GALLAGHER BASSETT | TECHNICAL SERVICES

REMEDIAL INVESTIGATION WORK PLAN

US Polychemical Corporation

584 Chestnut Ridge Road
Village of Chestnut Ridge
Rockland County, New York

NYSDEC BCP Site: C344081

November 2021

GBTS Project: 21003-0031

Technical Services Division

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GBTS Project: 21003-0031

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The undersigned have reviewed this Remedial Investigation Work Plan and certify to 584 Chestnut Ridge LLC and to the New York State Department of Environmental Conservation that the information provided in this document is accurate as of the date of issuance by this office.

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

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1.0 INTRODUCTION

1.1 Purpose

This Remedial Investigation Work Plan (RIWP) describes actions that are proposed by Gallagher Bassett Technical Services (GBTS) to investigate the property located at 584 Chestnut Ridge Road, Village of Chestnut Ridge, Rockland County, New York (the Site) in accordance with the requirements of the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP). The Brownfield Cleanup Agreement (BCA), dated March 12, 2021, identifies the Site as "US Polychemical Corporation" (Site No. C344081).

This RIWP proposes an investigation to document environmental conditions at the Site (this work supplements earlier fieldwork conducted during previous due diligence activities). Work will be conducted in accordance with a Site-specific Health and Safety Plan (HASP, Appendix A), which includes a Community Air Monitoring Plan (CAMP).

1.2 Site Location and Description

The Site consists of the westernmost +/- 2.63-acre portion of the property located at 584 Chestnut Ridge Road, Village of Chestnut Ridge, Rockland County, New York (identified as Village of Chestnut Ridge tax lot parcel: Section 63.06, Block 1, Lot 1). The property is located in a well-developed suburban area comprised primarily of commercial and residential uses. Figure 1 shows the Site location.

The Site is an approximately rectangular parcel measuring approximately 335 feet north to south and 370 feet east to west, accessed from the eastern side of Chestnut Ridge Road. Site improvements include a single story, approximately 18,870 square foot commercial structure, along with asphalt parking lots, concrete walkways and landscaped areas. The northern portion of the property is occupied by US PolyChemical Corporation, a manufacturer of maintenance products, and the southern portion is occupied by Woolzies, Inc., a distributor of personal care and home products. The building contains office areas to the west, facing the roadway, with rear manufacturing/warehouse areas and associated loading docks.

The Site is adjoined to the east by undeveloped woodland comprising the remaining eastern portion of the tax lot, and by commercial properties to the north (Interstate Waste Services vehicle depot), south (Ultimate Kitchens office/warehouse) and west (landscaping services and HLU Sales warehouse). Residential parcels lie within a quarter-mile radius to the east and southeast of the Site (south of Interstate 87 and west of the Garden State Parkway). All Figures show the BCP Site boundaries (a metes and bounds description will be prepared during the remedial investigation).

Current development plans for the Site (to be finalized) include property redevelopment and potential expansion of the existing building for professional offices and/or industrial uses.

1.3 Physical Setting

1.3.1 Site Topography

Local area topography is variable. The larger tax lot parcel at 584 Chestnut Ridge Road is located in a lowland area that ultimately drains southwesterly towards Pine Brook. The Site gradually slopes downward to the east, toward low-lying wetland areas on the larger tax lot. Based on USGS maps, Site elevation ranges from between 450 and 440 feet above mean sea level.

1.3.2 Site Geology and Hydrogeology

Soils encountered at the Site during previous environmental investigations (see Section 1.4), from six borings advanced to 8 feet below grade surface (bgs), were generally described as brown mixed fill/sandy loam (upper 4 to 5 feet) overlying gray sand. A thin layer of black organic material was noted above the deeper sand in most borings. Saturated soil was reported from 4 to 6 feet bgs. Based on topographic conditions, shallow groundwater flow at the Site is expected to generally follow wetland drainage pathways, which are to the east and then southward.

1.4 Summary of Previous Environmental Investigations

According to a *Phase I Environmental Site Assessment Report* issued by LCS, Inc. (January 2019; updates an earlier LCS report issued September 2017), the on-Site building was constructed circa 1965, with an expansion by circa 1974, and was historically used for mixing of solvents to generate industrial products and cleaning chemicals. Materials processed on-Site included chlorinated and aromatic solvents, as well as aliphatic naphthas. Wastewater historically entered floor drains, which discharged to the ground surface and to a septic system (floor drains and the septic system have been taken out of service). Current production is focused on materials designed as a solvent replacement. Local records indicate that the property was identified as a potential source of “odors and poor tasting water in a local waterway” in the 1970s.

A *Phase II Environmental Site Assessment* issued by DT Consulting Services, Inc. (December 2017) documented performance of a geophysical survey, collection of soil and groundwater samples from six (6) exterior soil borings, and collection of four (4) vapor samples from beneath the building slab.

Geophysical scans indicated the presence of a subsurface pipe (likely associated with closed interior floor drains) extending eastward from the mid-section of the facility towards the wooded, undeveloped area of the property, as well as likely subsurface components of a former septic system located west of the building (beneath the parking lot). Subsurface features identified in the Phase II ESA are shown on Figures 2 and 3.

Borings were extended near the northeastern corner of the building near interior chemical storage areas (SB-1 to SB-3), along the path of the subsurface drain pipe (SB-3), east of the building near the southeastern corner (SB-5), and west of the building near the suspect former septic system (SB-6). Soil was recovered at intervals of 4 feet. Field evidence of contamination was noted near the chemical storage area (SB-1 and SB-2) and at the former septic area (SB-6), including elevated photoionization detector (PID) readings and solvent odors. Peak PID readings of 1,200 parts per million (ppm) were recorded at SB-2. No significant field evidence of contamination was observed at SB-3 to SB-5.

Soils samples (collected from the interval just above or intercepting the groundwater interface) were submitted for laboratory analysis of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and RCRA metals. Soil contamination was limited to the detection of VOCs above Part 375 Protection of Groundwater (POG) Soil Cleanup Objectives (SCOs) at SB-2 and SB-6, including chlorinated compounds (CVOCs) and petroleum products, with two analytes reported above Commercial Use (CU) SCOs at SB-2, as follows (all values in ppm, results above POG SCOs highlighted, results above CU SCOs in bold):

Analyte	POG SCO	CU SCO	SB-2	SB-6
1,1,1-trichloroethane (TCA)	0.68	500	130	*Not detected*
tetrachloroethene (PCE)	1.3	150	**1,400**	*Not detected*
trichloroethene (TCE)	0.47	200	22	*Not detected*
cis-dichloroethene (DCE)	0.25	500	73	*Not detected*
1,2,4-trimethylbenzene	3.6	190	100	1.4
1,3,5-trimethylbenzene	8.4	190	37	0.5
ethylbenzene	1	390	180	0.95
n-propylbenzene	3.9	500	24	0.26
toluene	0.7	500	98	*Not detected*
xylenes (total)	1.6	500	**750**	3.27

Following soil collection, temporary monitoring wells were installed at SB-2 (MW-1) and SB-6 (MW-2), and groundwater samples were submitted for laboratory analysis of VOCs and SVOCs. Multiple VOCs were reported at elevated levels, including the following reported at values at least 20 times the Ambient Water Quality Standard (AWQS; all values in parts per billion [ppb]):

Analyte	AWQS	MW-1	MW-2
1,1,1-trichloroethane (TCA)	5	400	53
1,1,1-dichloroethane (DCA)	5	100	160
tetrachloroethene (PCE)	5	1,900	13
trichloroethene (TCE)	5	110	60
cis-dichloroethene (DCE)	5	900	1,800
trans-DCE	5	26	110
vinyl chloride	2	18	650
1,2,4-trimethylbenzene	5	140	780
1,3,5-trimethylbenzene	5	49	210
ethylbenzene	5	400	1,900
n-propylbenzene	5	29	110
toluene	5	230	130
xylenes (total)	5	1,860	5,900

The majority of VOCs detected in groundwater at elevated levels were also detected in soil samples above POG SCOs.

A high level of the SVOC naphthalene (137 ppb, AWQS 10 ppb) was reported in MW-2, and elevated levels of benzo(a)anthracene and chrysene (0.0727 ppb, AWQS 0.002 ppb, both compounds) were reported at MW-1. Low levels of other SVOCs were found at both wells.

High levels of CVOCs were reported in vapor, indicating a likely source area beneath the building slab (contaminated soil and/or groundwater) and the potential for vapor intrusion within the building interior. The greatest impacts are present at the northeastern portion in and near chemical storage areas (SG-1 and SG-2), and appear to be primarily related to releases of PCE and TCA (high levels of petroleum compounds were not reported in vapor). The most significant VOC concentrations are as follows (concentrations in $\mu g/m^3$):

Analyte	**SG-1**	**SG-2**	**SG-3**	**SG-4**
TCA	4,100	65,000	150	13
DCA	9,100	23,000	7.9	*Not detected*
cis-DCE	10,000	42,000	14	*Not detected*
PCE	17,000	740,000	850	6,800
TCE	13,000	59,000	23	84
cis-DCE	10,000	42,000	14	*Not detected*
VC	*Not detected*	350	*Not detected*	*Not detected*
Chloroform	94	2,000	*Not detected*	*Not detected*

Previous sampling data for VOCs in soil, groundwater and sub-slab vapor are shown on Figure 2, and excerpts of the Phase I ESA and a copy of the Phase II ESA are is provided in Appendix C.

1.5 Areas of Concern

Based on documented Site history and the results of previous environmental investigations, the following areas of concern (AOC), requiring additional investigation, have been identified:

AOC 1: Soil Impacts from Historical Releases

Soil at exterior boring locations contains VOCs (both chlorinated solvents/breakdown products and petroleum constituents) at concentrations above POG and CU SCOs, likely indicating one or more releases from historical manufacturing operations. Previous soil sampling, conducted in order to provide a general screening, are limited and do not provide delineation data. There are no data for soil located beneath the Site building.

AOC 2: Site-wide Groundwater Quality

Groundwater samples collected from two temporary wells document elevated levels of CVOCs and petroleum products. Although only one of the two boring locations was impacted by high levels of CVOCs in soil, groundwater contamination by these compounds (as well as petroleum constituents) was documented in both locations, which are distant from each other, indicating likely Site-wide contamination. The extent of the contaminant plume is unknown and there are no permanent monitoring wells capable of providing reproducible data.

AOC 3: Sub-slab Vapor Contamination

High levels of CVOCs are present in sub-slab vapor. Additional investigation is needed to document the source(s) of contamination beneath the structure, guide appropriate response actions to prevent vapor intrusion within the building interior, and document any potential vapor impacts to off-Site receptors.

2.0 REMEDIAL INVESTIGATION WORK PLAN

This RIWP details activities proposed by GBTS to further characterize the Site so that a comprehensive assessment of Site conditions, as required by the NYSDEC BCP guidelines, is completed.

Previous investigations will be supplemented by the work described below to complete a site characterization in compliance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, Section 3. Additional investigation will be completed to fully characterize contamination associated with the identified areas of concern (known significant impacts to soil, groundwater and sub-slab vapor), and establish a comprehensive data set for all Part 375 analytical parameters in accordance with BCP requirements.

A Proposed Remedial Investigation Map depicting relevant Site features, and previous and proposed sampling locations, is provided as Figure 3. All proposed work will be conducted according to a site-specific Health and Safety Plan (Appendix A).

For the purpose of the work detailed in this RIWP, the Participant is 584 Chestnut Ridge LLC, who will contract with the environmental consultant/remediation firm (hereafter referred to as the On-site Coordinator [OSC]) to provide the services detailed below. The OSC shall be a firm with experience in investigating NYSDEC BCP sites, with the capability to certify the final Remedial Investigation Report (RIR) in conformance with DER-10 Section 1.5.

2.1 Overview of Proposed Investigative Services

The proposed investigative services described in detail in subsequent sections of this RIWP consist of the following:

- Documentation of Underground Structures (2.2.3);
- Initiation of air monitoring during ground intrusive activities (Section 2.3.1);
- Collection of eleven (11) sub-slab vapor samples to more fully delineate contamination beneath the building, and six (6) exterior soil vapor samples to screen for potential on- and off-Site vapor impacts (Section 2.3.3);
- Collection of indoor air samples at office areas of the on-Site building (Section 2.3.3);

- Extension of thirty-one (31) exterior soil borings, and collection of one or more soil samples from each boring, to document soil conditions (Section 2.3.4);
- Completion of twelve (12) borings as new, permanent groundwater monitoring wells, and sampling to document groundwater quality (Section 2.3.5); and,
- Preparation of a RIR for the Participant and NYSDEC (Section 2.4)

Vapor sampling will be conducted prior to the soil investigation, with the resulting data used to modify boring locations as needed. The number and location of the proposed monitoring wells may similarly be modified based on field observations at the borings and laboratory results from soil sampling.

Prior to, or in conjunction with, the initiation of these actions (see Section 2.3), the tasks detailed in Section 2.2, below, will also be conducted.

2.2 Proposed Site Preparation Services

This section of the RIWP provides details of activities and services necessary to be initiated and/or completed prior to the implementation of Site remediation services.

2.2.1 Agency Notification

The NYSDEC will be notified in writing at least five (5) business days prior to the start of fieldwork. Notification of subsequent field activities will be in accordance with reasonable business practice, with verbal notification for immediate (within 48 hours) activities and written notification otherwise. Written notifications will be transmitted to the NYSDEC via facsimile or electronic mail.

2.2.2 Utility Markout

Prior to the implementation of any of the investigative tasks outlined in Section 2.3, below, a request for a complete utility markout of the Site will be submitted as required by New York State Department of Labor regulations. Confirmation of underground utility locations will be secured, a field check of the utility markout will be conducted prior to the initiation of work.

2.2.3 Documentation of Underground Structures

The presence or absence of relevant underground structures will be documented throughout the Site, either using ground penetrating radar (GPR) or other means if GPR technology is determined to not be suitable to the Site (e.g., metal reinforcement in building slabs may be a significant limiting factor). A GPR survey will be of sufficient density to document the presence or absence of small subgrade structures, including tanks. Results will be provided to the OSC and NYSDEC prior to the extension of borings (which may be relocated based on the findings) and will be recorded on Site maps for inclusion in the RIR. Should the use of GPR not be feasible, an alternative methodology will be proposed to NYSDEC for review and approval.

2.2.4 Quality Assurance Project Plan

A Quality Assurance Project Plan (QAPP, Appendix B) has been prepared, detailing procedures necessary to generate data of sufficient quality and quantity to represent successful performance of the Remedial Investigation at the Site. The QAPP includes a Sampling and Analysis Plan (SAP), detailing sampling and analysis of all media and which identifies methods for sample collection and handling.

A photo-ionization detector will be utilized to screen encountered materials for the presence of volatile vapors. The PID will be calibrated at the onset of each workday, and a written calibration log will be maintained for this project. The PID will be calibrated to read parts per million gas equivalents of isobutylene in accordance with protocols set forth by the equipment manufacturer.

All samples will be collected in accordance with applicable DER-10 requirements and NYSDEC and NYSDOH guidance documents and will be submitted to a NYSDOH ELAP-certified laboratory using appropriate chain of custody procedures. Dedicated, laboratory supplied containers will be used for sample collection. Field personnel will maintain all samples at cold temperatures, as necessary, and complete all chain of custody forms.

Laboratory reports will include detailed Quality Assurance/Quality Control (QA/QC) analyses, including sample duplicates, rinse blanks (for non-dedicated sampling equipment), and trip blanks. A Data Usability Summary Report (DUSR) will be prepared by a third, independent party, which maintains NYSDOH ELAP CLP Certification.

2.2.5 Subcontractor Coordination

Subcontractors will perform requested services under the direct supervision of the OSC. Prior to the initiation of fieldwork, all subcontractors will be provided with a copy of the Health and Safety Plan (Section 2.2.6). Insurance certificates will be secured from subcontractors by the Participant and/or by the OSC. At this time, the following subcontractors are anticipated to be used on this project: GPR, driller, analytical laboratory and data validator.

2.2.6 Health and Safety Plan

The site-specific Health and Safety Plan (Appendix A) will be reviewed with on-site personnel (including subcontractors) prior to the initiation of fieldwork. It is anticipated that all proposed work will be performed in “Level D” personal protective equipment; however, all on-site field personnel will be prepared to continue services wearing more protective levels of equipment should field conditions warrant.

2.3 Proposed Specific Investigation Services

This section of the RIWP provides a detailed description of the investigative tasks that will be conducted at the Site.

2.3.1 Community Air Monitoring

A Community Air Monitoring Plan (provided in the HASP) will be initiated during all ground intrusive activities. The implementation of the CAMP will document the presence or absence of specific compounds in the air surrounding the work zone, which may migrate off-site due to fieldwork activities.

This plan provides guidance on the need for implementing more stringent dust and emission controls based on air quality data. Air monitoring will be conducted for VOCs and for dust. Water misting will be used to control dust (as needed) during all ground intrusive activities, which will be limited to the extension of soil borings and installation of the monitoring wells (hand-held equipment and portable water tanks will be supplied by the driller). Water spray will include use of an odor/vapor suppressant (e.g., BioSolve) if required.

2.3.2 General Fieldwork Methodology

Fieldwork methodology will be in conformance with the QAPP (including sample handling and custody for PFAS and 1,4-dioxane, the so-called “emerging contaminants” [ECs]), which includes copies of applicable Standard Operating Procedures (SOPs) for fieldwork activities. The QAPP provides tables indicating appropriate types of sample containers, sampling frequency and approved USEPA Methods for laboratory analysis.

All sampling locations will be determined in the field, measured to the nearest 0.5-foot relative to a permanent fixed on-site marker, and will be recorded in logbooks for inclusion in all final maps. Anticipated sampling locations, and planned new monitoring wells, are depicted on the Proposed Remedial Investigation Map (Figure 3).

An assessment of media characteristics, including soil type, presence or absence of foreign materials, field indications of contamination (e.g., unusual coloration patterns or odors), and instrument readings, will be made by the OSC during all Site investigative work.

The OSC will be responsible for identifying any materials that require special handling (media that may contain elevated concentrations of contaminants or is grossly contaminated, hazardous materials, etc.) and will ensure that they are properly securely stored on-site (soil stockpiled on plastic and covered, or soil and water placed in approved containers), pending characterization and proper disposition. The OSC will ensure that unforeseen environmental conditions are managed in accordance with applicable federal and state regulations.

2.3.3 Vapor and Air Sampling

A total of eleven (11) sub-slab vapor samples will be collected during the RI from beneath the building, and six (6) soil vapor samples will be collected at exterior areas, to further define and delineate VOC contamination, and to help determine the potential for any off-Site migration of impacted vapor. All sampling will be in accordance with applicable NYSDOH guidance.

Air samples (three [3] indoor and one [1] exterior ambient) will be collected concurrently with sub-slab vapor samples. Interior samples will be co-located with the sub-slab vapor samples collected in the building office areas at the western side of structure.

Sampling Methodology

Interior vapor probes will be constructed by drilling a small diameter hole (generally ½ inch) through the slab and extending the bit to 6 inches below the base of the concrete. Permanent sampling points will be created through use of commercial fittings (e.g., Vapor Pin©) in order to allow for periodic monitoring as needed, including the ability to co-locate concurrent indoor air sampling stations.

Temporary probes will be constructed at exterior areas by advancing a boring using mechanized direct-push equipment (approximate depth of 4 feet bgs) and placing sample tubing with an attached “air stone” near the invert of the boring. The bottom of the borehole will be partially filled with clean sand, surrounding the air stone, and remaining upper portions of the borehole will be backfilled, with the near surface interval sealed with hydrated bentonite to prevent surface air from entering the system.

All locations will utilize approved tubing (0.188-inch inner diameter Teflon), be screened with a PID for VOCs prior to purging, and will be checked for a proper surface seal. A tracer gas will be used to verify that there is no significant infiltration of outside air. The space surounding the sampling point will be enclosed and sealed (e.g., with a metal hemisphere and clay seal, and plastic sheeting at exterior locations) in order to introduce helium into the area surrounding the probe. Real-time sampling equipment (Radiodetection Multi-vapor Leak Locator, model MDG 2002, or equivalent) will be utilized to determine when the interior atmosphere in the enclosure reaches a concentration of 80%, and the tubing for the vapor implant will then be sampled for helium. If helium is detected in vapor at a concentration greater than 10%, the annular seal will be repaired and gas tracing performed again until less than 10% helium is detected. Successful exclusion of the tracer gas (minimum two interior and two exterior locations) will be considered adequate documentation that sampling techniques are sufficiently preventing air infiltration (tracer screening will be conducted at additional locations, as needed, based on any variable conditions encountered in the field).

For all vapor sampling locations, the exact purge volume will be dependent on boring depth and tubing length. Three borehole and tubing volumes will be purged prior to collection. The purge rate will not exceed 0.2 liters per minute.

Concurrent, co-located indoor air samples will be collected during sub-slab vapor sampling at the building office areas. Samples will be collocated at a height of 4 to 5 feet above the vapor implant. A building survey will be completed prior to sampling to identify any factors that could cause interference (e.g., use of cleaning materials).

All vapor and air samples will be collected into laboratory-certified clean Summa canisters (rate not exceeding 0.2 L/minute), equipped with appropriate flow regulators (8- hour controllers at co-located vapor/air locations, and two-hour controllers at all other vapor collection points).

Sample Submission

Vapor and air samples will be analyzed for VOCs using USEPA method TO-15.

2.3.4 Soil Assessment

Soil Borings

An initial total of thirty-one (31) soil borings will be extended at exterior areas, with additional "step out" borings as needed based on field and instrument observations of contamination, in order to define the extent of Site soil containing analyte concentrations above the applicable SCOs. Additional fieldwork rounds for the advancement of soil borings and/or installation of monitoring wells may be required to fully delineate identified contamination, and to determine if contamination extends or is migrating off-site (the need for an expanded investigation scope will be determine in consultation with NYSDEC).

Four (4) borings will be extended using hand-held boring equipment to a depth of 2 feet bgs in the wooded wetland area at the eastern margin of the Site; all other borings will be extended using mechanized equipment, to at least the deeper of 15 feet bgs or to a sample interval below the groundwater interface, or until refusal (all borings to be completed as groundwater wells will be extended to a minimum depth that allows for proper installation of the well screen). Boring equipment will be capable of collecting soil cores at discreet intervals.

Soil is anticipated to be collected using coring barrels lined with disposable acetate sleeves (split spoons may be utilized based on Site conditions and equipment availability).

Sampling Methodology

Soil will be continuously recovered from borings, and material in each sampling interval will be characterized in order to identify existing subsurface physical conditions and any overt evidence of contamination. Sampling of recovered material for laboratory submission will be conducted from all boring intervals, as warranted, to fully define contaminants in soil and provide sufficient areal and vertical delineation. Samples will be collected (at a minimum) from the soil stratum intercepting the groundwater table, any fill material, and from soil exhibiting field evidence of impacts (if encountered) or at soil strata corresponding to previously identified contamination in nearby boring locations (for delineation).

Sampling may occur in multiple rounds to ensure complete Site characterization in compliance with DER-10, Chapter 3, including a full characterization of any existing soils proposed to remain in place as a clean cover system (based on Site development requirements, the characterization of *in situ* cover soils may be conducted in full or part during a Pre-design Investigation).

Samples will be collected directly from the freshly cut open sleeve, using disposable plastic trowels or properly decontaminated stainless steel instruments, or may be manually collected directly from exposed soil or the sampling instrument using dedicated disposable latex gloves.

Soil sampling for VOCs will follow USEPA Method 5035 protocols, using disposable 5-gram plastic syringes to place material into laboratory-supplied glass vials (prepared with stirs bars and appropriate preservatives).

Sample Submission

Soil samples will be analyzed for NYSDEC Part 375-6.8 parameters, including USEPA Target Compound List (TCL) VOCs and SVOCs plus 30 tentatively identified compounds (TICs), USEPA Target Analyte List (TAL) metals including Cr^{+6}, polychlorinated biphenyls (PCBs), pesticides, herbicides and cyanide, as well as ECs (1,4-dioxane and PFAS, in accordance with the most current NYSDEC guidance). Methods of analysis for all analyte classes are specified in the QAPP.

Analysis of samples may be modified in consultation with the NYSDEC Project Manager based on initial sampling results, including the presence or absence of field evidence of contamination. Additional analysis may be performed based repository requirements for waste characterization prior to off-site disposal.

2.3.5 Groundwater Assessment

A minimum of twelve (12) permanent monitoring wells are proposed for locations throughout the Site. Monitoring wells may be relocated in consultation with NYSDEC, or additional wells be installed, based on subsurface conditions, including the presence of non-aqueous phase liquids (NAPL) or other indications of gross contamination.

If shallow bedrock (or a significant aquitard) is not encountered within 15 feet of the surface, an evaluation will be made, in consultation with NYSDEC, regarding the need for installation of paired “deep” wells (potentially necessary to evaluate impacts from CVOCs with a high specific gravity). All monitoring wells will be sampled.

Well installation, well development, and sample collection and laboratory submission are detailed below.

Monitoring Well Installation

At this time, it is anticipated that “shallow” wells will be completed at a depth of approximately 12 to 14 feet bgs. The wells will be constructed of two-inch PVC casing with a ten-foot length of 0.01-inch slotted PVC screening across the water table. No glue will be used to thread the casing lengths. The wells will be constructed such that a minimum of 2 feet of screening will extend above the water table, with approximately 8 feet of screening below the water level. If “deep” wells are required, they will be constructed with the screening located to intercept the lowest level of the water column.

The annular space between the well screen and the borehole will be backfilled with clean silica sand to a depth of approximately two feet above the well screen. A seal consisting of hydrated bentonite clay will be placed above the sand pack (minimum of least 12 inches at shallow wells, and the depth required to exclude the upper water column at deep wells) and the remaining annular space will be grouted with cement.

A locked cap with vent will be installed at the top of the PVC riser and the wells will be protected by secure metal covers or casings. A transit level will be used to determine the elevation of the top of the PVC well riser, relative to a permanent on-site marker, for use in determining relative groundwater elevations. Well locations and relative elevations will be recorded in field logs and indicated on all fieldwork maps.

Monitoring Well Development

One week following installation, wells will be developed with a decontaminated mechanical pump and dedicated polyethylene tubing in order to clear fine-grained material that may have settled around the well screen and to enhance the natural hydraulic connection between the well screen and the surrounding soils. Well development will begin at the top of the screened interval to prevent pump clogging. Development will be discontinued when the discharge water is free of obvious sediment, turbidity is below 50 NTUs and indicator parameters (e.g., dissolved oxygen, temperature, etc.) have stabilized. The pump assembly will be removed from the well while the pump is running to avoid discharge of purged water back into the well. Development water will be securely stored on-site pending laboratory analysis.

Sampling Methodology

All Site monitoring wells will be sampled one week following development using USEPA Low-Stress ("low flow") methodology. Sampling will be conducted using the following protocol:

1. Basic weather conditions and all field observations will be recorded in the field logbook. Sampling will begin at the potentially least contaminated well (as determined from well location and/or previous data) and proceed to the potentially most contaminated well. Wells will be checked for damage or evidence of tampering before initiating sampling.

2. If permissible under QAPP requirements, plastic sheeting will be placed around wells to minimize potential contamination of sampling equipment from the ground surface, and all monitoring, purging and sampling equipment will be placed on the sheeting.

3. The protective casing on the well will be unlocked, the air in the well head will be screened with a PID, and the static water level (relative to the top of the casing) will be measured with a decontaminated water-level meter. A peristaltic pump with plastic tubing (or equivalent equipment) will be used for sampling. The tubing (or a submersible pump attached to tubing, if required by Site conditions) will be slowly lowered until reaching two to three feet off of the well bottom to prevent disturbance of sediment.

4. The water level will be measured before the pump is started and at three to five minute intervals. Pumping rates will be reduced (as needed) to the minimum capabilities of the pump to ensure stabilization of the water level (drawdown of 0.3 feet or less).
5. During pumping, field indicator parameters (turbidity, temperature, specific conductance, pH, redox potential, and dissolved oxygen) will be monitored and recorded approximately every five minutes. The well will be considered stabilized when the indicator parameters have stabilized for three consecutive readings (the minimum purge interval will be at least 15 minutes).
6. All groundwater samples will be collected in a manner consistent with the QAPP.
7. The protective cap on the well will be replaced and locked, and the field sampling crew will move to the next most contaminated well and the process will be repeated.

Sample Submission

Groundwater samples will be analyzed for NYSDEC Part 375-6.8 parameters, including USEPA Target Compound List (TCL) VOCs and SVOCs plus 30 TICs, USEPA TAL metals including Cr^{+6}, PCBs, pesticides, herbicides and cyanide, as well as ECs (1,4-dioxane and PFAS, in accordance with the most current NYSDEC guidance). Methods of analysis are specified in the QAPP.

Analysis of samples may be modified in consultation with the NYSDEC Project Manager based on initial sampling results, including the presence or absence of field evidence of contamination.

Groundwater Flow Calculations

The direction of groundwater flow will be determined based on elevations of static groundwater as measured at all wells, measured prior to water quality sample collection. Measurements will be collected with an electronic depth meter with an accuracy of +/- 0.01 foot. All data will be recorded in field logs and presented on a Direction of Groundwater Flow Map in the RIR.

2.3.6 Management of Investigation-Derived Waste

Any soil cuttings will be backfilled within the originating borehole to within 12-inches of the surface, unless the following conditions exist: soil is grossly contaminated; the boring has penetrated a confining layer; a path for vertical migration would be completed; cuttings do not fit in the borehole; or, the boring will be converted to a monitoring point for groundwater or vapor.

Waste soil generated during the investigation will be stored on plastic sheeting or within approved DOT containers prior to being returned to the bore hole. Any materials remaining at the Site at the end of the workday will be properly covered and secured and all materials remaining after completion of the fieldwork will be containerized and disposed off-site at a permitted facility.

Monitoring well purge water and other fluids will be securely stored on-site in closed containers, pending the results of groundwater sampling and/or waste characterization, and disposed at an appropriate facility. Discarded personal protective equipment and other fieldwork supplies will be disposed as municipal solid waste.

2.4 Documentation of Environmental Conditions

A RIR will be prepared at the completion of all fieldwork services, in accordance with DER-10, summarizing the nature of environmental conditions for all identified areas of concern. The RIR will: summarize Site history and all previous investigations; document Site conditions and the investigative work performed during implementation of the RIWP; provide complete analytical findings and compare results to applicable Standards, Criteria, and Guidance (SCG); and, include an on-site and off-site Qualitative Human Health Exposure Assessment in accordance with DER-10(3.3)(c)(4).

An on-site and off-site qualitative fish and wildlife resource exposure assessment (identification of impacts to fish and wildlife resources from Site contaminants of ecological concern) will be completed if it is determined that there are likely to be ecological resources present on or in the vicinity of the Site.

The RIR will provide complete data summary tables, figures showing all exceedances of SCGs, fieldwork and construction logs, laboratory and data validation reports, CAMP monitoring data and waste disposal documentation. All laboratory data presented in the RIR will be submitted to NYSDEC in an acceptable electronic data deliverable (EDD) format.

3.0 PROJECT SCHEDULE

The following schedule is anticipated for this project (Week 0 based on date of RIWP approval):

Week	Task(s)
1	Utility markout (may include supplemental private markout, if warranted); selection of driller; secure insurance, NYSDEC notification of fieldwork
2 to 3	Installation of borings; collection of soil and vapor samples, completion of monitoring wells
4 to 5	Well development; collection of groundwater samples; establish groundwater elevations
5-7	Laboratory analysis of soil and groundwater samples
8-11	Preparation of RIR
12	Submission of RIR to NYSDEC (a Remedial Alternatives Report and Remedial Action Work Plan may be submitted at this time)

FIGURES

Figure 1: Site Location Map

US Polychemical Corporation C344081
584 Chestnut Ridge Road
Spring Valley
Rockland County, New York

Legend:
property border
BCP site border
Longitude = -74°02′55.5″W
Latitude = 41°05′44.3″N

0 400 800
SCALE IN FEET

File: CS19058.50

November 2021

Figures

GALLAGHER BASSETT | TECHNICAL SERVICES

SG-1	
(12-5-2017)	
Soil Vapor	Result
PCE	17,000
TCE	13,000
cis-DCE	10,000
TCA	4,100
DCA	9,100

SG-2	
(12-5-2017)	
Soil Vapor	Result
PCE	740,000
TCE	59,000
cis-DCE	42,000
VC	350
TCA	65,000
DCA	23,000
1,1-DCE	2,600
Chloroform	2,000

SB-6/GW		
(12-5-2017)		
Groundwater	AWQS	Result
PCE	5	13
TCE	5	60
cis-DCE	5	1,800
trans-DCE	5	110
VC	2	650
DCA	5	160
TCA	5	53
1,2,4-Trimethylbenzene	5	780
1,3,5-Trimethylbenzene	5	210
Ethylbenzene	5	1,900
Isopropylbenzene	5	65
n-Propylbenzene	5	110
o-Xylene	5	1,600
p-&m-Xylenes	5	4,300
p-Ethyltoluene	NA	210
Toluene	5	130
Naphthalene	10	137

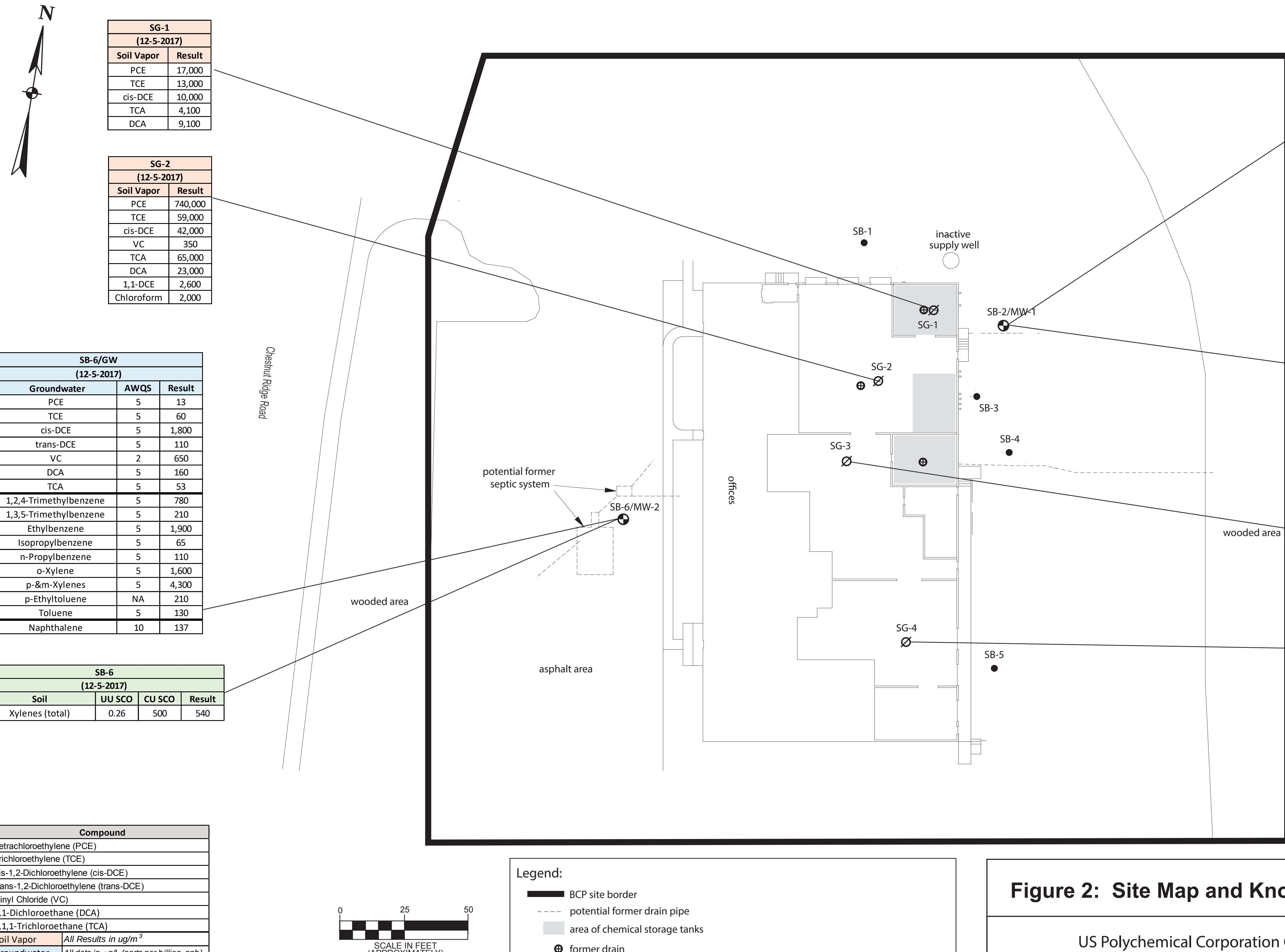
SB-6			
(12-5-2017)			
Soil	UU SCO	CU SCO	Result
Xylenes (total)	0.26	500	540

SB-2/GW		
(12-5-2017)		
Groundwater	AWQS	Result
PCE	5	1,900
TCE	5	110
cis-DCE	5	900
trans-DCE	5	26
VC	2	18
DCA	5	100
TCA	5	400
1,2,4-Trimethylbenzene	5	140
1,3,5-Trimethylbenzene	5	49
Ethylbenzene	5	400
Isopropylbenzene	5	19
n-Propylbenzene	5	29
o-Xylene	5	560
p-&m-Xylenes	5	1,300
p-Ethyltoluene	NA	49
Toluene	5	230
Benzo(a)anthracene	0.002	0.0727
Chrysene	0.002	0.0727

SB-2			
(12-5-2017)			
Soil	UU SCO	CU SCO	Result
PCE	1.3	150	1,400
TCE	0.47	200	22
cis-DCE	0.25	500	73
1,1,1-TCA	0.68	500	130
1,2,4-Trimethylbenzene	3.6	190	100
1,3,5-Trimethylbenzene	8.4	190	37
Ethylbenzene	1	390	180
n-Propylbenzene	3.9	500	24
Toluene	0.7	500	68
Xylenes (total)	0.26	500	750

SG-3	
(12-5-2017)	
Soil Vapor	Result
PCE	850

SG-4	
(12-5-2017)	
Soil Vapor	Result
PCE	6,800



Compound	
Tetrachloroethylene (PCE)	
Trichloroethylene (TCE)	
cis-1,2-Dichloroethylene (cis-DCE)	
trans-1,2-Dichloroethylene (trans-DCE)	
Vinyl Chloride (VC)	
1,1-Dichloroethane (DCA)	
1,1,1-Trichloroethane (TCA)	
Soil Vapor	*All Results in ug/m³*
Groundwater	*All data in µg/L (parts per billion, ppb)*
Soil	*All data in mg/Kg (ppm)*

Legend:
- BCP site border
- potential former drain pipe
- area of chemical storage tanks
- former drain
- previous soil boring
- previous soil vapor sample
- previous soil boring and temporary monitoring well

All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Figure 2: Site Map and Known Contamination Conditions

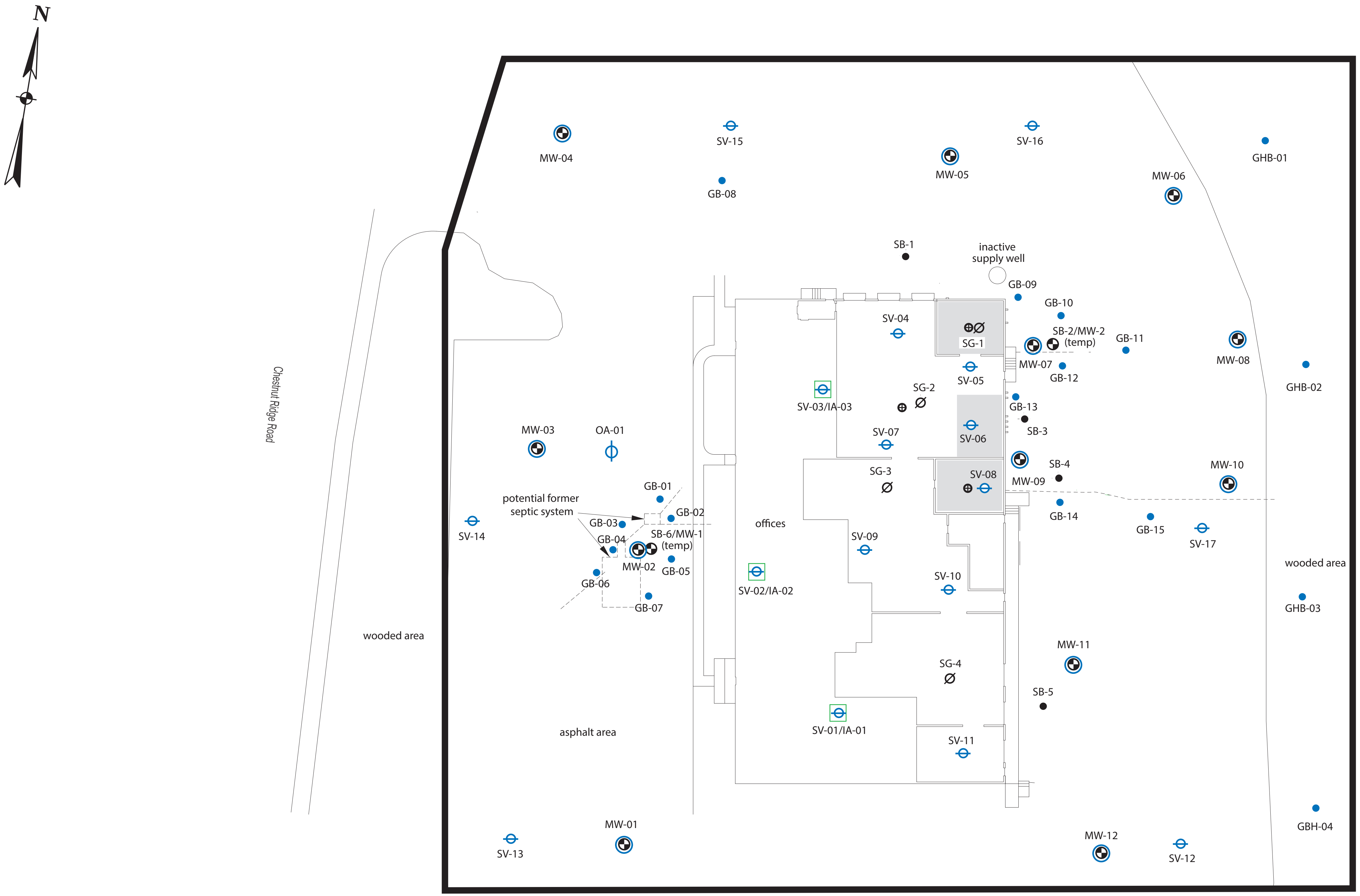
US Polychemical Corporation C344081
584 Chestnut Ridge Road
Spring Valley
Rockland County, New York

File: CS19058.50

Scale as shown

November 2021 | Figures

GALLAGHER BASSETT | TECHNICAL SERVICES



0 25 50
SCALE IN FEET
(APPROXIMATELY)

All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Legend:
- BCP site border
- potential former drain pipe
- area of chemical storage tanks
- former drain
- proposed soil boring
- proposed vapor sample
- proposed soil boring and permanent monitoring well
- previous soil boring
- previous soil vapor sample
- previous soil boring and temporary monitoring well
- co-located vapor and indoor air sample
- proposed outdoor ambient air sample (location to be determined in field)

Figure 3: Proposed Investigation Map

US Polychemical Corporation C344081
584 Chestnut Ridge Road
Spring Valley
Rockland County, New York

File: CS19058.50

Scale as shown

November 2021 | Figures

APPENDIX A

Health and Safety Plan

SITE INVESTIGATION
HEALTH AND SAFETY PLAN

US Polychemical Corporation

584 Chestnut Ridge Road
Village of Chestnut Ridge
Rockland County, New York

NYSDEC BCP Site: C344081

November 2021

GBTS Project: 21003-0031

Technical Services Division

22 IBM Road, Suite 101., Poughkeepsie, NY 12601 T: 845-452-1658 F: 845-485-7083
www.gallagherbassett.com

SITE INVESTIGATION
HEALTH AND SAFETY PLAN

November 2021

GBTS Project: 21003-0031

Prepared By:

Gallagher Bassett Technical Services
22 IBM Road, Suite 101
Poughkeepsie, New York 12601

Prepared For:

584 Chestnut Ridge LLC
584 Chestnut Ridge Road
Spring Valley, New York 10977

The undersigned have reviewed this Site Investigation Health And Safety Plan and certify to 584 Chestnut Ridge LLC and to the New York State Department of Environmental Conservation that the information provided in this document is accurate as of the date of issuance by this office.

Scott Spitzer
Gallagher Bassett Technical Services
Technical Director – Environmental Consulting

Richard Hooker
Gallagher Bassett Technical Services
Manager – Environmental Consulting

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose

This Site Investigation Health and Safety Plan (HASP) has been developed to provide the requirements and general procedures to be followed by Gallagher Bassett Technical Services (GBTS) and on-Site subcontractors while performing investigative services at the US Polychemical Corporation BCP Site (ID: C344081) located in the Village of Chestnut Ridge, Rockland County, New York.

This HASP incorporates policies, guidelines and procedures intended to protect the public health of the community during fieldwork activities, and therefore serves as a Community Health and Safety Plan. The objectives of the HASP are met by establishing guidelines to minimize potential exposures during fieldwork, and by planning for and responding to emergencies affecting the public adjacent to the site.

This HASP describes the responsibilities, training requirements, protective equipment and standard operating procedures to be utilized by all personnel while on the Site. All on-site personnel and visitors shall follow the guidelines, rules, and procedures contained in this HASP. The Project Manager or Site Health and Safety Officer (SHSO) may impose any other procedures or prohibitions necessary for safe operations. This HASP incorporates by reference applicable Occupational Safety and Health Administration (OSHA) requirements in 29 CFR 1910 and 1926.

The requirements and guidelines in this HASP are based on a review of available information and evaluation of potential on-site hazards. This HASP will be discussed with Site personnel and will be available on-site for review while work is underway. On-site personnel will report to the SHSO in matters of health and safety. The on-site project supervisor(s) are responsible for the enforcement and implementation of this HASP, which is applicable to all on-site field personnel, including contractors and subcontractors.

This HASP is specifically intended for the conduct of activities within the defined scope of work in specified areas of the Site. Changes in conditions or future actions that may be conducted at the Site may necessitate the modification of the requirements of the HASP. Although this HASP can be made available to interested persons for informational purposes, GBTS cannot be held accountable for the interpretations or activities of any other persons or entities other than the employees of GBTS or its subcontractors.

1.2 Site Location and Description

The Site is defined as the property located at 584 Chestnut Ridge Road, Village of Chestnut Ridge, Rockland County, New York. A Fieldwork Map illustrating the Site configuration and areas of proposed fieldwork activities is included as an Attachment to this HASP.

1.3 Work Activities

Environmental investigative activities are detailed in the NYSDEC-approved Remedial Investigation Work Plan (RIWP) dated November 2021. The specific tasks detailed in the RIWP are wholly incorporated by reference into this HASP. The RIWP describes the tasks required to investigate any environmental contamination at the Site.

Previous investigations of the Site documented the presence soils containing elevated levels of volatile organic compounds (VOCs), including chlorinated compounds (CVOCs) and petroleum products, which have contaminated groundwater. High levels of CVOCs were detected in soil vapor collected below the on-Site building.

2.0 HEALTH AND SAFETY HAZARDS

2.1 Hazard Overview for On-Site Personnel

Elevated concentrations of VOCs are documented in Site soil, groundwater and soil vapor. The possibility exists for on-site personnel to have contact with contaminated soils, groundwater and/or vapor during investigative activities. Contact with contaminated substances may present a skin contact, inhalation and/or ingestion hazard. These potential hazards are addressed in Sections 3.0 through 11.0, below.

2.2 Potential Hazards to the Public from Fieldwork Activities

The potential exists for the public to be exposed to contaminated soils, groundwater and/or vapor, which may present a skin contact, inhalation and/or ingestion hazard. Additional potential hazards to the public that are associated with fieldwork activities include mechanical/physical hazards, traffic hazards from fieldwork vehicles, and noise impacts associated with operation of mechanical equipment.

Impacts to public health and safety are expected to be limited to hazards that could directly affect on-Site visitors and/or trespassers. These effects will be mitigated through site access and control measures (see Section 6.0, below). Specific actions taken to protect the public health (presented in Sections 3.0 through 11, below) are anticipated to minimize any potential off-site impacts from contaminant migration, noise and traffic hazards.

3.0 PERSONAL PROTECTIVE EQUIPMENT

The levels of protection identified for the services specified in the RAWP represent a best estimate of exposure potential and protective equipment needed for that exposure. Determination of levels was based on data provided by previous studies of the Site and information reviewed on current and past Site usage. The SHSO may recommend revisions to these levels based on an assessment of actual exposures and may at any time require Site workers, supervisors and/or visitors to use specific safety equipment.

The level of protective clothing and equipment selected for this project is Level D. Level D PPE provides minimal skin protection and no respiratory protection, and is used when the atmosphere contains no known hazard, oxygen concentrations are not less than 19.5%, and work activities exclude splashes, immersion or the potential for unexpected inhalation or contact with hazardous levels of chemicals. Workers will wear Level D protective clothing including, but not limited to, a hard hat, steel-toed boots, nitrile gloves (when handling soils and/or groundwater), hearing protection (foam ear plugs or ear muffs, as required), and safety goggles (in areas of exposed groundwater and when decontaminating equipment). Personal protective equipment (PPE) will be worn at all times, as designated by this HASP.

Disposable gloves will be changed immediately following the handling of contaminated soils, water, or equipment. Tyvek suits will be worn during activities likely to excessively expose work clothing to contaminated dust or soil (chemically-resistant over garments will be required in situations where exposures could lead to penetration of clothing and direct dermal contact by contaminants).

The requirement for the use of PPE by official on-site visitors shall be determined by the SHSO, based on the most restrictive PPE requirement for a particular Work Zones (see Section 6 for Work Zone definitions). All on-site visitors shall, at a minimum, be required to wear an approved hardhat and be provided with appropriate hearing protection as necessary.

The need for an upgrade in PPE will be determined based upon encountered Site conditions, including measurements taken in the breathing zone of the work area using a photo-ionization detector (PID). An upgrade to a higher level of protection (Level C) will begin when specific action levels are reached (see Section 5.0, below), or as otherwise required by the SHSO. Level C PPE includes a full-face or half-mask air-purifying respirator (NIOSH approved for compound[s] of concern), hooded chemical-resistant clothing, outer and inner chemical-resistant gloves, and (as needed) coveralls, outer boots/boot covers, escape mask, and face shield. Level C PPE may be used only when: oxygen concentrations are not less than 19.5%; contaminant contact will not adversely affect exposed skin; types of air contaminants have been identified, concentrations measured, and a cartridge/canister is available that can remove the contaminant; atmospheric contaminant concentrations do not exceed immediately dangerous to life or health (IDLH) levels; and job functions do not require self-contained breathing apparatus (SCBAs). The need for Level B or Level A PPE is not anticipated for the planned remedial activities at this Site.

If any equipment fails and/or any employee experiences a failure or other alteration of their protective equipment that may affect its protective ability, that person will immediately leave the work area. The Project Manager and the SHSO will be notified and, after reviewing the situation, determine the effect of the failure on the continuation of on-going operations. If the failure affects the safety of personnel, the work site, or the surrounding environment, personnel will be evacuated until appropriate corrective actions have been taken.

4.0 CONTAMINANT CONTROL

Precautions will be taken during dry weather (e.g., wetting or covering exposed soils) to avoid generating and breathing dust-generated from soils. A PID (or equivalent equipment) will be used to monitor potential contaminant levels. Response to the monitoring will be in accordance with the action levels provided in Section 5.0.

5.0 MONITORING AND ACTION LEVELS

Concentrations of petroleum compounds in the air are expected to be below the OSHA Permissible Exposure Limits (PELs). Air monitoring will be conducted for VOCs and dust according to the NYSDOH Generic Community Air Monitoring Plan (provided as an Attachment). Monitoring will be conducted at all times that fieldwork activities which are likely to generate emissions are occurring. PID and dust readings consistently in excess of CAMP limits will be used as an indication of the need to initiate personnel monitoring, increase worker protective measures, and/or modify or cease on-site operations in order to mitigate off-site community exposure.

PID readings that consistently exceed background in the breathing zone (during any proposed tasks) will necessitate moving away from the source or implementing a higher PPE level.

6.0 SITE CONTROL/WORK ZONES

Site control procedures will be established to reduce the possibility of worker/visitor contact with environmental contaminants, to protect the public in the area surrounding the Site and to limit access to the Site to only those persons required to be in the work zone. Notices placed near the Site will warn the public not to enter fieldwork areas and direct visitors to report to the Project Manager or SHSO. Measures will be taken to limit the entry of unauthorized personnel into the specific areas of field activity and to safely direct and control all vehicular traffic in and near the Site (e.g., placement of traffic cones and warning tape).

Work Areas are defined as follows:

Exclusion Zone - The exclusion zone will be that area immediately surrounding the work being performed to accomplish fieldwork activities involving the handling or potential exposures to contaminated media. Only individuals with appropriate PPE and training are allowed into this zone. It is the responsibility of the SHSO to prevent unauthorized personnel from entering the exclusion zone. When necessary (e.g., high traffic areas) the exclusion zone will be delineated with barricade tape, cones and/or barricades.

Dedicated Decontamination Area - A dedicated decontamination area for personnel and equipment (including contamination reduction and support zones) is not anticipated to be required during completion of fieldwork activities, but will be established and utilized, as warranted, based on changes in Site conditions. Care will be taken at all times to remove gloves, excess soil from boots, and soiled clothing (if necessary) before entering the Intermediate Zone.

Intermediate Zone - The intermediate zone, also known as the decontamination zone, is where patient decontamination should take place, if necessary. A degree of contamination still is found in this zone and some PPE is required, although it is usually of a lesser degree than that required for the exclusion zone.

Command Zone - The command zone is located outside the decontamination zone. All exposed individuals and equipment from the exclusion zone and the decontamination zone should be decontaminated before entering the command zone. Access to all zones must be controlled. Keeping onlookers, media, etc. well away from the Site is critical and will be the responsibility of both the SHSO and the Project Manager, and other Site personnel as appropriate.

7.0 NOISE CONTROL

All fieldwork activities will be conducted in a manner designed to reduce unnecessary noise generation, and to minimize the potential for both on-site and off-site harmful noise levels. The Project Manager and SHSO will establish noise reduction procedures (as appropriate to the Site and the work) to meet these requirements.

8.0 PERSONNEL TRAINING

Work zones that will accomplish the general objective stated above will be established by the Project Manager and the SHSO. Site access will be monitored by the SHSO, who will maintain a log-in sheet for personnel that will include, at the minimum, personnel on the Site, their arrival and departure times and their destination on the Site. All workers will be properly trained in accordance with OSHA requirements (29 CFR 1910). Personnel exiting the work zone(s) will be decontaminated prior to exiting the Site.

Site-specific training will be provided to each employee. Personnel will be briefed by the SHSO as to the potential hazards to be encountered.

Topics will include:

- Availability of this HASP;
- General site hazards and specific hazards in the work areas, including those attributable to known of suspect on-site contaminants;
- Selection, use, testing, and care of the body, eye, hand, and foot protection being worn, with the limitations of each;
- Decontamination procedures for personnel, their personal protective equipment, and other equipment used on the Site;

- Emergency response procedures and requirements;
- Emergency alarm systems and other forms of notification, and evacuation routes to be followed; and,
- Methods to obtain emergency assistance and medical attention.

9.0 DECONTAMINATION

The SHSO will establish a decontamination system and decontamination procedures (appropriate to the Site and the work) that will prevent potentially hazardous materials from leaving the Site. Vehicles will be brushed to remove materials adhering to surfaces. Sampling equipment will be segregated and, after decontamination, stored separately from PPE. All decontaminated or clean sampling equipment not in use will be protected and stored in a designated, controlled storage area.

10.0 EMERGENCY RESPONSE

10.1 Notification of Site Emergencies

In the event of an emergency, the SHSO will be immediately notified of the nature and extent of the emergency (the names and contact information for key site safety and management personnel, as well as other site safety contact telephone numbers, shall be posted at the Site).

Table 1 in this HASP contains Emergency Response Telephone Numbers, and immediately following is a map detailing the directions to the nearest hospital emergency room. This information will be maintained at the work Site by the SHSO. The location of the nearest telephone will be determined prior to the initiation of on-site activities. In addition to any permanent phone lines, a cellular phone will be in the possession of the SHSO, or an authorized designee, at all times.

10.2 Responsibilities

Prior to the initiation of on-site work activities, the SHSO will:

- Notify individuals, authorities and/or health care facilities of the potentially hazardous activities and potential wastes that may develop as a result of the remedial activities;
- Confirm that first aid supplies and a fire extinguisher are available on-site;
- Have a working knowledge of safety equipment available; and,
- Confirm that a map detailing the most direct route to the hospital is prominently posted with the emergency telephone numbers.

The SHSO will be responsible for directing notification, response and follow-up actions and for contacting outside response personnel (ambulance, fire department, or others). In the case of an evacuation, the SHSO will account for personnel. A log of individuals entering and leaving the Site will be kept so that everyone can be accounted for in an emergency.

Upon notification of an exposure incident, the SHSO will contact the appropriate emergency response personnel for recommended medical diagnosis and, if necessary, treatment. The SHSO will determine whether and at what levels exposure actually occurred, the cause of such exposure, and the means to prevent similar incidents from occurring.

10.3 Accidents and Injuries

In the event of an accident or injury, measures will be taken to assist those who have been injured or exposed and to protect others from hazards. If an individual is transported to a hospital or doctor, a copy of the HASP will accompany the individual.

The SHSO will be notified and respond according to the severity of the incident. The SHSO will investigate the incident and prepare a signed and dated report documenting the investigation. An exposure-incident report will also be completed by the SHSO and the exposed individual. The form will be filed with the employee's medical and safety records to serve as documentation of the incident and the actions taken.

10.4 Communication

No special hand signals will be utilized within the work zone. Field personnel will utilize standard hand signals during the operation of heavy equipment.

10.5 Safe Refuge

Vehicles and on-site structures will serve as the immediate place of refuge in the event of an emergency. If evacuation from the area is necessary, project vehicles will be used to transport on-site personnel to safety.

10.6 Site Security and Control

Site security and control during emergencies, accidents and incidents will be monitored by the SHSO. The SHSO is responsible for limiting access to the Site to authorized personnel and for oversight of reaction activities.

10.7 Emergency Evacuation

In case of an emergency, personnel will evacuate to the safe refuge identified by the SHSO, both for their personal safety and to prevent the hampering of response/rescue efforts.

10.8 Resuming Work

A determination that it is safe to return to work will be made by the SHSO and/or any personnel assisting in the emergency, e.g., fire department, police department, utility company, etc. No personnel will be allowed to return to the work areas until a full determination has been made by the above-identified personnel that all field activities can continue unobstructed. Such a determination will depend upon the nature of the emergency (e.g., downed power lines -- removal of all lines from the property; fire -- extinguished fire; injury -- safe transport of the injured party to a medical facility with either assurance of acceptable medical care present or completion of medical care; etc.). Before on-site work is resumed following an emergency, necessary emergency equipment will be recharged, refilled or replaced. Government agencies will be notified as appropriate. An Incident Report Form will be filed.

10.9 Fire Fighting Procedures

A fire extinguisher will be available in the work zone during on-site activities. This extinguisher is intended for small fires. When a fire cannot be controlled with the extinguisher, the area will be evacuated immediately. The SHSO will be responsible for directing notification, response and follow-up actions and for contacting ambulance and fire department personnel.

10.10 Emergency Decontamination Procedure

The extent of emergency decontamination depends on the severity of the injury or illness and the nature of the contamination. Whenever possible, minimum decontamination will consist of washing, rinsing and/or removal of contaminated outer clothing and equipment. If time does not permit decontamination, the person will be given first aid treatment and then wrapped in plastic or a blanket prior to transport.

10.11 Emergency Equipment

The SHSO will maintain a dedicated vehicle containing the following on-site equipment for safety and emergency response: fire extinguisher; first-aid kit; and, extra copy of this HASP.

11.0 SPECIAL PRECAUTIONS AND PROCEDURES

The activities associated with this remediation may involve potential risks of exposure to both chemical and physical hazards. The potential for chemical exposure to hazardous or regulated substances will be significantly reduced through the use of monitoring, personal protective clothing, engineering controls, and implementation of safe work practices.

11.1 Heat/Cold Stress

Training in prevention of heat/cold stress will be provided as part of the site-specific training. The timing of this project is such that heat/cold stress may pose a threat to the health and safety of personnel. Work/rest regimens will be employed, as necessary, so that personnel do not suffer adverse effects from heat/cold stress. Special clothing and appropriate diet and fluid intake regimens will be recommended to personnel to further reduce this temperature-related hazard. Rest periods will be recommended in the event of high/low temperatures and/or humidity to counter the negative effects of heat/cold stress.

11.2 Heavy Equipment

Working in the vicinity of heavy equipment is the primary safety hazard at the Site. Physical hazards in working near heavy construction equipment include the following: overhead hazards, slips/trip/falls, hand and foot injuries, moving part hazards, improper lifting/back injuries and noise. All workers will be properly trained in accordance with OSHA requirements (29 CFR 1910). No workers will be permitted within any excavated areas without proper personal protective equipment (PPE), including, as warranted, any necessary Level C equipment (e.g., respirators and protective suits). Air monitoring in excavation areas will be conducted for VOCs in accordance with Section 5.0.

11.3 Additional Safety Practices

The following are important safety precautions to be enforced during the remedial activities.

Medicine and alcohol can aggravate the effect of exposure to certain compounds. Controlled substances and alcoholic beverages will not be consumed during remedial activities. Consumption of prescribed drugs will only be at the discretion of a physician familiar with the person's work.

Eating, drinking, chewing gum or tobacco, smoking, or other practices that increase the probability of hand-to-mouth transfer and ingestion of material is prohibited except in areas designated by the SHSO.

Contact with potentially contaminated surfaces will be avoided whenever possible. Workers will not unnecessarily walk through puddles, mud or other discolored surfaces; kneel on the ground; or lean, sit, or place equipment on drums, containers, vehicles, or the ground.

Personnel and equipment in the work areas will be minimized, consistent with site operations.

Unsafe equipment left unattended will be identified by a "DANGER, DO NOT OPERATE" tag.

Work areas for various operational activities will be established.

11.4 Daily Log Contents

The SHSO will establish a system appropriate to the Site, the work and the work zones that will record, at a minimum, the following information:

- Personnel on the Site (arrival and departure times) and their destination on the Site;
- Incidents and unusual activities Site such as (but not limited to) accidents, spills, breaches of security, injuries, equipment failures and weather-related problems;
- Changes to the HASP; and,
- Daily information, such as: changes to work and health and safety plans, work accomplished and the current Site status, and monitoring results.

12.0 COVID-19 POLICIES AND PROCEDURES

The Coronavirus 2019 (COVID-19) is a highly infectious respiratory disease caused by the SARS-CoV-2 virus, and has created a global pandemic. The virus may be transferred by person-to-person contact via respiratory droplets or touching, and may be transferred by touching a contaminated surface and then touching your eyes, nose and/or mouth. As a response to the pandemic, general guidelines have been established by the Centers for Disease Control and Prevention (CDC), the world health organization (WHO), the Occupational Safety and Health Administration (OSHA) and New York State (Governor's Executive Order No. 202.42), as well as localized jurisdictions. The following policies and procedures have been established specifically for this Site in order to mitigate risks associated with potential COVID-19 exposure.

12.1 At-Home Screening

GBTS personnel, associated sub-contractors, and authorized guests will be required to conduct at-home screening procedures prior to arriving at the site. The at-home screening will consist of individuals measuring their body temperature and answering COVID-19 related questions in the attached questionnaire. If the individual's temperature exceeds 100.4^{o}F, or if the individual answers "yes" to any of the questions presented on the questionnaire, the individual must remain at home and notify appropriate personnel at the Site.

12.2 Site Temperature Screening

GBTS personnel, associated sub-contractors, and authorized guest will be required to conduct temperature screening once at the Site. Upon arriving at the Site, the individual's body temperature will be measured by the Site Safety and Health Officer (SSHO) by using a medical grade touchless infrared thermometer or thermal scanning equipment. The individual's body temperature and associated signature will be recorded on the attached field form. If the individual's temperature exceeds 100.4^{o}F, the individual will not be permitted on Site.

12.3 Site Practices

The following practices will be enforced by GBTS personnel, associated sub-contractors, and authorized guests.

12.3.1 Hand Hygiene

Hand sanitizing with an alcohol-based product (at least 60% ethanol or 70% isopropanol) should be conducted upon entering and/or returning to the Site (a sanitizing station will be located at the Site entrance). The sanitizing solutions/gel should be applied to hands, and rubbed together until dry (at least 20 seconds), making sure to cover all surfaces. Avoid touching your eyes, nose and mouth while at the Site. Hand sanitizing should be conducted prior to donning (i.e., putting on) any type of face covering and/or respirator.

12.3.2 Social Distancing

Where possible maintain a minimum of six (6) feet between individuals.

Do not occupy an individual's work area.

Do not use someone else's tools and/or equipment (if applicable).

Where a minimum of six (6) feet between individuals cannot be maintained, engineering controls such as repositioning equipment may be warranted to maintain social distancing guidelines.

12.2.3 Respiratory Etiquette

Properly use face coverings (e.g., dust masks, surgical masks, cloth face coverings). Hand sanitizing should be conducted before putting on any/all face coverings or respirators.

Cover your mouth and nose with a tissue when coughing or sneezing, and dispose of the tissue in a designated non-touch waste bin.

Perform hand hygiene after having contact with respiratory secretions and/or contaminated objects/materials.

12.2.4 Other Procedures

Cleaning and disinfection of equipment/tools should be conducted prior to and after use. All disinfecting products used shall be registered and approved by the Environmental Protection Agency (EPA), and located on the List N: Disinfectant for Use Against SARS-CoV-2.

General housekeeping activities should be performed in work area to prevent accumulation of dust/debris, including use of no-touch waste bins.

Encourage individuals to report any safety and health concerns.

Signage such as posters, banners, flyers and/or stickers that illustrate the importance of hand hygiene, social distancing, respiratory etiquette, etc. may be appropriate in certain location throughout the Site (e.g. entrances/exits, restrooms, break areas, etc.).

12.2.5 Illness Response

If an individual becomes ill, or develops symptoms associated with COVID-19 (e.g., fever, persistent cough, shortness of breath, chills/shakes, muscle pain, headaches, sore throat, and new loss of smell or taste) while on Site, the individual must immediately put on appropriate face covering (if not already wearing) and report symptoms to SSHO.

All other individuals on Site must immediately put on appropriate face coverings (if not already wearing). Hand sanitizing should be conducted before putting on any/all face coverings or respirators.

The affected individual must perform a temperature self-screen. The individual must return home to monitor their symptoms. Appropriate measures should be taken to by the affected individual as to not impact their family and others. Ongoing monitoring of symptoms should be conducted by the affected individual according to CDC guidelines, and medical attention may be warranted if symptoms progress.

Ongoing monitoring of symptoms should also be conducted by non-affected individuals, and if COVID-19 related symptoms develop, self-quarantine and/or medical testing may be warranted.

13.0 EMERGENCY INFORMATION

13.1 Emergency Contact Information

The following page presents a table indicating emergency contact information. This table should be copied and freely distributed and/or posted at the Site to ensure ready access.

Emergency Contact Information

Emergency Agencies	Phone Numbers
EMERGENCY	**911**
HOSPITAL 60 North Midland Avenue Nyack, New York 10960	**(845) 348-2000 or 911**
POLICE Village of Spring Valley - Police Headquarters 200 North Main Street Spring Valley, New York 10977	**(845) 356-7400 or 911**
FIRE Spring Valley Fire Department	**(845) 371-8411 or 911**
Chestnut Ridge Village Hall	(845) 425-2805
Town of Clarkstown, Department of Engineering and Facilities Management	(845) 639-2111
Site Health and Safety Officer, Scott Spitzer, GBTS	(845) 452-1658 (845) 867-4717

13.2 Directions to Hospital

Approximately 14 minutes travel time – 7.9 miles

South on Chestnut Ridge Road (0.3 mile)

Turn Left Scotland Road (0.5 mile)

Turn Right Scotland Hill Road (0.5 mile)

Turn Left South Pascack Road (0.7 mile)

Turn Right Old Nyack Turnpike, then Ramp on Left for I-287/I-87 EAST (0.3 mile)

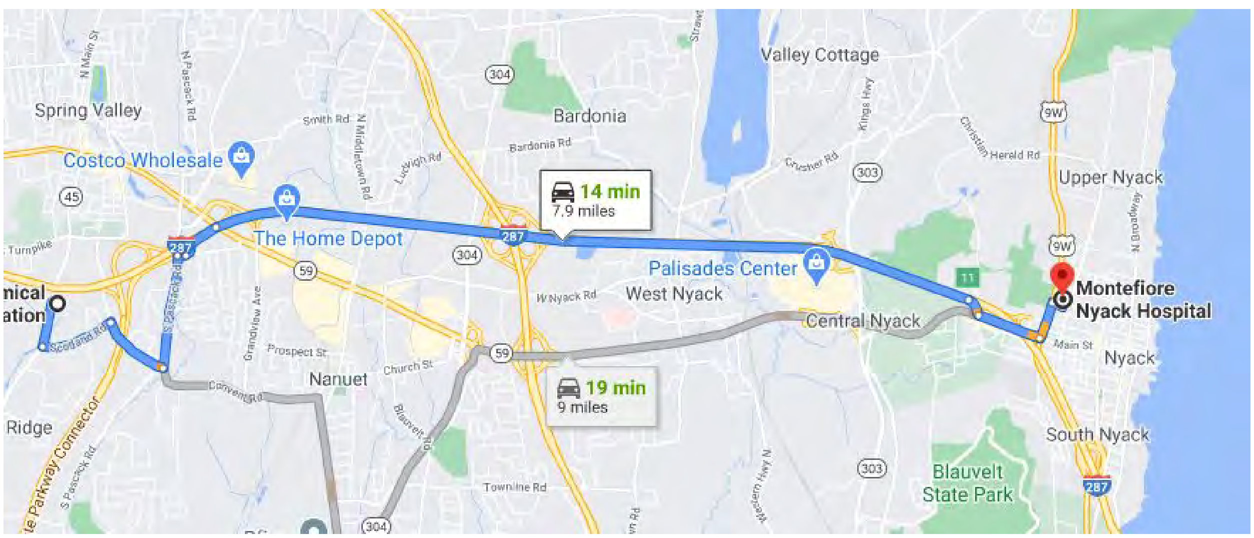
I-287/I-87 EAST to Exit 11 (4.9 mile)

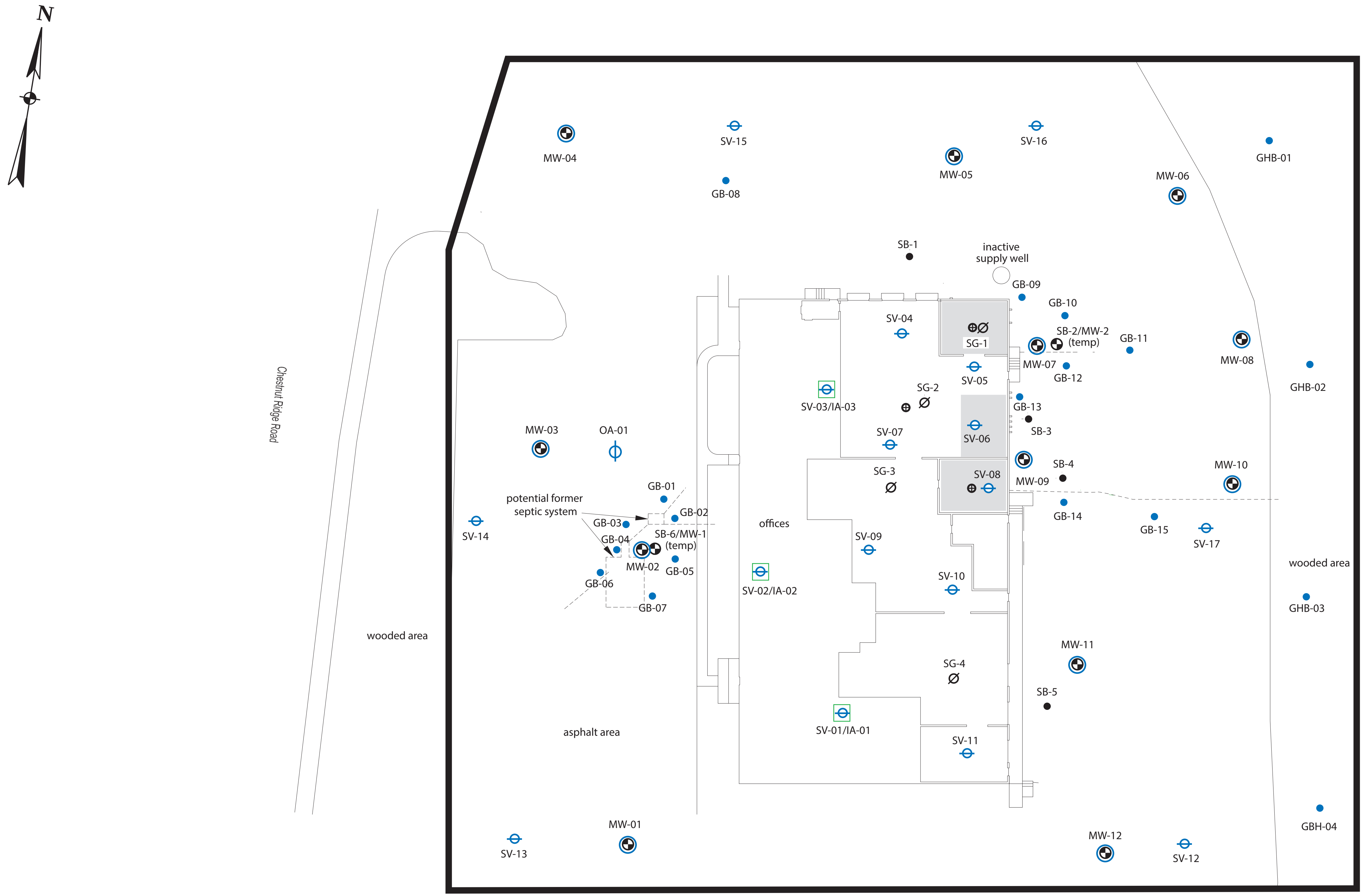
Turn Left NY-59 East (0.4 mile)

Turn Left NY-9W North (0.2 mile)

Hospital on the Right (east side) of 9W

13.3 Map to Hospital





0 25 50
SCALE IN FEET
(APPROXIMATELY)

All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Legend:

- BCP site border
- potential former drain pipe
- area of chemical storage tanks
- former drain
- proposed soil boring
- proposed vapor sample
- proposed soil boring and permanent monitoring well
- previous soil boring
- previous soil vapor sample
- previous soil boring and temporary monitoring well
- co-located vapor and indoor air sample
- proposed outdoor ambient air sample (location to be determined in field)

Figure: Proposed Fieldwork Map

US Polychemical Corporation C344081 584 Chestnut Ridge Road Spring Valley Rockland County, New York	File: CS19058.50
	Scale as shown
	November 2021 | Attachment

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

<u>VOC Monitoring, Response Levels, and Actions</u>

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

<u>Particulate Monitoring, Response Levels, and Actions</u>

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be 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 must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

APPENDIX B

Quality Assurance Project Plan

SITE INVESTIGATION
QUALITY ASSURANCE PROJECT PLAN

US Polychemical Corporation

584 Chestnut Ridge Road
Village of Chestnut Ridge
Rockland County, New York

NYSDEC BCP Site: C344081

November 2021

GBTS Project: 21003-0031

Technical Services Division

22 IBM Road, Suite 101, Poughkeepsie, NY 12601 T: 845-452-1658 F: 845-485-7083
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SITE INVESTIGATION
QUALITY ASSURANCE PROJECT PLAN

November 2021

GBTS Project: 21003-0031

Prepared By:

Gallagher Bassett Technical Services
22 IBM Road, Suite 101
Poughkeepsie, New York 12601

Prepared For:

584 Chestnut Ridge LLC
584 Chestnut Ridge Road
Spring Valley, New York 10977

The undersigned have reviewed this Site Investigation Quality Assurance Project Plan and certify to 584 Chestnut Ridge LLC and to the New York State Department of Environmental Conservation that the information provided in this document is accurate as of the date of issuance by this office.

Scott Spitzer
Gallagher Bassett Technical Services
Technical Director – Environmental Consulting

Richard Hooker
Gallagher Bassett Technical Services
Manager – Environmental Consulting

TABLE OF CONTENTS

1.0 PROJECT MANAGEMENT

1.1 Project/Task Organization

Major participants in the project are shown below along with their specific responsibilities and authorities. Resumes for Gallagher Bassett Technical Services (GBTS) personnel and for the Data Validator are provided in Attachment D this Quality Assurance Project Plan (QAPP).

Michael Kilmer New York State Department of Environmental Conservation (NYSDEC)

Michael Kilmer is the project manager for the NYSDEC. He is responsible for review and approval of all project submittals.

James Blaney Operations Manager, Environmental, GBTS

James Blaney, CHMM is the Qualified Environmental Professional (QEP) for the project, responsible for overview of all project activities. Mr. Blaney has authority over all GBTS personnel and subcontractors and will be responsible for final review and approval of all project submittals prior to submission to the NYSDEC.

Scott Spitzer Technical Director, Environmental Consulting, GBTS

Scott Spitzer will be the Project Manager, responsible for directing and coordinating all project activities, reviewing all project documents, and ensuring that project plans are followed. Mr. Spitzer has authority to direct the activities of the field team (OSC and subcontractors).

Richard Hooker Quality Assurance Officer, GBTS

Richard Hooker, PhD will be responsible for reviewing all sampling procedures and certifying that the data was collected and analyzed using the appropriate procedures, and will assist in the development of the sampling and analytical portion of a site-specific quality assurance project plan (QAPP).

Erick Salazar On-Site Coordinator (OSC), GBTS

The OSC will be responsible for the completion of all on-site fieldwork, collection of all samples, completion of the field log, and chains of custody. The OSC will have authority over all on-site subcontractors.

Laboratory York Analytical Laboratories

York Analytical Laboratories, will be responsible for analysis of samples, and is New York State Department of Health (NYSDOH) Environmental Laboratory Approved Program (ELAP) certified in the appropriate categories, including PFOA and PFOS in drinking water by EPA Method 537.1 or ISO 25101.

Subcontractors *To be determined*

Subcontractors will be responsible for the operation of special equipment and providing technical assistance as needed. The laboratory subcontractor will be responsible for analysis of samples and will be New York State Department of Health (NYSDOH) Environmental Laboratory Approved Program (ELAP) certified in the appropriate categories.

1.2 Principal Data Users

The principal users of the generated data in this project are listed below.

1. Residents of the Village of Chestnut Ridge, especially those residing near the Site
2. 584 Chestnut Ridge LLC
3. NYSDEC

1.3 Problem Definition/Background

Site investigation is planned under the NYSDEC Brownfields Cleanup Program (BCP ID: C344081); previous Environmental investigative activities are detailed in the NYSDEC-approved Remedial Investigation Work Plan (RIWP) dated November 2021. The specific tasks detailed in the RIWP are wholly incorporated by reference into this QAPP. The RIWP describes the tasks required to investigate any environmental contamination at the Site.

Previous investigations of the Site documented the presence soils containing elevated levels of volatile organic compounds (VOCs), including chlorinated compounds (CVOCs) and petroleum products, which have contaminated groundwater. High levels of CVOCs were detected in soil vapor collected below the on-Site building.

1.4 Project/Task Description

The project will meet its objective through compliance with NYSDEC DER-10 Technical Guidance for site investigations.

1.5 Quality Objectives and Criteria

The data collected in this project will be used to document Site environmental conditions. In order to meet the data quality objectives of precision, accuracy, representation, comparability, and completeness the following actions will be taken:

- Soil, groundwater and soil vapor samples will be collected based on the procedures in the RIWP and this QAPP, to ensure data consistency.
- Data generated during sampling will be submitted for review by a third, independent party (see Section 3.2.1, below).

Prior to field activities, the QEP, Project Manager and the OSC will review the RIWP to ensure that the data quality objectives of precision, accuracy, representation, comparability, and completeness will be met during the field activities. At the completion of field activities, the Project Manager will review field logs and chains of custody to ensure that field activities met the intent of the RIWP. If a problem is identified, Mr. Richard Hooker and the Project Manager will meet to determine corrective measures necessary to meet data quality objectives.

1.6 Documents and Records

Electronic and paper copies of all fieldwork observations and measurements will be retained by GBTS.

2.0 SAMPLING AND ANALYSIS PLAN

Sample collection, handling and laboratory analysis is summarized below. A Proposed Remedial Investigation Map showing Site features and fieldwork locations is provided as Attachment A.

2.1 Sampling Overview

Borings will be extended in order to recover representative soil samples at various depths and to allow for the collection of soil vapor samples. Several borings will be completed as permanent groundwater monitoring wells to allow for the collection of reproducible groundwater quality samples. Air samples will be collected at several interior office areas and at an exterior area.

2.2 Fieldwork and Sampling Methodology

All fieldwork activities, including collection and handling of media samples, will be in accordance with the Standard Operating Procedures (SOPs) provided in Attachment B. Sampling will occur for per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane ("emerging contaminants", ECs) and guidelines for such sampling will be strictly followed by all field and laboratory personnel. Basic SOP components are summarized below.

2.2.1. General Fieldwork

The OSC will be responsible for compliance with the SOPs, including:

- Documentation of all fieldwork activities in logbooks for inclusion in final reports;
- Assessment of media characteristics (soil type, presence or absence of foreign materials, field indications of contamination), and instrument readings using properly calibrated and operated precision instruments;
- Identification of materials requiring special handling (media that may contain elevated concentrations of contaminants or is grossly contaminated, hazardous materials, etc.) and ensuring proper secure on-site storage, pending characterization and disposition;

- Ensuring that unforeseen environmental conditions are managed in accordance with applicable federal and state regulations;
- Sample collection, including procedures to minimize potential cross-contamination; and,
- Implementation of decontamination procedures.

Sample collection and laboratory analysis for PFAS and 1,4-dioxane will comply with NYSDEC guidance (*Sampling, Analysis, and Assessment of Polyfluoroalkyl Substances Under NYSDEC's Part 375 Remedial Programs*, January 2021), provided in Attachment B (SOPs), which includes a target list of PFAS compounds.

Guidelines for sampling of soil and/or groundwater for PFAS include the following (detailed protocols, including lists of prohibited behaviors and materials, are provided in the SOP):

- Sampling for PFAS will be conducted prior to sampling for other analytes, as practicable, to minimize cross contamination from sample containers utilized for other methods;
- Sampling personnel will comply with specific prohibitions in regards to field equipment, PPE, rain gear, personal clothing and body-care, food, etc.;
- Sample coolers will be held at low temperature using only ice (plastic freezer packs are prohibited);
- Decontamination protocols specific to PFAS will be followed, including use of "PFAS free" water and approved cleaning agents (Liquinox is prohibited); and,
- Compliance with laboratory requirements for sampling containers, field blanks, etc.

2.2.2. Soil Vapor and Air Sampling

Soil vapor and air sampling will be in accordance with applicable NYSDOH guidance, including use of a tracer gas at vapor locations to confirm adequate surface seals. Purge rates will not exceed 0.2 liters per minute. Co-located vapor and air samples will be collected over a twenty-four-hour period and soil vapor samples will be collected over a two-hour period (rate to not exceed 0.2 liters per minute), into laboratory-certified clean Summa canisters equipped with applicable flow regulators.

2.2.3. Extension of Borings and Soil Sampling

An initial total of thirty-one (31) soil borings will be extended at exterior areas, with additional "step out" borings as needed based on field and instrument observations of contamination, in order to define the extent of Site soil containing analyte concentrations above the applicable SCOs. Additional fieldwork rounds for the advancement of soil borings and/or installation of monitoring wells may be required to fully delineate identified contamination, and to determine if contamination extends or is migrating off-site (the need for an expanded investigation scope will be determine in consultation with NYSDEC).

Borings will be extended using mechanized and hand-held equipment), capable of collecting soil cores at discreet intervals. Mechanized Borings will be extended to at least the deeper of 15 feet below ground surface or to a sample interval below the groundwater interface, or until refusal (all borings to be completed as groundwater wells will be extended to a minimum depth that allows for proper installation of the well screen).

Soil is anticipated to be collected using coring barrels lined with disposable acetate sleeves (split spoons may be utilized based on Site conditions and equipment availability).

Soil will be continuously recovered from borings, and material in each sampling interval will be characterized in order to identify existing subsurface physical conditions and any overt evidence of contamination. Sampling of recovered material for laboratory submission will be conducted from all boring intervals, as warranted, to fully define contaminants in soil and provide sufficient areal and vertical delineation. Samples will be collected (at a minimum) from the soil stratum intercepting the groundwater table, any fill material, and from soil exhibiting field evidence of impacts (if encountered) or at soil strata corresponding to previously identified contamination in nearby boring locations (for delineation).

Sampling may occur in multiple rounds to ensure complete Site characterization in compliance with DER-10, Chapter 3, including a full characterization of any existing soils proposed to remain in place as a clean cover system (based on Site development requirements, the characterization of *in situ* cover soils may be conducted in full or part during a Pre-design Investigation).

Samples will be collected directly from the freshly cut open sleeve, using disposable plastic trowels or properly decontaminated stainless steel instruments, or may be manually collected directly from exposed soil or the sampling instrument using dedicated disposable latex gloves.

Soil sampling for VOCs will follow USEPA Method 5035 protocols, using disposable 5-gram plastic syringes to place material into laboratory-supplied glass vials (prepared with stirs bars and appropriate preservatives).

2.2.4. Installation of Monitoring Wells and Groundwater Sampling

It is anticipated that a minimum of twelve (12) borings will be completed as permanent monitoring wells, with final depths of 12 to 14 feet bgs. The wells will be constructed of two-inch PVC casing with a ten-foot length of 0.01-inch slotted PVC well screening across the water table. No glue will be used to secure PVC connections. The wells will be constructed with approximately 2 feet of screening above the water table and approximately 8 feet of screening below the water level. The annular space between the well screen/casing and the borehole will be backfilled with clean silica sand and hydrated bentonite and/or cement grout. Wells will be secured with locked caps and metal covers. The elevation of the top of the PVC well riser, relative to a permanent on-site marker, will be documented for use in determining relative groundwater elevations. The wells will be developed one week following installation.

All Site monitoring wells will be purged and sampled using USEPA Low Flow methodology. Sampling will begin at the potentially least contaminated well and proceed to the potentially most contaminated well.

Prior to purging, the air in the well head will be screened with a PID and the static water level (relative to the top of the casing) will be measured with a decontaminated water-level meter. A peristaltic pump with plastic tubing (or equivalent equipment) will be used for sampling. The tubing (or a submersible pump attached to tubing, if required by Site conditions) will be slowly lowered until reaching two to three feet off of the well bottom to prevent disturbance and re-suspension of any remaining sediment.

The water level will be measured before the pump is started and at intervals of every three to five minutes. Pumping rates will be reduced (as needed) to the minimum capabilities of the pump to ensure stabilization of the water level (drawdown of 0.3 feet or less). During pumping, field indicator parameters (turbidity, temperature, specific conductance, pH, redox potential, and dissolved oxygen) will be monitored and recorded approximately every five minutes. The well will be considered stabilized, and sampling may proceed, when the indicator parameters have stabilized for three consecutive readings (minimum purge interval at least 15 minutes).

2.2.5. Other Materials

Any non-soil solid materials requiring laboratory analysis will be placed into laboratory supplied glassware when possible, or will alternatively be placed into double locking plastic bags and then boxed in order to prevent a tear or other breach in the bags. Liquid samples from excavations, collection pits, or drums/tanks, etc., will be sampled using a dedicated disposal sampling device.

2.3 Sample Handling and Custody

2.3.1 Sample Containers

The following laboratory-supplied containers will be used for sample collection (as applicable):

Media	Analyte Class	Collection Container (subject to laboratory requirements)	Preservation
Vapor/Air	VOCs	1, 6-liter Summa canister (or equivalent)	none
Soil	PFAS	1, 250-ml HDPE plastic (fill halfway)	4° C
Soil	VOCs	Laboratory 5035 VOA kit, (4, 40-ml glass vials)	Method 5035
Soil	SVOCs, metals, PCBs, pesticides, herbicides, cyanide	1, 8-oz. glass jar	4° C
Soil	PFAS MS/MSD	1, 250-ml HDPE plastic (fill halfway), (may use soil from a sample container)	4° C
Soil	All other MS/MSD	additional 8-oz. glass jar	4° C

Media	Analyte Class	Collection Container (subject to laboratory requirements)	Preservation
Water	PFAS	2, 250-ml HDPE plastic (fill to neck)	4° C
Water	VOCs	4, 40-ml prepared glass vials	4° C, HCl
Water	SVOCs, PCBs, pesticides, herbicides	1-liter amber glass (specified by laboratory)	4° C
Water	Metals - total	1, 500-ml HDPE plastic	4° C
Water	Metals - dissolved	1, 500-ml HDPE plastic	4° C, HNO_3
Water	Cyanide	1, 500-ml HDPE plastic	4° C, NaOH
Water	Trip blank (PFAS)	2, 250-ml HDPE plastic (fill to neck)	4° C
Water	Field blank (PFAS)	1, 250-ml HDPE plastic (fill to neck)	4° C
Water	Trip blank (VOCs)	3, 40-ml prepared glass vials	4° C, HCl
Water	Field blank (other analytes)	As per sample collection requirements	See above

2.3.2 Sampling Frequency

SOIL VAPOR AND AIR

Eleven (11) sub-slab vapor samples will be collected from beneath the building, and six (6) soil vapor samples will be collected at exterior areas. Three (3) air samples will be co-located and collected concurrently with vapor samples at the western portion of the on-Site building, and with one outdoor ambient air sample (location to be determined in the field).

SOIL

An initial total of thirty-one (31) soil borings (inclusive of four manual borings in wetland areas) will be extended at exterior areas, with additional "step out" borings as needed based on field and instrument observations of contamination, in order to define the extent of Site soil containing analyte concentrations above the applicable SCOs.

Additional fieldwork rounds for the advancement of soil borings and/or installation of monitoring wells may be required to fully delineate identified contamination, and to determine if contamination extends or is migrating off-site (the need for an expanded investigation scope will be determine in consultation with NYSDEC).

All boring locations will be sampled for soil. Based on three 5- foot intervals per mechanized boring, and one sample per manual boring, a likely maximum of eighty-five (85) soil samples will be submitted for laboratory analysis.

Samples will be analyzed for NYSDEC Part 375-6.8 parameters, including USEPA Target Compound List (TCL) VOCs and semi-volatile organic compounds (SVOCs) plus 30 tentatively identified compounds (TICs), USEPA Target Analyte List (TAL) metals, Cr^{+6}, polychlorinated biphenyls (PCBs), pesticides, herbicides and cyanide, as well as ECs (1,4-dioxane and PFAS, in accordance with the most current NYSDEC guidance).

Analysis of samples may be modified in consultation with the NYSDEC Project Manager based on initial sampling results, including the presence or absence of field evidence of contamination. Additional analysis may be performed based repository requirements for waste characterization prior to off-site disposal.

GROUNDWATER

All monitoring wells will be sampled for NYSDEC Part 375-6.8 parameters, including USEPA Target Compound List (TCL) VOCs and SVOCs plus 30 TICs, USEPA TAL metals including Cr^{+6}, PCBs, pesticides, herbicides and cyanide, as well as ECs (1,4-dioxane and PFAS, in accordance with the most current NYSDEC guidance).

Analysis of samples may be modified in consultation with the NYSDEC Project Manager based on initial sampling results, including the presence or absence of field evidence of contamination.

SUMMARY OF PROPOSED SOIL BORINGS AND MONITORING WELLS

The proposed number of soil boring and new monitoring wells is summarized below (the actual number of borings extended and wells completed may be higher, based on encountered field conditions).

Quantity	Fieldwork Element	Purpose
11	Install Soil Vapor Implants	Collect soil vapor samples
31	Extend Soil Borings	Collect soil samples from multiple depth
12	Install Monitoring Wells	Collect groundwater samples from fixed location

The estimated approximate number of samples to be collected is outlined below (actual number of samples may vary based on conditions encountered during the investigation).

Media / QC Parameter	Number of Samples [a]	Analytes (USEPA Method) [b, c]
Soil Vapor & Air	11 vapor / 4 air	VOCs (TO-15)
Soil	85	PFAS: NYSDEC target list (537, modified) TCL: VOCs +10 and SVOCs +20 (8260C/8270D) TAL: metals (6010D and 7473); chromium^{+6} (7196A); cyanide (9010C) Other: pesticides (8081); herbicides (8151A); PCBs (8082)

Media / QC Parameter	Number of Samples [a]	Analytes (USEPA Method) [b, c]
Groundwater	12	PFAS: NYSDEC target list (537, modified) TCL: VOCs +10 and SVOCs +20 (8260C/8270D) TAL: metals, total & dissolved (6010D and 7473); chromium^{+6} (7196A); cyanide (9010C) Other: pesticides (8081); herbicides (8151A); PCBs (8082)
Trip Blank (PFAS)	1 per sample cooler (each day of sampling)	PFAS NYSDEC target list (537, modified)
Trip Blank (VOCs)	1 per sample cooler (each day of sampling)	TCL VOCs +10 (8260)
Field Blank (PFAS)	1 per sample day	PFAS NYSDEC target list (537, modified)
Equipment Blank (PFAS)	1 per sampling day (non-dedicated)	PFAS NYSDEC target list (537, modified)
Field Blank (other)	1 for every 20 samples (non-dedicated)	As per sample collection requirements
Duplicates, MS/MSD	1 for every 20 samples (minimum 1/week)	As per sample collection requirements; PFAS soil MS/MSD may be from same container as sample

Notes

a Assumes a maximum of 3 soil samples from each of 27 deep borings, and 1 per manual boring. Equipment blanks (when required) to be collected at a minimum of one per day for each matrix.

b PFAS will be analyzed by LC-MS/MS for PFAS using methodologies based on EPA Method 537; additional laboratory methods may include Synthetic Precipitation Leaching Procedure (SPLP, by 1312, and/or Total Oxidizable Precursor Assay (TOP Assay).

c 1,4-dioxane by 8270 SIM

2.3.3 Sample Custody

Samples will be handled by the OSC and maintained at cold temperatures (4 +/- 2 °C), as warranted. Upon the completion of each day of sample collection activities, all samples will be shipped via either courier or overnight delivery (per laboratory requirements) to a NYSDOH ELAP certified laboratory under proper chain of custody.

Laboratory personnel will record the cooler temperature upon receipt and analyze the samples prior to the expiration of the hold times specified in NYSDEC Analytical Services Protocols (ASP).

2.4 Analytical Methods

Media samples will be analyzed as indicated in Section 2.3.2, above. Analytical methods for the samples will be implemented as follows:

Matrix	Sample Analysis (Holding Time)	USEPA Analytical Method
Vapor/Air	VOCs (30 days)	TO-15
Soil	PFAS (14 days)	537, modified (reporting limit 1 µg/kg)
Soil	TCL VOCs+10 (14 days)	8260C; 8270 for 1,4-dioxane (1,4-dioxane reporting limit 0.1 mg/kg) [a]
Soil	TCL SVOCs+20 (14 days)	8270B
Soil	TAL metals (180 days; mercury 28 days)	6010C/7471B
Soil	cyanide (14 days)	9010C
Soil	pesticides/PCBs/herbicides (14 days [b])	8081A/8082/8151A
Water	PFAS (14 days)	537, modified (reporting limit 2 ng/L)
Water	TCL VOCs+10 (14 days)	8260C; 8270 SIM for 1,4-dioxane (1,4-dioxane reporting limit 0.35 µg/L) [a]
Water	TCL SVOCs+20 (7 days [b])	8270B
Water	TAL metals (180 days; mercury 28 days)	6010C/7471B
Water	cyanide (14 days)	9010C
Water	pesticides/PCBs/herbicides (7 days [b])	8081A/8082/8151A
a Laboratory will meet required reporting limits running standard USEPA Method 8270 b Days for extraction, 40 days after extraction for laboratory analysis		

2.5 Quality Control

Accuracy and precision will be determined by repeated analysis of laboratory standards, and matrix effects and recovery will be determined through use of spiked samples. The laboratory will run standards, blanks, and spiked samples during sample analysis.

Duplicate sampling (for all parameters), and matrix spike (MS)/matrix spike duplicate (MSD) analyses, will be performed in accordance with Section 2.3.2. For each day of sampling, a trip blank will be included with each sample cooler and be analyzed for PFAS or VOCs, as applicable.

Samples will be identified using a unique ID number. This ID will be recorded on the sampling log and/or field record and the sampling container (samples for each fieldwork day will be assigned to a Sample Delivery Group [SDG] by the laboratory). In accordance with current best fieldwork practices, permanent marker will not be utilized to label samples planned for analysis for PFAS. Samples for each day of fieldwork will be shipped via courier to the laboratory under proper chain of custody procedures.

2.6 Quality Assurance

2.6.1 Instrument/Equipment, Testing, Inspection, and Maintenance

Field measurements will be conducted using monitoring equipment specialized for each task, including use of a PID during fieldwork to screen for volatile organic vapors. All equipment will be properly stored (within buildings or construction trailers when not in use) and calibrated (as warranted) in accordance with the manufacturer's instructions (instrument malfunction is normally apparent during calibration). In the event of malfunction, equipment will be cleaned and tested. Equipment testing, inspection and maintenance will be the responsibility of the Project Manager and OSC. Any other equipment selected for field measurements will be similarly managed.

2.6.2 Inspection/Acceptance of Supplies and Consumables

All supplies and consumables will be inspected and tested (if necessary) by either the Project Manager or the OSC upon receipt.

The following supplies and consumables will be used for each sample:

- Laboratory-supplied sampling containers, as specified in Section 2.3.1
- Laboratory-supplied materials for PFAS sampling, including trip blanks and PFAS-free cooler
- Plastic tubing for groundwater and soil vapor sampling
- PFAS-free water for decontamination
- Disposable gloves (nitrile or equivalent)

2.6.3 Data Management

For the purpose of data management, the data can be divided into field and laboratory data.

Field data will be recorded at the time of measurement on written field logs.

Laboratory data will be reviewed upon receipt and summarized in data summary tables. The NYSDEC electronic data deliverable format for the analytical data will be requested from the testing laboratory.

NYSDEC ASP Category B Data Deliverables will be requested from the testing laboratory and forwarded to an independent third party data validator for the development of Data Usability Summary Report (DUSR).

3.0 DATA REVIEW, VALIDATION AND USABILITY

3.1 Field Measurements

If field instruments are determined to be functioning correctly through calibration and measurements of standards, and if there are no inconsistencies between written records and data recorded in the meters, the data will be assumed to be valid and will be accepted as an indication of field conditions. If instruments malfunction prior to field measurement, they will be restored to proper function prior to re-use. If they malfunction immediately after field measurements are taken, the measurements will be retaken as soon as possible. Inconsistencies between written records and recorded meter data will be resolved by re-testing the material, if possible. If re-testing is not possible, (i.e. the sample has been shipped to the laboratory), the inconsistency will be described in appropriate subsequent reporting and the laboratory analysis will be utilized to classify the material. In addition, all field data will be reviewed by the Project Manager for consistency and plausibility.

3.2 Laboratory Analysis

A NYSDOH ELAP-certified laboratory will provide a NYSDEC ASP Category B data package and NYSDEC Electronic Data Deliverable format for the determinative sample analyses.

3.3 Standards, Criteria and Guidance

The following Standards, Criteria and Guidance (SCGs) are applicable for this Site:

SOIL

Soil results are compared to Soil Cleanup Objectives (SCOs) provided in 6 NYCRR Subpart 375, Table 375-6.8(a) Unrestricted Use SCOs and 6.8(b) Restricted-Commercial and Industrial Use SCOs, Supplemental SCOs and/or Soil Cleanup Levels in NYSDEC CP-51 Soil Cleanup Guidance, Tables 1 to 3, and current NYSDEC guidance for PFAS. SCOs are provided as Attachment C.

WATER

Water results are compared to NYSDEC Division of Water Ambient Water Quality Standards and Guidance Values (AWQS), provided in Technical and Operational Guidance Series 1.1.1, and current NYSDEC guidance for PFAS.

VAPOR AND AIR

The State of New York does not have any SCG for volatile chemicals in subsurface vapors. Vapor results will be evaluated in terms of Site data as a whole, and will include any needed discussion of potential vapor intrusion concerns (may include references to applicable NYSDOH guidance). Air results will be compared to NYSDOH Air Guideline Values and background levels presented in current NYSDOH guidance documents.

3.4 Verification and Validation Methods

3.4.1 Verification Method

Once collected, all data will go to the Project Manager for review and verification. Review will involve determining that data has been collected at the proper locations by the proper persons and that all field and laboratory logs are complete. In addition, a Data Usability Summary Report (DUSR) will be prepared by a third, independent party. A resume outlining the education and data validation experience of the individual preparing the DUSR is provided in Attachment D.

3.4.2 Authority for Verification

Authority for verification, validation, and resolution of data issues will be distributed among the investigators. Authority to resolve issues regarding verification of field measurements will rest with the QEP, Project Manager and Mr. Richard Hooker.

4.0 REPORTING REQUIREMENTS

Following review, validation, and verification, all data will be conveyed to users via a Remedial Investigation Report (RIR) in accordance with the requirements of NYSDEC DER-10 Section 3.1.4.

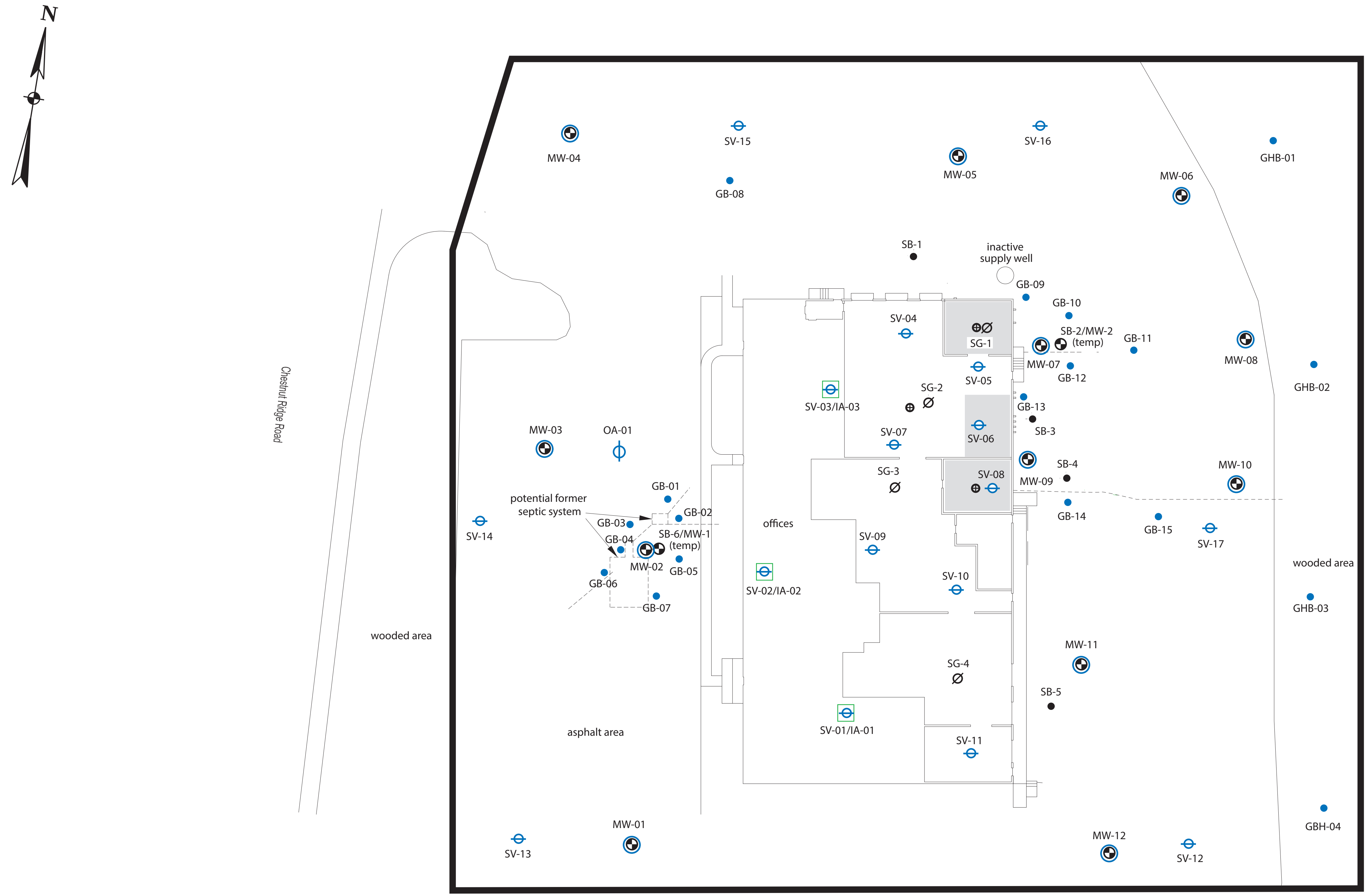
The RIR will summarize all data collected during implementation of the RIWP (and any additional work), and will include, at a minimum:

- Descriptions of fieldwork activities and observations;
- Summaries of laboratory analytical results from sampling events, described in the report text and provided in data summary tables, as well as DUSRs for all data;
- Characterization of contamination sources (including environmental fate and transport);
- A qualitative human exposure assessment;
- Accounts of any deviations from RIWP procedural requirements; and,
- Conclusions drawn from applicable, available data.

ATTACHMENT A

Proposed Fieldwork Map

GALLAGHER BASSETT | TECHNICAL SERVICES



0 25 50
SCALE IN FEET
(APPROXIMATELY)

All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Legend:
- BCP site border
- potential former drain pipe
- area of chemical storage tanks
- former drain
- proposed soil boring
- proposed vapor sample
- proposed soil boring and permanent monitoring well
- previous soil boring
- previous soil vapor sample
- previous soil boring and temporary monitoring well
- co-located vapor and indoor air sample
- proposed outdoor ambient air sample (location to be determined in field)

Figure: Proposed Fieldwork Map

US Polychemical Corporation C344081
584 Chestnut Ridge Road
Spring Valley
Rockland County, New York

File: CS19058.50

Scale as shown

November 2021 | Attachment A

ATTACHMENT B

Standard Operating Procedures

GALLAGHER BASSETT | TECHNICAL SERVICES

STANDARD OPERATING PROCEDURES

Fieldwork Sampling
and
Decontamination

Updated April 2021

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TABLE OF CONTENTS

I. INTRODUCTION

This document provides Standard Operating Procedures (SOPs) for use by Gallagher Bassett Technical Services (GBTS) personnel during fieldwork events that require the collection of soil, groundwater, soil vapor and/or air samples. General procedures are presented below; detailed protocols, as available, are provided as supplemental attachments. Equipment checklists, forms and calibration documents are maintained at GBTS offices. All SOPs and supporting documentation are periodically updated.

II. FIELDWORK SAMPLING

Fieldwork sampling procedures are described below. Selection of field equipment will be based on anticipated site conditions (updated check-lists of equipment and supplies required for sampling activities are maintained at the local field office). All equipment operations will be in accordance with applicable operating manuals and specifications, and will be conducted (as needed) by an experienced subcontractor holding applicable permits/licenses. Decontamination procedures will be implemented as warranted during all fieldwork activities. Special requirements for PFAS sampling are noted in Section III.

A. Procedures to be Conducted Prior to Fieldwork

Prior to the initiation of any ground-intrusive fieldwork, a request for a complete utility markout of the fieldwork site will be submitted to an appropriate service, as required by state regulations. Confirmation of underground utility locations will be secured and a field check of the utility markout will be conducted prior to the extension of soil borings[1].

A Fieldwork Map and Work Plan, indicating sampling locations and objectives, will be prepared prior to fieldwork activities, and sampling locations will be confirmed and located prior to starting work.

B. General Fieldwork Methodology

At the start of the wok day, all on-site personnel, including environmental subcontractors and observers, will be briefed on planned activities and the contents of the site-specific Health and Safety Plan (HASP). Independent field logs will be utilized to document relevant information, including arrival and departure times of on-site personnel, safety meetings, basic weather conditions, and detailed notes and drawings documenting all fieldwork activities and/or any other relevant events and conditions.

On-site personnel will be properly dressed for the intended activities[2] and the anticipated weather conditions, including use of personnel protective equipment in accordance with the HASP.

Sampling locations will be determined in the field, measured to the nearest 0.5-foot relative to a fixed on-site marker, and will be recorded in logbooks for inclusion in all final maps.

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[1] Markout requirements apply to any ground intrusive methodologies, including the extension of test pits.

[2] Special care is required when for sampling of PFAS; see Section IV

Media will be collected in accordance with the Quality Assurance Project Plan (QAPP) and in a manner consistent with NYSDEC and/or NYSDOH requirements, including protocols for handling and custody. New, dedicated disposable nitrile gloves will be worn at each sampling location, and will be changed frequently based on field conditions. Fieldwork personnel will assess media characteristics (e.g., soil type, presence of debris, indications of contamination, etc.) and record all observations in log books.

On-site senior personnel will be responsible for: a) identifying any materials that require special handling, such as media that may contain high levels of contaminants or is grossly contaminated or likely to be hazardous; b) ensuring that identified materials are properly securely stored on-site (stockpiled on plastic and covered, or placed in approved containers), pending characterization and proper disposition; and, c) ensuring that unforeseen environmental conditions are managed in accordance with applicable federal and state regulations.

Sample collection from recovered media will be performed without unnecessary delay. Samples will be placed into labeled containers provided by the laboratory, stored in dedicated coolers kept at 4 (+/-2) °C and handled under proper chain of custody. All samples will be shipped to a NYSDOH ELAP certified laboratory via laboratory courier (either upon completion of each day of sample collection activities, or the following day after overnight storage in a dedicated sample refrigerator).

C. Extension of Soil Borings

Soil borings will be extended using either hand-held or mechanized equipment, based on site conditions and Work Plan requirements. Mechanized equipment includes using either direct push technology (DPT) or rotary methods, including hollow stem auger (HSA) and sonic drilling. The small size of DPT rigs allows for sampling in tight spaces and areas that are sensitive to the use of heavy equipment. DPT can be used in overburden soils where the soil texture allows for direct push of sampling equipment. A HSA or sonic rig will be utilized if significant subsurface obstructions (e.g., large cobbles, boulders, concrete, etc) are (or are expected to be) encountered.

Hand borings will be extended (as warranted) using manual DPT equipment (e.g., Geoprobe), which includes a collection barrel lined with disposable acetate sleeves, extension rods and a slide hammer. The barrel will collect samples from discreet intervals of 2 feet. Hand boring methods are generally restricted to shallow soil sampling (0 to 6’ below grade) and may be employed/attempted if access by mechanized equipment is not practical.

DPT will typically be utilized during the extension of borings in overburden soils. The DPT rig will be equipped with a macro-core sampling barrel (minimum diameter 4”) lined with disposable acetate sleeves. The barrel will collect samples from discreet intervals of either 4 or 5 feet. HSA rigs will use a continuous hollow stem auger with a split-spoon (collection interval of 2 feet) or other collection device. This system drives drill cuttings to the surface as drilling progresses, which will require management. Sonic drill rigs will utilize coring barrels of various lengths lined with plastic tubing.

Bore hole openings will be periodically screened with a photoionization detector (PID).

D. Installation and Development of Monitoring wells

Groundwater monitoring wells will be installed by the drilling subcontractor. Unless otherwise specified, monitoring wells will be constructed of two-inch PVC casing with a ten-foot length of 0.01-inch slotted PVC well screening across the water table. No glue will be used to thread the casing lengths. A minimum of 2 feet of screening will extend above the water table, with approximately 8 feet below the water level (depth to water will be inferred based on saturated soils encountered during installation, or from data from existing groundwater monitoring wells).

The annular space between the well screen and the borehole will be backfilled with clean silica sand to approximately two feet above the screen. A seal consisting of at least 12 inches of hydrated bentonite clay will be placed above the sand pack and the remaining annular space will be grouted with cement.

A locked cap with vent will be installed at the top of the PVC riser (well protection will be in accordance with the Work Plan, including use of secure “drive-over” metal cover or stick-up metal outer casing). A surveyor’s transit level will be used to determine the elevation of the top of the PVC well riser, relative to a permanent on-site marker, for use in determining relative groundwater elevations. Well locations and relative elevations will be recorded in field logs and indicated on all fieldwork maps.

The wells will be developed one week following installation. The wells will be developed with a properly decontaminated mechanical pump and dedicated polyethylene tubing in order to clear fine-grained material that may have settled around the well screen and to enhance the natural hydraulic connection between the well screen and the surrounding soils. Well development will begin at the top of the screened interval to prevent clogging of the pump within the well casing. Well development will be discontinued when the discharge water is free of obvious sediment, turbidity is below 50 NTUs and indicator parameters (e.g., dissolved oxygen, temperature, etc.) have stabilized. Upon completion, the pump assembly will be removed from the well while the pump is still running to avoid discharge of purged water back into the well. Development water will be securely stored on-site pending laboratory analysis.

E. Soil Sampling

Recovered sampling equipment will be placed on a clean surface (folding table, plastic sheeting, etc.) and opened (liners will be sliced with a clean razor knife). Recovered soils will be observed for potential contamination through observation and use of properly calibrated field instruments, e.g., PID. Samples will be collected directly from the sampling device. The volume of material collected will be sufficient for the required analyses and for reasonably anticipated potential additional analyses. Soil to be analyzed for volatile organic compounds (VOCs) will be collected following USEPA Method 5035 protocols, using laboratory sampling kits. Samples to be analyzed for parameters other than VOCs will be collected as either grab or composite samples, using disposable plastic trowels or properly decontaminated stainless steel instruments, or directly by the fieldwork technician using dedicated, fresh disposable nitrile gloves.

F. Groundwater Sampling

Groundwater sampling will be conducted using USEPA "Low-Stress" protocols, which are detailed in Supplement A. Sampling will be conducted using the following general procedures:

1. Groundwater sampling will begin at the potentially least contaminated well (as determined from well location and/or previous data) and proceed to the potentially most contaminated well. The field technician will check and record the condition of all monitoring wells for damage or evidence of tampering before initiating sampling. Plastic will be placed around wells to minimize potential contamination of sampling equipment from the ground surface, and all monitoring, purging and sampling equipment will be placed on the sheeting.
2. The protective casing on the well will be unlocked, the air in the well head will be screened with a PID, and static water level (from the top of the casing) will be measured with a decontaminated water-level meter. A peristaltic pump with plastic tubing, or a submersible pump attached to tubing (if required by Site conditions, e.g., well depth) will be used for sampling. The tubing (or pump attached to tubing) will be slowly lowered until reaching two to three feet off of the well bottom to prevent disturbance and re-suspension of any remaining sediment.
3. Depth to water will be measured to nearest 0.01 feet, relative to a reference measuring point on the well casing (if no pre-existing reference point is found, a reference point will be marked on the inner casing and noted in the field logbook). The water level will be measured before the pump is started and at intervals of every three to five minutes. Pumping rates will be reduced (as needed) to the minimum capabilities of the pump to ensure stabilization of the water level (drawdown of 0.3 feet or less).
4. During pumping, field indicator parameters (turbidity, temperature, specific conductance, pH, redox potential, and dissolved oxygen) will be monitored and recorded approximately every five minutes. The well will be considered stabilized when the indicator parameters have stabilized for three consecutive readings (the minimum purge interval will be at least 15 minutes).
5. All groundwater samples will be collected in a manner consistent with the QAPP.
6. The protective cap on the well will be replaced and locked following sampling, and the field sampling crew will move to the next most contaminated well and the process will be repeated.

G. Soil Vapor Sampling

Soil vapor sampling will be conducted consistent with applicable NYSDOH guidance and fieldwork protocols detailed in Supplement B. Sampling will be conducted using the following general procedures:

Soil vapor samples may be collected from beneath building foundations or paved areas, or from exterior areas not otherwise covered by material that trap soil vapor at the surface. Concrete slabs and exterior pavement will generally be breached with rotary equipment, which produce a small-diameter hole. The hole will be extended into underlying soil/sub-base to a depth required by the sampling technology (typically 6 to 12 inches below the base of the overlying materials for temporary installations). Sampling at exterior areas will require extension of a borehole to at least 3 to 4 feet below the surface (greater depths may be specified by the Work Plan).

Construction details for both temporary and permanent soil vapor implants are provided in the Supplement. All soil vapor probes will be installed with a properly sealed surface opening to prevent ambient air from entering the system.

A tracer gas (e.g., helium) will be used at soil vapor sampling locations to verify that adequate sampling techniques are being implemented (i.e. to verify the absence of significant infiltration of outside air), in accordance with applicable NYSDOH guidance. The space around the sampling point will be enclosed and sealed (with a metal hemisphere and clay) in order to introduce a tracer gas (helium) into the area surrounding the probe point. Real-time sampling equipment (Radiodetection Multi-vapor Leak Locator, model MDG 2002, or equivalent) will be utilized to determine when the interior atmosphere in the enclosure reaches a concentration of 80%, and the tubing for the vapor implant will then be sampled for the tracer gas. If helium is detected in vapor at a concentration greater than 10%, the annular seal will be repaired and gas tracing performed again until less than 10% helium is detected.

Vapor in the sampling tubing will be screened with a PID for VOCs prior to purging. For all sampling locations, the exact purge volume will be dependent on the boring depth and subsequent length of tubing. Three borehole and tubing volumes will be purged prior to collection. The purge rate will not exceed 0.2 liters per minute. Following purging of ambient air from the collection device, soil vapor samples will be (at a rate not exceeding 0.2 liters per minute) into individual laboratory-certified clean Summa canisters equipped with flow regulators (sampling period as specified in the Work Plan).

III. GENERAL DECONTAMINATION PROTOCOL

Consistent decontamination methods will be used to reduce or eliminate contamination and cross-contamination of samples by field equipment, other samples or personnel, and to minimize potential exposures caused by the spread of contaminants. Decontamination will occur any time a sampling tool or instrument used in field investigations contacts sampled media or personnel using the equipment. These procedures will be used in conjunction with all non-dedicated (i.e. reusable) equipment used during the handling, sampling or measuring of environmental media, and will be implemented primarily on-site at the point of use or at a designated equipment decontamination station at the project site.

Types of equipment usually requiring decontamination include pumps, gauges, augers and sampling barrels. Drilling equipment, water level meters, submersible pumping equipment, and any other non-dedicated monitoring and sampling equipment will be decontaminated prior to the start of fieldwork, after the collection of each media sample, and between boring intervals and/or sampling locations. Water quality parameter sensors and flow-through cell will be cleaned between sampling locations in accordance with the manufacturer's recommendations.

Materials and methods for decontamination are provided in Supplement C.

IV. PFAS SAMPLING - SPECIAL REQUIREMENTS

Special requirements apply to all fieldwork procedures during sampling for per- and polyfluoroalkyl substances (PFAS). Because of the potential presence of PFAS in common consumer products and in equipment typically used to collect media and the need for very low reporting limits, special handling and care must be taken when collecting samples for PFAS analysis to avoid sample contamination. There is only limited research regarding how the use of various procedures and materials affect sample results, and this SOP therefore represent a conservative approach. Field personnel should take precautions to avoid items that are likely to contain PFAS at the sampling site as well as avoid specific items during the sampling event, and must frequently check for updates to this SOP. The most recent NYSDEC guidance document (June 2019), as well as a *PFAS Sampling Quick Reference Field Guide* (provided by Michigan Department of Environmental Quality), are provided in Supplement D.

A. EQUIPMENT AND SUPPLIES

Avoid personal protective equipment (PPE, including clothing chemically treated for UV protection) and field supplies that may include PFAS and which could cross-contaminate field samples. Personal body products such as shampoos, moisturizers and cosmetics may contain PFAS and should be used with care the day of sampling. Sunblock and insect repellent ingredients need to be verified to ensure that they do not contain PFAS before use in the field.

Food and food packaging should not enter the sampling zone.

Water resistant, waterproof, stain-treated, clothing recently washed with fabric softeners, and new clothing should be avoided. If sampling in inclement weather a canopy tent may be a good option (note, however, that water resistant/waterproof material likely contains PFAS and disposable gloves should be worn when putting up and/or moving the tent.

Waterproof field books may contain PFAS and should not be used. Documentation of field activities should be on loose paper on an aluminum clipboard or in a waterproof field book that does not use PFAS. Field notes should be taken with a ball point pen (avoid large felt tip markers; fine and ultra-fine point Sharpie® markers are acceptable). Sticky notes, etc., may contain PFAS and should be avoided (pre-printed labels should be verified PFAS-free.

Disposable, powderless, nitrile gloves must be worn during PFAS sampling and handling activities and should be changed frequently during and between sampling activities.

Sealed laboratory-supplied sampling containers may be placed into LDPE resealable storage bags (e.g., Ziploc®) that will not contact the sample media.

Chemical ice packs should not be used unless it is verified that they are PFAS-free. Samples for PFAS analysis should be placed on water ice immediately and should ideally be received by the laboratory at a temperature less than 6º Celsius.

B. GENERAL SAMPLING PROCEDURES

Sampling must be conducted in accordance with the project-specific QAPP, including use of laboratory-supplied sample containers.

If non-dedicated non-disposable equipment is used for sampling, proper decontamination is necessary. Decontamination reagents should be checked to ensure that they do not contain PFAS before use. Similarly, water used for decontamination should be checked (i.e. field equipment blanks) to verify that it does not contain PFAS. It may be necessary to collect samples of decontamination water prior to use to ensure that water being used for decontamination does not contain PFAS.

Soil samples should be collected using stainless steel, acetate, or polypropylene constructed equipment. Liners for soil sampling should not contain PFAS.

If a monitoring well has dedicated tubing that may contain PFAS, the dedicated tubing should be removed, and silicone or HDPE tubing should be used to sample for PFAS following at least one well volume purge prior to sampling for PFAS. The recommended length of time that dedicated tubing should be removed, and the recommended amount of purging conducted prior to sampling where dedicated tubing has been present is variable. If it is anticipated that dedicated tubing may be a source of PFAS cross contamination extra precaution, such as removal of the tubing 14 days prior to sampling or purging of three well volumes, should be considered.

Care should be taken to not cross contaminate PFAS samples if samples for non-PFAS analyses are being collected. For example, if VOCs and PFAS water samples are being collected, the VOCs would be collected using a peristaltic pump with HDPE and silicone tubing, and then a second set of samples would be collected for PFAS after changing gloves and switching sample container sets.

If transfer bottles are necessary for surface water sample collection, they should be PFAS-free and made of the same material as the laboratory provided sample containers.

If a water supply is to be sampled, both a pre- and post-treatment sample may be necessary. Carbon filtration, reverse osmosis, and other filter media may bias laboratory results for PFAS. Water should be allowed to run freely until water quality parameter stabilization has occurred, typically between 3 and 5 minutes. Water flow rate should be reduced for minimal aeration.

Do not filter samples for PFAS analysis.

C. DECONTAMINATION OF PFAS SAMPLING EQUIPMENT

Special requirements apply to decontaminating non-dedicated equipment used for PFAS sampling. Laboratory supplied PFAS-free deionized water is preferred for decontamination (commercially available deionized water in an HDPE container, and municipal drinking water, may be used for decontamination if verified to be PFAS-free. Sampling equipment can be scrubbed using a polyethylene or polyvinyl chloride (PVC) brush to remove particulates. Decontamination procedures should include triple rinsing with PFAS-free water. Note that a QAPP prepared for NYSDEC program sites prohibits use of Liquinox®.

V. INVESTIGATION DERIVED WASTES

Disposal of any waste materials will be in accordance with provisions of the applicable site-specific Work Plan. If not otherwise specified: 1) discarded personal protective equipment and other fieldwork supplies not significantly impacted by free petroleum or other gross contaminants will be disposed as municipal solid waste; and, 2) well development purge water, spent absorbents or other significantly contaminated materials, and/or any recovered free-petroleum, will be properly stored on-site, in properly labeled and secured containers, pending final off-site disposal at a permitted facility.

SUPPLEMENT A

USEPA Groundwater Sampling Methods

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I

LOW STRESS (low flow) PURGING AND SAMPLING PROCEDURE FOR THE COLLECTION OF GROUNDWATER SAMPLES FROM MONITORING WELLS

Quality Assurance Unit
U.S. Environmental Protection Agency – Region 1
11 Technology Drive
North Chelmsford, MA 01863

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Prepared by:__________________________________ ____________
(Robert Reinhart, Quality Assurance Unit) Date

Approved by:__________________________________ ____________
(John Smaldone, Quality Assurance Unit) Date

Revision Page

Date	Rev #	Summary of changes	Sections
7/30/96	1	Finalized	
01/19/10	2	Updated	All sections
3/23/17	3	Updated	All sections
9/20/17	4	Updated	Section 7.0

Table of Contents

1.0 USE OF TERMS

Equipment blank: The equipment blank shall include the pump and the pump's tubing. If tubing is dedicated to the well, the equipment blank needs only to include the pump in subsequent sampling rounds. If the pump and tubing are dedicated to the well, the equipment blank is collected prior to its placement in the well. If the pump and tubing will be used to sample multiple wells, the equipment blank is normally collected after sampling from contaminated wells and not after background wells.

Field duplicates: Field duplicates are collected to determine precision of the sampling procedure. For this procedure, collect duplicate for each analyte group in consecutive order (VOC original, VOC duplicate, SVOC original, SVOC duplicate, etc.).

Indicator field parameters: This SOP uses field measurements of turbidity, dissolved oxygen, specific conductance, temperature, pH, and oxidation/reduction potential (ORP) as indicators of when purging operations are sufficient and sample collection may begin.

Matrix Spike/Matrix Spike Duplicates: Used by the laboratory in its quality assurance program. Consult the laboratory for the sample volume to be collected.

Potentiometric Surface: The level to which water rises in a tightly cased well constructed in a confined aquifer. In an unconfined aquifer, the potentiometric surface is the water table.

QAPP: Quality Assurance Project Plan

SAP: Sampling and Analysis Plan

SOP: Standard operating procedure

Stabilization: A condition that is achieved when all indicator field parameter measurements are sufficiently stable (as described in the "Monitoring Indicator Field Parameters" section) to allow sample collection to begin.

Temperature blank: A temperature blank is added to each sample cooler. The blank is measured upon receipt at the laboratory to assess whether the samples were properly cooled during transit.

Trip blank (VOCs): Trip blank is a sample of analyte-free water taken to the sampling site and returned to the laboratory. The trip blanks (one pair) are added to each sample cooler that contains VOC samples.

2.0 SCOPE & APPLICATION

The goal of this groundwater sampling procedure is to collect water samples that reflect the total mobile organic and inorganic loads (dissolved and colloidal sized fractions) transported through the subsurface under ambient flow conditions, with minimal physical and chemical alterations from sampling operations. This standard operating procedure (SOP) for collecting groundwater samples will help ensure that the project's data quality objectives (DQOs) are met under certain low-flow conditions.

The SOP emphasizes the need to minimize hydraulic stress at the well-aquifer interface by maintaining low water-level drawdowns, and by using low pumping rates during purging and sampling operations. Indicator field parameters (e.g., dissolved oxygen, pH, etc.) are monitored during purging in order to determine when sample collection may begin. Samples properly collected using this SOP are suitable for analysis of groundwater contaminants (volatile and semi-volatile organic analytes, dissolved gases, pesticides, PCBs, metals and other inorganics), or naturally occurring analytes. This SOP is based on Puls, and Barcelona (1996).

This procedure is designed for monitoring wells with an inside diameter (1.5-inches or greater) that can accommodate a positive lift pump with a screen length or open interval ten feet or less and with a water level above the top of the screen or open interval (Hereafter, the "screen or open interval" will be referred to only as "screen interval"). This SOP is not applicable to other well-sampling conditions.

While the use of dedicated sampling equipment is not mandatory, dedicated pumps and tubing can reduce sampling costs significantly by streamlining sampling activities and thereby reducing the overall field costs.

The goal of this procedure is to emphasize the need for consistency in deploying and operating equipment while purging and sampling monitoring wells during each sampling event. This will help to minimize sampling variability.

This procedure describes a general framework for groundwater sampling. Other site specific information (hydrogeological context, conceptual site model (CSM), DQOs, etc.) coupled with systematic planning must be added to the procedure in order to develop an appropriate site specific SAP/QAPP. In addition, the site specific SAP/QAPP must identify the specific equipment that will be used to collect the groundwater samples.

This procedure does not address the collection of water or free product samples from wells containing free phase LNAPLs and/or DNAPLs (light or dense non-aqueous phase liquids). For this type of situation, the reader may wish to check: Cohen, and Mercer (1993) or other pertinent documents.

This SOP is to be used when collecting groundwater samples from monitoring wells at all Superfund, Federal Facility and RCRA sites in Region 1 under the conditions described herein. Request for modification of this SOP, in order to better address specific situations at individual wells, must include adequate technical justification for proposed changes. <u>All changes and modifications must be approved and included in a revised SAP/QAPP before implementation in field.</u>

3.0 BACKGROUND FOR IMPLEMENTATION

It is expected that the monitoring well screen has been properly located (both laterally and vertically) to intercept existing contaminant plume(s) or along flow paths of potential contaminant migration. Problems with inappropriate monitoring well placement or faulty/improper well installation cannot be overcome by even the best water sampling procedures. This SOP presumes that the analytes of interest are moving (or will potentially move) primarily through the more permeable zones intercepted by the screen interval.

Proper well construction, development, and operation and maintenance cannot be overemphasized. The use of installation techniques that are appropriate to the hydrogeologic setting of the site often prevent "problem well" situations from occurring. During well development, or redevelopment, tests should be conducted to determine the hydraulic characteristics of the monitoring well. The data can then be used to set the purging/sampling rate, and provide a baseline for evaluating changes in well performance and the potential need for well rehabilitation. Note: if this installation data or well history (construction and sampling) is not available or discoverable, for all wells to be sampled, efforts to build a sampling history should commence with the next sampling event.

The pump intake should be located within the screen interval and at a depth that will remain under water at all times. It is recommended that the intake depth and pumping rate remain the same for all sampling events. The mid-point or the lowest historical midpoint of the saturated screen length is often used as the location of the pump intake. For new wells, or for wells without pump intake depth information, the site's SAP/QAPP must provide clear reasons and instructions on how the pump intake depth(s) will be selected, and reason(s) for the depth(s) selected. If the depths to top and bottom of the well screen are not known, the SAP/QAPP will need to describe how the sampling depth will be determined and how the data can be used.

Stabilization of indicator field parameters is used to indicate that conditions are suitable for sampling to begin. Achievement of turbidity levels of less than 5 NTU, and stable drawdowns of less than 0.3 feet, while desirable, are not mandatory. Sample collection may still take place provided the indicator field parameter criteria in this procedure are met. If after 2 hours of purging indicator field parameters have not stabilized, one of three optional courses of action may be taken: a) continue purging until stabilization is achieved, b) discontinue purging, do not collect any samples, and record in log book that stabilization could not be achieved (documentation must describe attempts to achieve stabilization), c) discontinue purging, collect samples and provide full explanation of attempts to achieve stabilization (note: there is a risk that the analytical data obtained, especially metals and strongly hydrophobic organic analytes, may reflect a sampling bias and therefore, the data may not meet the data quality objectives of the sampling event).

It is recommended that low-flow sampling be conducted when the air temperature is above 32°F (0°C). If the procedure is used below 32°F, special precautions will need to be taken to prevent the groundwater from freezing in the equipment. Because sampling during freezing temperatures may adversely impact the data quality objectives, the need for water sample collection during months when these conditions are likely to occur should be evaluated during site planning and special sampling measures may need to be developed. Ice formation in the flow-through-cell will cause the monitoring probes to act erratically. A transparent flow-through-cell needs to be used to observe if ice is forming in the cell. If ice starts to form on the other pieces of the sampling equipment, additional problems may occur.

4.0 HEALTH & SAFETY

When working on-site, comply with all applicable OSHA requirements and the site's health/safety procedures. All proper personal protection clothing and equipment are to be worn. Some samples may contain biological and chemical hazards. These samples should be handled with suitable protection to skin, eyes, etc.

5.0 CAUTIONS

The following cautions need to be considered when planning to collect groundwater samples when the below conditions occur.

If the groundwater degasses during purging of the monitoring well, dissolved gases and VOCs will be lost. When this happens, the groundwater data for dissolved gases (e.g., methane, ethene, ethane, dissolved oxygen, etc.) and VOCs will need to be qualified. Some conditions that can promote degassing are the use of a vacuum pump (e.g., peristaltic pumps), changes in aperture along the sampling tubing, and squeezing/pinching the pump's tubing which results in a pressure change.

When collecting the samples for dissolved gases and VOCs analyses, avoid aerating the groundwater in the pump's tubing. This can cause loss of the dissolved gases and VOCs in the groundwater. Having the pump's tubing completely filled prior to sampling will avoid this problem when using a centrifugal pump or peristaltic pump.

Direct sun light and hot ambient air temperatures may cause the groundwater in the tubing and flow-through-cell to heat up. This may cause the groundwater to degas which will result in loss of VOCs and dissolved gases. When sampling under these conditions, the sampler will need to shade the equipment from the sunlight (e.g., umbrella, tent, etc.). If possible, sampling on hot days, or during the hottest time of the day, should be avoided. The tubing exiting the monitoring well should be kept as short as possible to avoid the sun light or ambient air from heating up the groundwater.

Thermal currents in the monitoring well may cause vertical mixing of water in the well bore. When the air temperature is colder than the groundwater temperature, it can cool the top of the water column. Colder water which is denser than warm water sinks to the bottom of the well and the warmer water at the bottom of the well rises, setting up a convection cell. "During low-flow sampling, the pumped water may be a mixture of convecting water from within the well casing and aquifer water moving inward through the screen. This mixing of water during low-flow sampling can substantially increase equilibration times, can cause false stabilization of indicator parameters, can give false indication of redox state, and can provide biological data that are not representative of the aquifer conditions" (Vroblesky 2007).

Failure to calibrate or perform proper maintenance on the sampling equipment and measurement instruments (e.g., dissolved oxygen meter, etc.) can result in faulty data being collected.

Interferences may result from using contaminated equipment, cleaning materials, sample containers, or uncontrolled ambient/surrounding air conditions (e.g., truck/vehicle exhaust nearby).

Cross contamination problems can be eliminated or minimized through the use of dedicated sampling equipment and/or proper planning to avoid ambient air interferences. Note that the use of dedicated sampling equipment can also significantly reduce the time needed to complete each sampling event, will promote consistency in the sampling, and may reduce sampling bias by having the pump's intake at a constant depth.

Clean and decontaminate all sampling equipment prior to use. All sampling equipment needs to be routinely checked to be free from contaminants and equipment blanks collected to ensure that the equipment is free of contaminants. Check the previous equipment blank data for the site (if they exist) to determine if the previous cleaning procedure removed the contaminants. If contaminants were detected and they are a concern, then a more vigorous cleaning procedure will be needed.

6.0 PERSONNEL QUALIFICATIONS

All field samplers working at sites containing hazardous waste must meet the requirements of the OSHA regulations. OSHA regulations may require the sampler to take the 40 hour OSHA health and safety training course and a refresher course prior to engaging in any field activities, depending upon the site and field conditions.

The field samplers must be trained prior to the use of the sampling equipment, field instruments, and procedures. Training is to be conducted by an experienced sampler before initiating any sampling procedure.

The entire sampling team needs to read, and be familiar with, the site Health and Safety Plan, all relevant SOPs, and SAP/QAPP (and the most recent amendments) before going onsite for the sampling event. It is recommended that the field sampling leader attest to the understanding of these site documents and that it is recorded.

7.0 EQUIPMENT AND SUPPLIES

A. Informational materials for sampling event

A copy of the current Health and Safety Plan, SAP/QAPP, monitoring well construction data, location map(s), field data from last sampling event, manuals for sampling, and the monitoring instruments' operation, maintenance, and calibration manuals should be brought to the site.

B. Well keys.

C. Extraction device

Adjustable rate, submersible pumps (e.g., centrifugal, bladder, etc.) which are constructed of stainless steel or polytetrafluoroethylene (PTFE, i.e. Teflon®) are preferred. PTFE, however, should not be used when sampling for per- and polyfluoroalkyl substances (PFAS) as it is likely to contain these substances.

Note: If extraction devices constructed of other materials are to be used, adequate information must be provided to show that the substituted materials do not leach contaminants nor cause interferences to the analytical procedures to be used. Acceptance of these materials must be obtained before the sampling event.

If bladder pumps are selected for the collection of VOCs and dissolved gases, the pump setting should be set so that one pulse will deliver a water volume that is sufficient to fill a 40 mL VOC vial. This is not mandatory, but is considered a “best practice”. For the proper operation, the bladder pump will need a minimum amount of water above the pump; consult the manufacturer for the recommended submergence. The pump’s recommended submergence value should be determined during the planning stage, since it may influence well construction and placement of dedicated pumps where water-level fluctuations are significant.

Adjustable rate, peristaltic pumps (suction) are to be used with caution when collecting samples for VOCs and dissolved gases (e.g., methane, carbon dioxide, etc.) analyses. Additional information on the use of peristaltic pumps can be found in Appendix A.
If peristaltic pumps are used, the inside diameter of the rotor head tubing needs to match the inside diameter of the tubing installed in the monitoring well.

Inertial pumping devices (motor driven or manual) are not recommended. These devices frequently cause greater disturbance during purging and sampling, and are less easily controlled than submersible pumps (potentially increasing turbidity and sampling variability, etc.). This can lead to sampling results that are adversely affected by purging and sampling operations, and a higher degree of data variability.

D. Tubing

PTFE (Teflon®) or PTFE-lined polyethylene tubing are preferred when sampling is to include VOCs, SVOCs, pesticides, PCBs and inorganics. As discussed in the previous section, PTFE tubing should not be used when sampling for PFAS. In this case, a suitable alternative such as high-density polyethylene tubing should be used.

PVC, polypropylene or polyethylene tubing may be used when collecting samples for metal and other inorganics analyses.

Note: If tubing constructed of other materials is to be used, adequate information must be provided to show that the substituted materials do not leach contaminants nor cause interferences to the analytical procedures to be used. Acceptance of these materials must be obtained before the sampling event.

The use of 1/4 inch or 3/8 inch (inside diameter) tubing is recommended. This will help ensure that the tubing remains liquid filled when operating at very low pumping rates when using centrifugal and peristaltic pumps.

Silastic tubing should be used for the section around the rotor head of a peristaltic pump. It should be less than a foot in length. The inside diameter of the tubing used at the pump rotor head must be the same as the inside diameter of tubing placed in the well. A tubing connector is used to connect the pump rotor head tubing to the well tubing. Alternatively, the two pieces of tubing can be connected to each other by placing the one end of the tubing inside the end of the other tubing. The tubing must not be reused.

E. The water level measuring device

Electronic ”tape”, pressure transducer, water level sounder/level indicator, etc. should be capable of measuring to 0.01 foot accuracy. Recording pressure transducers, mounted above the pump, are especially helpful in tracking water levels during pumping operations, but their use must include check measurements with a water level “tape” at the start and end of each sampling event.

F. Flow measurement supplies

Graduated cylinder (size according to flow rate) and stopwatch usually will suffice.

Large graduated bucket used to record total water purged from the well.

G. Interface probe

To be used to check on the presence of free phase liquids (LNAPL, or DNAPL) before purging begins (as needed).

H. Power source (generator, nitrogen tank, battery, etc.)

When a gasoline generator is used, locate it downwind and at least 30 feet from the well so that the exhaust fumes do not contaminate samples.

I. Indicator field parameter monitoring instruments

Use of a multi-parameter instrument capable of measuring pH, oxidation/reduction potential (ORP), dissolved oxygen (DO), specific conductance, temperature, and coupled with a flow-through-cell is required when measuring all indicator field parameters, except turbidity. Turbidity is collected using a separate instrument. Record equipment/instrument identification (manufacturer, and model number).

Transparent, small volume flow-through-cells (e.g., 250 mLs or less) are preferred. This allows observation of air bubbles and sediment buildup in the cell, which can interfere with the operation of the monitoring instrument probes, to be easily detected. A small volume cell facilitates rapid turnover of water in the cell between measurements of the indicator field parameters.

It is recommended to use a flow-through-cell and monitoring probes from the same manufacturer and model to avoid incompatibility between the probes and flow-through-cell.

Turbidity samples are collected before the flow-through-cell. A “T” connector coupled with a valve is connected between the pump’s tubing and flow-through-cell. When a turbidity measurement is required, the valve is opened to allow the groundwater to flow into a container. The valve is closed and the container sample is then placed in the turbidimeter.

Standards are necessary to perform field calibration of instruments. A minimum of two standards are needed to bracket the instrument measurement range for all parameters except ORP which use a Zobell solution as a standard. For dissolved oxygen, a wet sponge used for the 100% saturation and a zero dissolved oxygen solution are used for the calibration.

Barometer (used in the calibration of the Dissolved Oxygen probe) and the conversion formula to convert the barometric pressure into the units of measure used by the Dissolved Oxygen meter are needed.

J. Decontamination supplies

Includes (for example) non-phosphate detergent, distilled/deionized water, isopropyl alcohol, etc.

K. Record keeping supplies

Logbook(s), well purging forms, chain-of-custody forms, field instrument calibration forms, etc.

L. Sample bottles

M. Sample preservation supplies (as required by the analytical methods)

N. Sample tags or labels

O. PID or FID instrument

If appropriate, to detect VOCs for health and safety purposes, and provide qualitative field evaluations.

P. Miscellaneous Equipment

Equipment to keep the sampling apparatus shaded in the summer (e.g., umbrella) and from freezing in the winter. If the pump's tubing is allowed to heat up in the warm weather, the cold groundwater may degas as it is warmed in the tubing.

8.0 EQUIPMENT/INSTRUMENT CALIBRATION

Prior to the sampling event, perform maintenance checks on the equipment and instruments according to the manufacturer's manual and/or applicable SOP. This will ensure that the equipment/instruments are working properly before they are used in the field.

Prior to sampling, the monitoring instruments must be calibrated and the calibration documented. The instruments are calibrated using U.S Environmental Protection Agency Region 1 *Calibration of Field Instruments (temperature, pH, dissolved oxygen, conductivity/specific conductance, oxidation/reduction [ORP], and turbidity),* March 23, 2017, or latest version or from one of the methods listed in 40CFR136, 40CFR141 and SW-846.

The instruments shall be calibrated at the beginning of each day. If the field measurement falls outside the calibration range, the instrument must be re-calibrated so that all measurements fall within the calibration range. At the end of each day, a calibration check is performed to verify that instruments remained in calibration throughout the day. This check is performed while the instrument is in measurement mode, not calibration mode. If the field instruments are being used to monitor the natural attenuation parameters, then a calibration check at mid-day is highly recommended to ensure that the instruments did not drift out of calibration. Note: during the day if the instrument reads zero or a negative number for dissolved oxygen, pH, specific conductance, or turbidity (negative value only), this indicates that the instrument drifted out of calibration or the instrument is malfunctioning. If this situation occurs the data from this instrument will need to be qualified or rejected.

9.0 PRELIMINARY SITE ACTIVITIES (as applicable)

Check the well for security (damage, evidence of tampering, missing lock, etc.) and record pertinent observations (include photograph as warranted).

If needed, lay out a sheet of clean polyethylene for monitoring and sampling equipment, unless equipment is elevated above the ground (e.g., on a table, etc.).

Remove well cap and if appropriate measure VOCs at the rim of the well with a PID or FID instrument and record reading in field logbook or on the well purge form.

If the well casing does not have an established reference point (usually a V-cut or indelible mark in the well casing), make one. Describe its location and record the date of the mark in the logbook (consider a photographic record as well). All water level measurements must be recorded relative to this reference point (and the altitude of this point should be determined using techniques that are appropriate to site's DQOs.

If water-table or potentiometric surface map(s) are to be constructed for the sampling event, perform synoptic water level measurement round (in the shortest possible time) before any purging and sampling activities begin. If possible, measure water level depth (to 0.01 ft.) and total well depth (to 0.1 ft.) the day before sampling begins, in order to allow for re-settlement of any particulates in the water column. This is especially important for those wells that have not been recently sampled because sediment buildup in the well may require the well to be redeveloped. If measurement of total well depth is not made the day before, it should be measured after sampling of the well is complete. All measurements must be taken from the established referenced point. Care should be taken to minimize water column disturbance.

Check newly constructed wells for the presence of LNAPLs or DNAPLs before the initial sampling round. If none are encountered, subsequent check measurements with an interface probe may not be necessary unless analytical data or field analysis signal a worsening situation. This SOP cannot be used in the presence of LNAPLs or DNAPLs. If NAPLs are present, the project team must decide upon an alternate sampling method. All project modifications must be approved and documented prior to implementation.

If available check intake depth and drawdown information from previous sampling event(s) for each well. Duplicate, to the extent practicable, the intake depth and extraction rate (use final pump dial setting information) from previous event(s). If changes are made in the intake depth or extraction rate(s) used during previous sampling event(s), for either portable or dedicated extraction devices, record new values, and explain reasons for the changes in the field logbook.

10.0 PURGING AND SAMPLING PROCEDURE

Purging and sampling wells in order of increasing chemical concentrations (known or anticipated) are preferred.

The use of dedicated pumps is recommended to minimize artificial mobilization and entrainment of particulates each time the well is sampled. Note that the use of dedicated sampling equipment can also significantly reduce the time needed to complete each sampling event, will promote consistency in the sampling, and may reduce sampling bias by having the pump's intake at a constant depth.

A. Initial Water Level

Measure the water level in the well before installing the pump if a non-dedicated pump is being used. The initial water level is recorded on the purge form or in the field logbook.

B. Install Pump

Lower pump, safety cable, tubing and electrical lines slowly (to minimize disturbance) into the well to the appropriate depth (may not be the mid-point of the screen/open interval). The Sampling and Analysis Plan/Quality Assurance Project Plan should specify the sampling depth (used previously), or provide criteria for selection of intake depth for each new well. If possible keep the pump intake at least two feet above the bottom of the well, to minimize mobilization of particulates present in the bottom of the well.

Pump tubing lengths, above the top of well casing should be kept as short as possible to minimize heating the groundwater in the tubing by exposure to sun light and ambient air temperatures. Heating may cause the groundwater to degas, which is unacceptable for the collection of samples for VOC and dissolved gases analyses.

C. Measure Water Level

Before starting pump, measure water level. Install recording pressure transducer, if used to track drawdowns, to initialize starting condition.

D. Purge Well

From the time the pump starts purging and until the time the samples are collected, the purged water is discharged into a graduated bucket to determine the total volume of groundwater purged. This information is recorded on the purge form or in the field logbook.

Start the pump at low speed and slowly increase the speed until discharge occurs. Check water level. Check equipment for water leaks and if present fix or replace the affected equipment. Try to match pumping rate used during previous sampling event(s). Otherwise, adjust pump speed until there is little or no water level drawdown. If the minimal drawdown that can be achieved exceeds 0.3 feet, but remains stable, continue purging.

Monitor and record the water level and pumping rate every five minutes (or as appropriate) during purging. Record any pumping rate adjustments (both time and flow rate). Pumping rates should, as needed, be reduced to the minimum capabilities of the pump to ensure stabilization of the water level. Adjustments are best made in the first fifteen minutes of pumping in order to help minimize purging time. During pump start-up, drawdown may exceed the 0.3 feet target and then "recover" somewhat as pump flow adjustments are made. Purge volume calculations should utilize stabilized drawdown value, not the initial drawdown. If the initial water level is above the top of the screen do not allow the water level to fall into the well screen. The final purge volume must be greater than the stabilized drawdown volume plus the pump's tubing volume. If the drawdown has exceeded 0.3 feet and stabilizes, calculate the volume of water between the initial water level and the stabilized water level. Add the volume of the water which occupies the pump's tubing to this calculation. This combined volume of water needs to be purged from the well after the water level has stabilized before samples are collected.

Avoid the use of constriction devices on the tubing to decrease the flow rate because the constrictor will cause a pressure difference in the water column. This will cause the groundwater to degas and result in a loss of VOCs and dissolved gasses in the groundwater samples.

Note: the flow rate used to achieve a stable pumping level should remain constant while monitoring the indicator parameters for stabilization and while collecting the samples.

Wells with low recharge rates may require the use of special pumps capable of attaining very low pumping rates (e.g., bladder, peristaltic), and/or the use of dedicated equipment. For new monitoring wells, or wells where the following situation has not occurred before, if the recovery rate to the well is less than 50 mL/min., or the well is being essentially dewatered during purging, the well should be sampled as soon as the water level has recovered sufficiently to collect the volume needed for all anticipated samples. The project manager or field team leader will need to make the decision when samples should be collected, how the sample is to be collected, and the reasons recorded on the purge form or in the field logbook. A water level measurement needs to be performed and recorded before samples are collected. If the project manager decides to collect the samples using the pump, it is best during this recovery period that the pump intake tubing not be removed, since this will aggravate any turbidity problems. Samples in this specific situation may be collected without stabilization of indicator field parameters. Note that field conditions and efforts to overcome problematic situations must be recorded in order to support field decisions to deviate from normal procedures described in this SOP. If this type of problematic situation persists in a well, then water sample collection should be changed to a passive or no-purge method, if consistent with the site's DQOs, or have a new well installed.

E. Monitor Indicator Field Parameters

After the water level has stabilized, connect the "T" connector with a valve and the flow-through-cell to monitor the indicator field parameters. If excessive turbidity is anticipated or encountered with the pump startup, the well may be purged for a while without connecting up the flow-through-cell, in order to minimize particulate buildup in the cell (This is a judgment call made by the sampler). Water level drawdown measurements should be made as usual. If possible, the pump may be installed the day before purging to allow particulates that were disturbed during pump insertion to settle.

During well purging, monitor indicator field parameters (turbidity, temperature, specific conductance, pH, ORP, DO) at a frequency of five minute intervals or greater. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (for a 250 mL flow-through-cell with a flow rate of 50 mLs/min., the monitoring frequency would be every five minutes; for a 500 mL flow-through-cell it would be every ten minutes). If the cell volume cannot be replaced in the five minute interval, then the time between measurements must be increased accordingly. <u>Note: during the early phase of purging, emphasis should be put on minimizing and stabilizing pumping stress, and recording those adjustments followed by stabilization of indicator parameters. Purging is considered complete and sampling may begin when all the above indicator field parameters have stabilized. Stabilization is considered to be achieved when three consecutive readings are within the following limits:</u>

Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized),
Dissolved Oxygen (10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized),
Specific Conductance (3%),
Temperature (3%),
pH (± 0.1 unit),
Oxidation/Reduction Potential (±10 millivolts).

All measurements, except turbidity, must be obtained using a flow-through-cell. Samples for turbidity measurements are obtained before water enters the flow-through-cell. Transparent flow-through-cells are preferred, because they allow field personnel to watch for particulate build-up within the cell. This build-up may affect indicator field parameter values measured within the cell. If the cell needs to be cleaned during purging operations, continue pumping and disconnect cell for cleaning, then reconnect after cleaning and continue monitoring activities. Record start and stop times and give a brief description of cleaning activities.

The flow-through-cell must be designed in a way that prevents gas bubble entrapment in the cell. Placing the flow-through-cell at a 45 degree angle with the port facing upward can help remove bubbles from the flow-through-cell (see Appendix B Low-Flow Setup Diagram). Throughout the measurement process, the flow-through-cell must remain free of any gas bubbles. Otherwise, the monitoring probes may act erratically. When the pump is turned off or cycling on/off (when using a bladder pump), water in the cell must not drain out. Monitoring probes must remain submerged in water at all times.

F. Collect Water Samples

When samples are collected for laboratory analyses, the pump's tubing is disconnected from the "T" connector with a valve and the flow-through-cell. The samples are collected directly from the pump's tubing. Samples must not be collected from the flow-through-cell or from the "T" connector with a valve.

VOC samples are normally collected first and directly into pre-preserved sample containers. However, this may not be the case for all sampling locations; the SAP/QAPP should list the order in which the samples are to be collected based on the project's objective(s). Fill all sample containers by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence.

If the pump's flow rate is too high to collect the VOC/dissolved gases samples, collect the other samples first. Lower the pump's flow rate to a reasonable rate and collect the VOC/dissolved gases samples and record the new flow rate.

During purging and sampling, the centrifugal/peristaltic pump tubing must remain filled with water to avoid aeration of the groundwater. It is recommended that 1/4 inch or 3/8 inch (inside diameter) tubing be used to help ensure that the sample tubing remains water filled. If the pump tubing is not completely filled to the sampling point, use the following procedure to collect samples: collect non-VOC/dissolved gases samples first, then increase flow rate slightly until the water completely fills the tubing, collect the VOC/dissolved gases samples, and record new drawdown depth and flow rate.

For bladder pumps that will be used to collect VOC or dissolved gas samples, it is recommended that the pump be set to deliver long pulses of water so that one pulse will fill a 40 mL VOC vial.

Use pre-preserved sample containers or add preservative, as required by analytical methods, to the samples immediately after they are collected. Check the analytical methods (e.g. EPA SW-846, 40 CFR 136, water supply, etc.) for additional information on preservation.

If determination of filtered metal concentrations is a sampling objective, collect filtered water samples using the same low flow procedures. The use of an in-line filter (transparent housing preferred) is required, and the filter size (0.45 µm is commonly used) should be based on the sampling objective. Pre-rinse the filter with groundwater prior to sample collection. Make sure the filter is free of air bubbles before samples are collected. Preserve the filtered water sample immediately. Note: filtered water samples are not an acceptable substitute for unfiltered samples when the monitoring objective is to obtain chemical concentrations of total mobile contaminants in groundwater for human health or ecological risk calculations.

Label each sample as collected. Samples requiring cooling will be placed into a cooler with ice or refrigerant for delivery to the laboratory. Metal samples after acidification to a pH less than 2 do not need to be cooled.

G. Post Sampling Activities

If a recording pressure transducer is used to track drawdown, re-measure water level with tape.

After collection of samples, the pump tubing may be dedicated to the well for re-sampling (by hanging the tubing inside the well), decontaminated, or properly discarded.

Before securing the well, measure and record the well depth (to 0.1 ft.), if not measured the day before purging began. Note: measurement of total well depth annually is usually sufficient after the initial low stress sampling event. However, a greater frequency may be needed if the well has a “silting” problem or if confirmation of well identity is needed.

Secure the well.

11.0 DECONTAMINATION

Decontaminate sampling equipment prior to use in the first well, and then following sampling of each subsequent well. Pumps should not be removed between purging and sampling operations. The pump, tubing, support cable and electrical wires which were in contact with the well should be decontaminated by one of the procedures listed below.

The use of dedicated pumps and tubing will reduce the amount of time spent on decontamination of the equipment. If dedicated pumps and tubing are used, only the initial sampling event will require decontamination of the pump and tubing.

Note if the previous equipment blank data showed that contaminant(s) were present after using the below procedure or the one described in the SAP/QAPP, a more vigorous procedure may be needed.

Procedure 1

Decontaminating solutions can be pumped from either buckets or short PVC casing sections through the pump and tubing. The pump may be disassembled and flushed with the decontaminating solutions. It is recommended that detergent and alcohol be used sparingly in the decontamination process and water flushing steps be extended to ensure that any sediment trapped in the pump is removed. The pump exterior and electrical wires must be rinsed with the decontaminating solutions, as well. The procedure is as follows:

Flush the equipment/pump with potable water.

Flush with non-phosphate detergent solution. If the solution is recycled, the solution must be changed periodically.

Flush with potable or distilled/deionized water to remove all of the detergent solution. If the water is recycled, the water must be changed periodically.

Optional - flush with isopropyl alcohol (pesticide grade; must be free of ketones {e.g., acetone}) or with methanol. This step may be required if the well is highly contaminated or if the equipment blank data from the previous sampling event show that the level of contaminants is significant.

Flush with distilled/deionized water. This step must remove all traces of alcohol (if used) from the equipment. The final water rinse must not be recycled.

Procedure 2

Steam clean the outside of the submersible pump.

Pump hot potable water from the steam cleaner through the inside of the pump. This can be accomplished by placing the pump inside a three or four inch diameter PVC pipe with end cap. Hot water from the steam cleaner jet will be directed inside the PVC pipe and the pump exterior will be cleaned. The hot water from the steam cleaner will then be pumped from the PVC pipe through the pump and collected into another container. Note: additives or solutions should not be added to the steam cleaner.

Pump non-phosphate detergent solution through the inside of the pump. If the solution is recycled, the solution must be changed periodically.

Pump potable water through the inside of the pump to remove all of the detergent solution. If the solution is recycled, the solution must be changed periodically.

Pump distilled/deionized water through the pump. The final water rinse must not be recycled.

12.0 FIELD QUALITY CONTROL

Quality control samples are required to verify that the sample collection and handling process has not compromised the quality of the groundwater samples. All field quality control samples must be prepared the same as regular investigation samples with regard to sample volume, containers, and preservation. Quality control samples include field duplicates, equipment blanks, matrix spike/matrix spike duplicates, trip blanks (VOCs), and temperature blanks.

13.0 FIELD LOGBOOK

A field log shall be kept to document all groundwater field monitoring activities (see Appendix C, example table), and record the following for each well:

Site name, municipality, state.

Well identifier, latitude-longitude or state grid coordinates.

Measuring point description (e.g., north side of PVC pipe).

Well depth, and measurement technique.

Well screen length.

Pump depth.

Static water level depth, date, time and measurement technique.

Presence and thickness of immiscible liquid (NAPL) layers and detection method.

Pumping rate, drawdown, indicator parameters values, calculated or measured total volume pumped, and clock time of each set of measurements.

Type of tubing used and its length.

Type of pump used.

Clock time of start and end of purging and sampling activity.

Types of sample bottles used and sample identification numbers.

Preservatives used.

Parameters requested for analyses.

Field observations during sampling event.

Name of sample collector(s).

Weather conditions, including approximate ambient air temperature.

QA/QC data for field instruments.

Any problems encountered should be highlighted.

Description of all sampling/monitoring equipment used, including trade names, model number, instrument identification number, diameters, material composition, etc.

14.0 DATA REPORT

Data reports are to include laboratory analytical results, QA/QC information, field indicator parameters measured during purging, field instrument calibration information, and whatever other field logbook information is needed to allow for a full evaluation of data usability.

Note: the use of trade, product, or firm names in this sampling procedure is for descriptive purposes only and does not constitute endorsement by the U.S. EPA.

15.0 REFERENCES

Cohen, R.M. and J.W. Mercer, 1993, *DNAPL Site Evaluation*; C.K. Smoley (CRC Press), Boca Raton, Florida.

Robert W. Puls and Michael J. Barcelona, *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures*, April 1996 (EPA/540/S-95/504).

U.S. Environmental Protection Agency, 1992, *RCRA Ground-Water Monitoring: Draft Technical Guidance*; Washington, DC (EPA/530-R-93-001).

U.S. Environmental Protection Agency, 1987, *A Compendium of Superfund Field Operations Methods*; Washington, DC (EPA/540/P-87/001).

U.S Environmental Protection Agency, Region 1, *Calibration of Field Instruments (temperature, pH, dissolved oxygen, conductivity/specific conductance, oxidation/reduction [ORP], and turbidity),* March 23, 2017 or latest version.

U.S Environmental Protection Agency, EPA SW-846.

U.S Environmental Protection Agency, 40 CFR 136.

U.S Environmental Protection Agency, 40 CFR 141.

Vroblesky, Don A., Clifton C. Casey, and Mark A. Lowery, Summer 2007, Influence of Dissolved Oxygen Convection on Well Sampling, *Ground Water Monitoring & Remediation* 27, no. 3: 49-58.

APPENDIX A

PERISTALTIC PUMPS

Before selecting a peristaltic pump to collect groundwater samples for VOCs and/or dissolved gases, (e.g., methane, carbon dioxide, etc.) consideration should be given to the following:

- The decision of whether or not to use a peristaltic pump is dependent on the intended use of the data.
- If the additional sampling error that may be introduced by this device is NOT of concern for the VOC/dissolved gases data's intended use, then this device may be acceptable.
- If minor differences in the groundwater concentrations could affect the decision, such as to continue or terminate groundwater cleanup or whether the cleanup goals have been reached, then this device should NOT be used for VOC/dissolved gases sampling. In these cases, centrifugal or bladder pumps are a better choice for more accurate results.

EPA and USGS have documented their concerns with the use of the peristaltic pumps to collect water sample in the below documents.

- "Suction Pumps are not recommended because they may cause degassing, pH modification, and loss of volatile compounds" *A Compendium of Superfund Field Operations Methods*, EPA/540/P-87/001, December 1987.
- "The agency does not recommend the use of peristaltic pumps to sample ground water particularly for volatile organic analytes" *RCRA Ground-Water Monitoring Draft Technical Guidance*, EPA Office of Solid Waste, November 1992.
- "The peristaltic pump is limited to shallow applications and can cause degassing resulting in alteration of pH, alkalinity, and volatiles loss", *Low-flow (Minimal drawdown) Ground-Water Sampling Procedures*, by Robert Puls & Michael Barcelona, April 1996, EPA/540/S-95/504.
- "Suction-lift pumps, such as peristaltic pumps, can operate at a very low pumping rate; however, using negative pressure to lift the sample can result in the loss of volatile analytes", USGS Book 9 Techniques of Water-Resources Investigation, Chapter A4. (Version 2.0, 9/2006).

APPENDIX B

SUMMARY OF SAMPLING INSTRUCTIONS

These instructions are for using an adjustable rate, submersible pump or a peristaltic pump with the pump's intake placed at the midpoint of a 10 foot or less well screen or an open interval. The water level in the monitoring well is above the top of the well screen or open interval, the ambient temperature is above 32°F, and the equipment is not dedicated. Field instruments are already calibrated. The equipment is setup according to the diagram at the end of these instructions.

1. Review well installation information. Record well depth, length of screen or open interval, and depth to top of the well screen. Determine the pump's intake depth (e.g., mid-point of screen/open interval).

2. On the day of sampling, check security of the well casing, perform any safety checks needed for the site, lay out a sheet of polyethylene around the well (if necessary), and setup the equipment. If necessary a canopy or an equivalent item can be setup to shade the pump's tubing and flow-through-cell from the sun light to prevent the sun light from heating the groundwater.

3. Check well casing for a reference mark. If missing, make a reference mark. Measure the water level (initial) to 0.01 ft. and record this information.

4. Install the pump's intake to the appropriate depth (e.g., midpoint) of the well screen or open interval. Do not turn-on the pump at this time.

5. Measure water level and record this information.

6. Turn-on the pump and discharge the groundwater into a graduated waste bucket. Slowly increase the flow rate until the water level starts to drop. Reduce the flow rate slightly so the water level stabilizes. Record the pump's settings. Calculate the flow rate using a graduated container and a stop watch. Record the flow rate. Do not let the water level drop below the top of the well screen.

If the groundwater is highly turbid or discolored, continue to discharge the water into the bucket until the water clears (visual observation); this usually takes a few minutes. The turbid or discolored water is usually from the well-being disturbed during the pump installation. If the water does not clear, then you need to make a choice whether to continue purging the well (hoping that it will clear after a reasonable time) or continue to the next step. Note, it is sometimes helpful to install the pump the day before the sampling event so that the disturbed materials in the well can settle out.

If the water level drops to the top of the well screen during the purging of the well, stop purging the well, and do the following:

> Wait for the well to recharge to a sufficient volume so samples can be collected. This may take a while (pump may be removed from well, if turbidity is not a problem). The project manager will need to make the decision when samples should be collected and the reasons recorded in the site's log book. A water level measurement needs to be performed and recorded before samples are collected. When samples are being collected, the water level must not drop below the top of the screen or open interval. Collect the samples from the pump's tubing. Always collect the VOCs and dissolved gases samples first. Normally, the samples requiring a small volume are collected before the large volume samples are collected just in case there is not sufficient water in the well to fill all the sample containers. All samples must be collected, preserved, and stored according to the analytical method. Remove the pump from the well and decontaminate the sampling equipment.

If the water level has dropped 0.3 feet or less from the initial water level (water level measure before the pump was installed); proceed to Step 7. If the water level has dropped more than 0.3 feet, calculate the volume of water between the initial water level and the stabilized water level. Add the volume of the water which occupies the pump's tubing to this calculation. This combined volume of water needs to be purged from the well after the water level has stabilized before samples are be collected.

7. Attach the pump's tubing to the "T" connector with a valve (or a three-way stop cock). The pump's tubing from the well casing to the "T" connector must be as short as possible to prevent the groundwater in the tubing from heating up from the sun light or from the ambient air. Attach a short piece of tubing to the other end of the end of the "T" connector to serve as a sampling port for the turbidity samples. Attach the remaining end of the "T" connector to a short piece of tubing and connect the tubing to the flow-through-cell bottom port. To the top port, attach a small piece of tubing to direct the water into a calibrated waste bucket. Fill the cell with the groundwater and remove all gas bubbles from the cell. Position the flow-through-cell in such a way that if gas bubbles enter the cell they can easily exit the cell. If the ports are on the same side of the cell and the cell is cylindrical shape, the cell can be placed at a 45-degree angle with the ports facing upwards; this position should keep any gas bubbles entering the cell away from the monitoring probes and allow the gas bubbles to exit the cell easily (see Low-Flow Setup Diagram). Note:

make sure there are no gas bubbles caught in the probes' protective guard; you may need to shake the cell to remove these bubbles.

8. Turn-on the monitoring probes and turbidity meter.

9. Record the temperature, pH, dissolved oxygen, specific conductance, and oxidation/reduction potential measurements. Open the valve on the "T" connector to collect a sample for the turbidity measurement, close the valve, do the measurement, and record this measurement. Calculate the pump's flow rate from the water exiting the flow-through-cell using a graduated container and a stop watch, and record the measurement. Measure and record the water level. Check flow-through-cell for gas bubbles and sediment; if present, remove them.

10. Repeat Step 9 every 5 minutes or as appropriate until monitoring parameters stabilized. Note: at least one flow-through-cell volume must be exchanged between readings. If not, the time interval between readings will need to be increased. Stabilization is achieved when three consecutive measurements are within the following limits:

Turbidity (10% for values greater than 5 NTUs; if three Turbidity values are less than 5 NTUs, consider the values as stabilized),
Dissolved Oxygen (10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized),
Specific Conductance (3%),
Temperature (3%),
pH (± 0.1 unit),
Oxidation/Reduction Potential (±10 millivolts).

If these stabilization requirements do not stabilize in a reasonable time, the probes may have been coated from the materials in the groundwater, from a buildup of sediment in the flow-through-cell, or a gas bubble is lodged in the probe. The cell and the probes will need to be cleaned. Turn-off the probes (not the pump), disconnect the cell from the "T" connector and continue to purge the well. Disassemble the cell, remove the sediment, and clean the probes according to the manufacturer's instructions. Reassemble the cell and connect the cell to the "T" connector. Remove all gas bubbles from the cell, turn-on the probes, and continue the measurements. Record the time the cell was cleaned.

11. When it is time to collect the groundwater samples, turn-off the monitoring probes, and disconnect the pump's tubing from the "T" connector. If you are using a centrifugal or peristaltic pump check the pump's tubing to determine if the tubing is completely filled with water (no air space).

All samples must be collected and preserved according to the analytical method. VOCs and dissolved gases samples are normally collected first and directly into pre-preserved sample containers. However, this may not be the case for all sampling locations; the SAP/QAPP should list the order in which the samples are to be collected based on the project's objective(s). Fill all sample containers by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence.

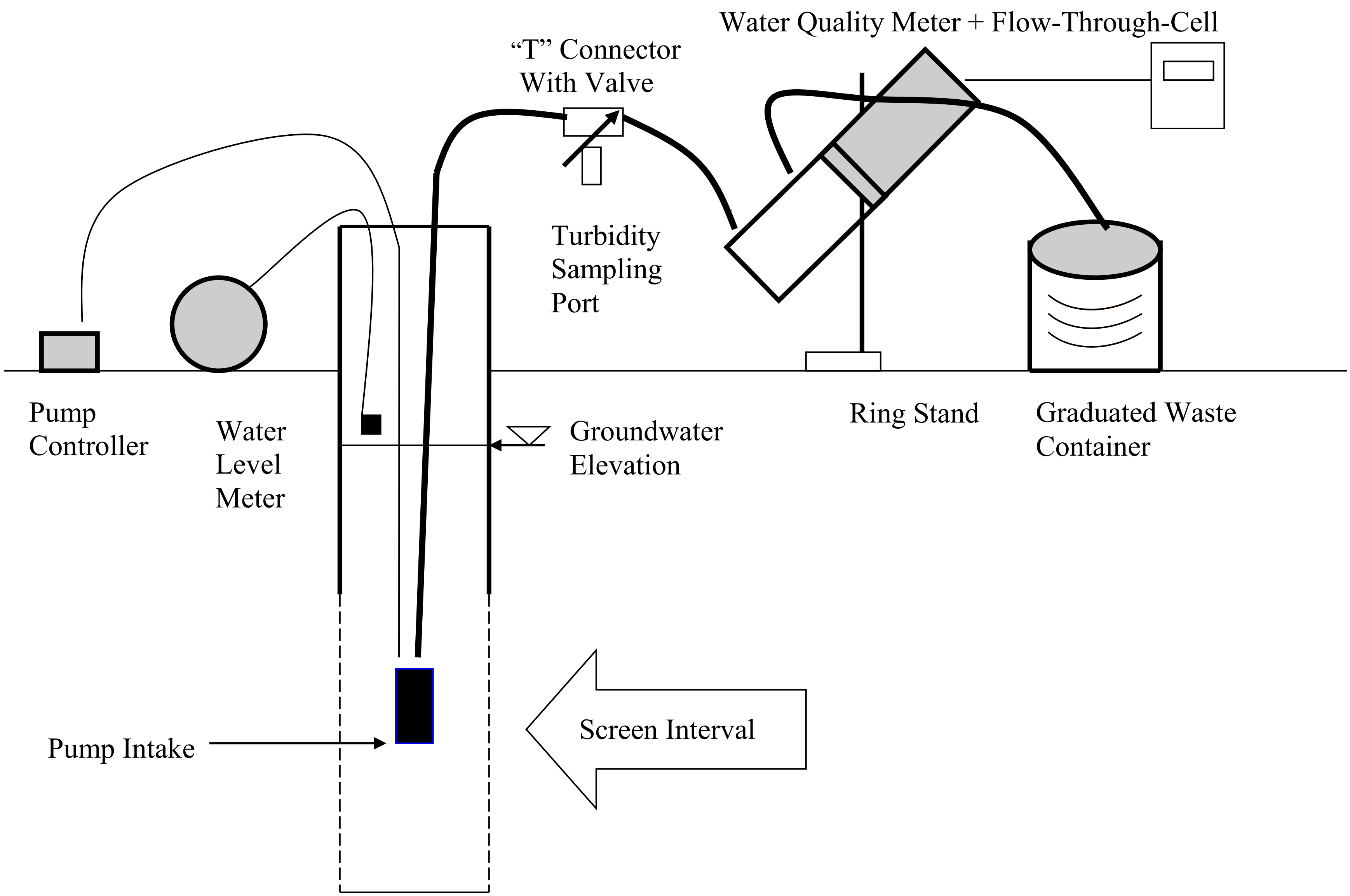
If the pump's tubing is not completely filled with water and the samples are being collected for VOCs and/or dissolved gases analyses using a centrifugal or peristaltic pump, do the following:

> All samples must be collected and preserved according to the analytical method. The VOCs and the dissolved gases (e.g., methane, ethane, ethene, and carbon dioxide) samples are collected last. When it becomes time to collect these samples increase the pump's flow rate until the tubing is completely filled. Collect the samples and record the new flow rate.

12. Store the samples according to the analytical method.

13. Record the total purged volume (graduated waste bucket). Remove the pump from the well and decontaminate the sampling equipment.

Low-Flow Setup Diagram



APPENDIX C

EXAMPLE (Minimum Requirements)

WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)_______________________________
Well Number________________ Date_______________________
Field Personnel____
Sampling Organization_______________________________________
Identify MP____

Depth to _______/________ of screen
(below MP) top bottom
Pump Intake at (ft. below MP)_________
Purging Device; (pump type)__________
Total Volume Purged _______________

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. "C	Spec. Cond.[2] µS/cm	pH	ORP[3] mv	DO mg/L	Tur-bidity NTU	Comments
Stabilization Criteria					3%	3%	±0.1	±10 mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. µSiemens per cm(same as µmhos/cm)at 25°C.
3. Oxidation reduction potential (ORP)

SUPPLEMENT B

NYSDOH Vapor and Air Sampling Methods

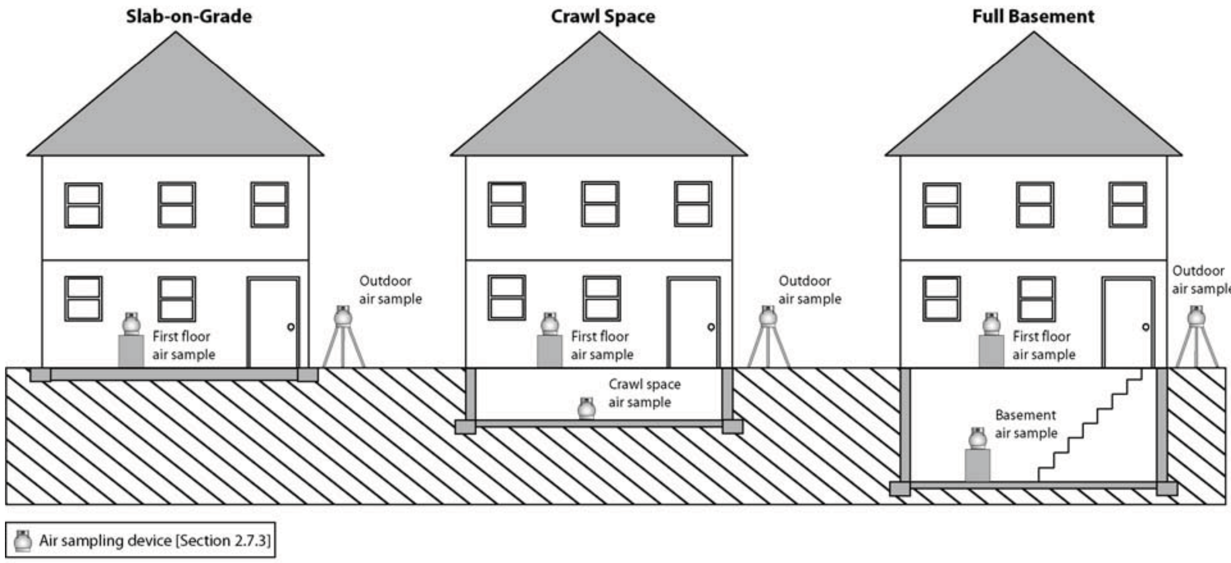


Figure 2.1
Schematic of indoor and outdoor air sampling locations

2.6.4 Outdoor air

Typically, an outdoor air sample is collected outside of each building where an indoor air sample is collected. However, if several buildings are being sampled within a localized area, representative outdoor air samples may be appropriate. For example, one outdoor air sample may be sufficient for three houses being sampled in a cul-de-sac. Outdoor air samples should be collected from a representative upwind location, away from wind obstructions (e.g., trees or bushes), and at a height above the ground to represent breathing zones (3 to 5 feet) [Figure 2.1]. A representative sample is one that is not biased toward obvious sources of volatile chemicals (e.g., automobiles, lawn mowers, oil storage tanks, gasoline stations, industrial facilities, etc.). For buildings with HVAC systems that draw outdoor air into the building, an outdoor air sample collected near the outdoor air intake may be appropriate.

2.7 Sampling protocols

The procedures recommended here may be modified depending on site-specific conditions, the sampling objectives, or emerging technologies and methodologies. Alternative sampling procedures should be described thoroughly and proposed in a work plan submitted for review by the State. The State will review and comment on the proposed procedure and consider the efficacy of the alternative sampling procedure based on the objectives of investigation. In all cases, work plans should thoroughly describe the proposed sampling procedure. Similarly, the procedures that were implemented in the field should be documented and included in the final report of the sampling results.

2.7.1 Soil vapor

Soil vapor probe installations [Figure 2.2] may be permanent, semi-permanent or temporary. In general, permanent or semi-permanent installations are preferred for data consistency reasons and to ensure outdoor air infiltration does not occur. Temporary probes should only be used if measures are taken to ensure that an adequate surface seal is created to prevent outdoor air infiltration and if tracer gas is used at every sampling location. [See Section 2.7.5 for additional information about the use of tracer gas when collecting soil vapor samples.] Soil vapor implants or probes should be constructed in the same manner at all sampling locations to minimize possible discrepancies. The following procedures should be included in any permanent construction protocol:

a. implants should be installed using an appropriate method based on site conditions (e.g., direct push, manually driven, auger — if necessary to attain the desired depth or if sidewall smearing is a concern, etc.);

b. porous, inert backfill material (e.g., glass beads, washed #1 crushed stone, etc.) should be used to create a sampling zone 1 to 2 feet in length;

c. implants should be fitted with inert tubing (e.g., polyethylene, stainless steel, nylon, Teflon®, etc.) of the appropriate size (typically 1/8 inch to 1/4 inch diameter) and of laboratory or food grade quality to the surface;

d. soil vapor probes should be sealed above the sampling zone with a bentonite slurry for a minimum distance of 3 feet to prevent outdoor air infiltration and the remainder of the borehole backfilled with clean material;

e. for multiple probe depths, the borehole should be grouted with bentonite between probes to create discrete sampling zones or separate nested probes should be installed [Figure 2.2]; and

f. steps should be taken to minimize infiltration of water or outdoor air and to prevent accidental damage (e.g., setting a protective casing around the top of the probe tubing and grouting in place to the top of bentonite, sloping the ground surface to direct water away from the borehole like a groundwater monitoring well, etc.).

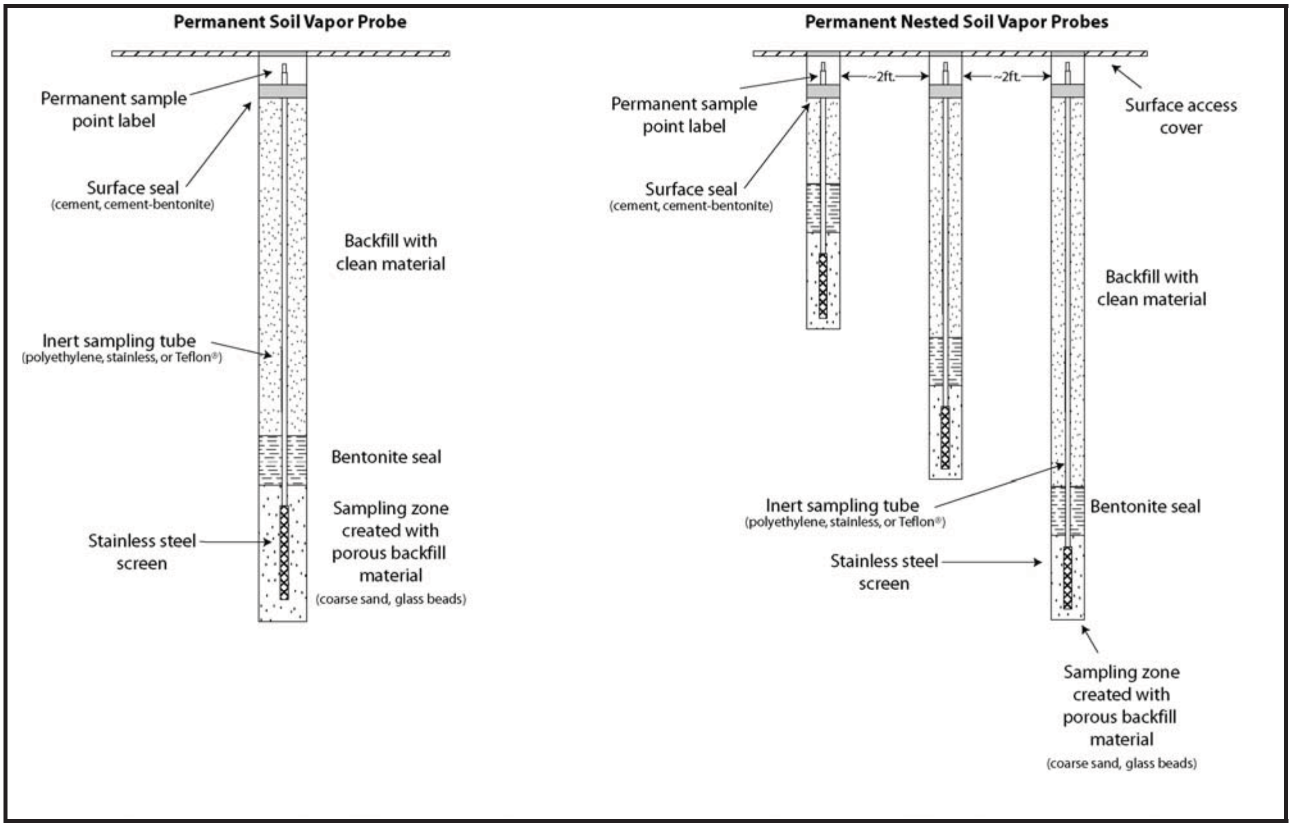


Figure 2.2

Schematics of a generic permanent soil vapor probe
and permanent nested soil vapor probes

[Note: Many variations exist and may be proposed in a work plan. Proposed installations should meet the sampling objectives and requirements of the analytical methods.]

To obtain representative samples and to minimize possible discrepancies, soil vapor samples should be collected in the following manner at all locations:

a. at least 24 hours after the installation of permanent probes and shortly after the installation of temporary probes, one to three implant volumes (i.e., the volume of the sample probe and tube) should be purged prior to collecting the samples;

b. flow rates for both purging and collecting should not exceed 0.2 liters per minute to minimize outdoor air infiltration during sampling;

c. samples should be collected, using conventional sampling methods, in an appropriate container — one which

   i. meets the objectives of the sampling (e.g., investigation of areas where low or high concentrations of volatile chemicals are expected; to minimize losses of volatile chemicals that are susceptible to photodegradation),

   ii. is consistent with the sampling and analytical methods (e.g., low flow rate; Summa® canisters if analyzing by using EPA Method TO-15), and

   iii. is certified clean by the laboratory;

d. sample size depends upon the volume of that will achieve minimum reporting limits [Section 2.9]; and

e. a tracer gas (e.g., helium, butane, sulfur hexafluoride, etc.) should be used when collecting soil vapor samples to verify that adequate sampling techniques are being implemented (i.e., to verify infiltration of outdoor air is not occurring) [Section 2.7.5].

In some cases, weather conditions may present certain limitations on soil vapor sampling. For example, condensation in the sample tubing may be encountered during winter sampling due to low outdoor air temperatures. Devices, such as tube warmers, may be used to address these conditions. Anticipated limitations to the sampling should be discussed prior to the sampling event so appropriate measures can be taken to address these difficulties and produce representative and reliable data.

When soil vapor samples are collected, the following actions should be taken to document local conditions during sampling that may influence interpretation of the results:

a. if sampling near a commercial or industrial building, uses of volatile chemicals during normal operations of the facility should be identified;

b. outdoor plot sketches should be drawn that include the site, area streets, neighboring commercial or industrial facilities (with estimated distance to the site), outdoor air sampling locations (if applicable), and compass orientation (north);

c. weather conditions (e.g., precipitation and outdoor temperature) should be noted for the past 24 to 48 hours; and

d. any pertinent observations should be recorded, such as odors and readings from field instrumentation.

Additional information that could be gathered to assist in the interpretation of the results includes barometric pressure, wind speed and wind direction.

The field sampling team should maintain a sample log sheet summarizing the following:

a. sample identification,

b. date and time of sample collection,

c. sampling depth,

d. identity of samplers,

e. sampling methods and devices,

f. purge volumes,

g. volume of soil vapor extracted,

h. if canisters used, the vacuum before and after samples were collected,

i. apparent moisture content (dry, moist, saturated, etc.) of the sampling zone, and

j. chain of custody protocols and records used to track samples from sampling point to analysis.

2.7.2 Sub-slab vapor

During colder months, heating systems should be operating to maintain normal indoor air temperatures (i.e., 65 – 75 °F) for at least 24 hours prior to and during the scheduled sampling time. Prior to installation of the sub-slab vapor probe, the building floor should be inspected and any penetrations (cracks, floor drains, utility perforations, sumps, etc.) should be noted and recorded. Probes should be installed at locations where the potential for ambient air infiltration via floor penetrations is minimal.

Sub-slab vapor probe installations [Figure 2.3] may be permanent, semi-permanent or temporary. A vacuum should not be used to remove drilling debris from the sampling port. Sub-slab implants or probes should be constructed in the same manner at all sampling locations to minimize possible discrepancies. The following procedures should be included in any construction protocol:

a. permanent recessed probes should be constructed with brass or stainless steel tubing and fittings;

b. temporary probes should be constructed with inert tubing (e.g., polyethylene, stainless steel, nylon, Teflon®, etc.) of the appropriate size (typically 1/8 inch to 1/4 inch diameter), and of laboratory or food grade quality;

c. tubing should not extend further than 2 inches into the sub-slab material;

d. porous, inert backfill material (e.g., glass beads, washed #1 crushed stone, etc.) should be added to cover about 1 inch of the probe tip for permanent installations; and

e. the implant should be sealed to the surface with non-VOC-containing and non-shrinking products for temporary installations (e.g., permagum grout, melted beeswax, putty, etc.) or cement for permanent installations.

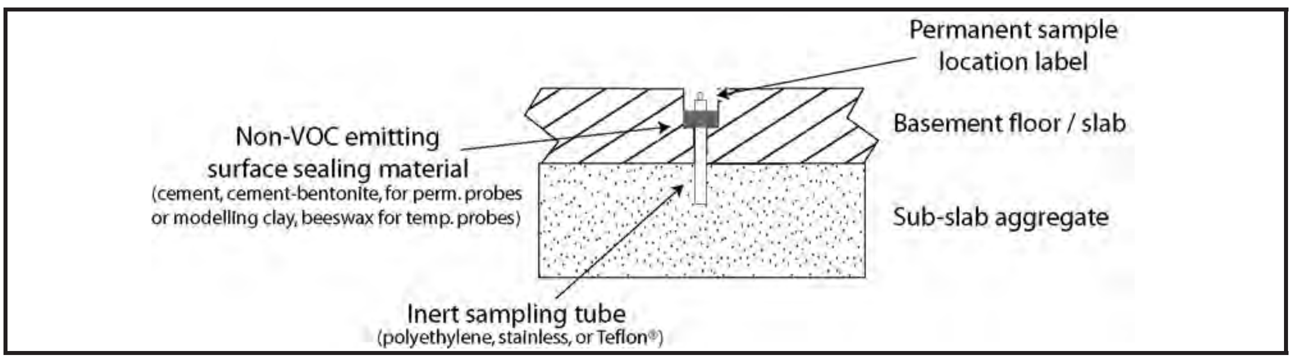


Figure 2.3

Schematic of a generic sub-slab vapor probe

[Note: Many variations exist and may be proposed in a work plan. Proposed installations should meet the sampling objectives and requirements of the analytical methods.]

To obtain representative samples that meet the data quality objectives, sub-slab vapor samples should be collected in the following manner:

a. after installation of the probes, one to three volumes (i.e., the volume of the sample probe and tube) must be purged prior to collecting the samples to ensure samples collected are representative;

b. flow rates for both purging and collecting must not exceed 0.2 liters per minute to minimize ambient air infiltration during sampling; and

c. samples should be collected, using conventional sampling methods, in an appropriate container — one which

    i. meets the objectives of the sampling (e.g., investigation of areas where low or high concentrations of volatile chemicals are expected; to minimize losses of volatile chemicals that are susceptible to photodegradation),

    ii. is consistent with the sampling and analytical methods (e.g., low flow rate; Summa® canisters if analyzing by using EPA Method TO-15), and

    iii. is certified clean by the laboratory;

d. sample size depends upon the volume of that will achieve minimum reporting limits [Section 2.9], the flow rate, and the sampling duration; and

e. ideally, samples should be collected over the same period of time as concurrent indoor and outdoor air samples.

When sub-slab vapor samples are collected, the following actions should be taken to document conditions during sampling and ultimately to aid in the interpretation of the sampling results [Section 3]:

a. historic and current storage and uses of volatile chemicals should be identified, especially if sampling within a commercial or industrial building (e.g., use of volatile chemicals in commercial or industrial processes and/or during building maintenance);

b. the use of heating or air conditioning systems during sampling should be noted;

c. floor plan sketches should be drawn that include the floor layout with sampling locations, chemical storage areas, garages, doorways, stairways, location of basement sumps or subsurface drains and utility perforations through building foundations, HVAC system air supply and return registers, compass orientation (north), footings that create separate foundation sections, and any other pertinent information should be completed;

d. outdoor plot sketches should be drawn that include the building site, area streets, outdoor air sampling locations (if applicable), compass orientation (north), and paved areas;

e. weather conditions (e.g., precipitation and indoor and outdoor temperature) and ventilation conditions (e.g., heating system active and windows closed) should be reported; and

f. any pertinent observations, such as spills, floor stains, smoke tube results, odors and readings from field instrumentation (e.g., vapors via PID, ppbRAE, Jerome Mercury Vapor Analyzer, etc.), should be recorded.

Additional documentation that could be gathered to assist in the interpretation of the results includes information about air flow patterns and pressure relationships obtained by using smoke tubes or other devices (especially between floor levels and between suspected contaminant sources and other areas), the barometric pressure and photographs to accompany floor plan sketches.

The field sampling team should maintain a sample log sheet summarizing the following:

a. sample identification,
b. date and time of sample collection,
c. sampling depth,
d. identity of samplers,
e. sampling methods and devices,
f. soil vapor purge volumes,
g. volume of soil vapor extracted,
h. if canisters used, vacuum of canisters before and after samples collected,
i. apparent moisture content (dry, moist, saturated, etc.) of the sampling zone, and
j. chain of custody protocols and records used to track samples from sampling point to analysis.

2.7.3 Indoor air

[Reference: NYSDOH's *Indoor Air Sampling & Analysis Guidance (February 1, 2005)*]

During colder months, heating systems should be operating to maintain normal indoor air temperatures (i.e., 65 – 75 °F) for at least 24 hours prior to and during the scheduled sampling time. If possible, prior to collecting indoor samples, a pre-sampling inspection [Section 2.11.1] should be performed to evaluate the physical layout and conditions of the building being investigated, to identify conditions that may affect or interfere with the proposed sampling, and to prepare the building for sampling. This process is described in Section 2.11.1.

In general, indoor air samples should be collected in the following manner:

a. sampling duration should reflect the exposure scenario being evaluated without compromising the detection limit or sample collection flow rate (e.g., an 8 hour sample from a workplace with a single shift versus a 24 hour sample from a workplace with multiple shifts). To ensure that air is representative of the locations sampled and to avoid undue influence from sampling personnel, samples should be collected for at least 1 hour. If the goal of the sampling is to represent average concentrations over longer periods, then longer duration sampling periods may be appropriate. Typically, 24 hour samples are collected from residential settings;
b. personnel should avoid lingering in the immediate area of the sampling device while samples are being collected;
c. sample flow rates must conform to the specifications in the sample collection method and, if possible, should be consistent with the flow rates for concurrent outdoor air and sub-slab samples; and
d. samples must be collected, using conventional sampling methods, in an appropriate container — one which

i. meets the objectives of the sampling (e.g., investigation of areas where low or high concentrations of volatile chemicals are expected; to minimize losses of volatile chemicals that are susceptible to photodegradation),

ii. is consistent with the sampling and analytical methods (e.g., low flow rate; Summa® canisters if analyzing by using EPA Method TO-15), and

iii. is certified clean by the laboratory.

At sites with tetrachloroethene contamination, passive air monitors that are specifically analyzed for tetrachloroethene (i.e., "perc badges") are commonly used to collect indoor and outdoor air samples. If site characterization activities indicate that degradation products of tetrachloroethene also represent a vapor intrusion concern, perc badges may be used to indicate the likelihood of vapor intrusion (i.e., by using tetrachloroethene as a surrogate) followed, as appropriate, by more comprehensive sampling and laboratory analyses to quantify both tetrachloroethene and its degradation products. Perc badge samples ideally should be collected over a twenty-four hour period, but for no less than eight hours.

The following actions should be taken to document conditions during indoor air sampling and ultimately to aid in the interpretation of the sampling results [Section 3]:

a. historic and current uses and storage of volatile chemicals should be identified, especially if sampling within a commercial or industrial building (e.g., use of volatile chemicals in commercial or industrial processes and/or during building maintenance);

b. a product inventory survey documenting sources of volatile chemicals present in the building during the indoor air sampling that could potentially influence the sample results should be completed [Section 2.11.2];

c. the use of heating or air conditioning systems during sampling should be noted;

d. floor plan sketches should be drawn that include the floor layout with sampling locations, chemical storage areas, garages, doorways, stairways, location of basement sumps or subsurface drains and utility perforations through building foundations, HVAC system supply and return registers, compass orientation (north), footings that create separate foundation sections, and any other pertinent information should be completed;

e. outdoor plot sketches should be drawn that include the building site, area streets, outdoor air sampling locations (if applicable), compass orientation (north), and paved areas;

f. weather conditions (e.g., precipitation and indoor and outdoor temperature) and ventilation conditions (e.g., heating system active and windows closed) should be reported; and

g. any pertinent observations, such as spills, floor stains, smoke tube results, odors and readings from field instrumentation (e.g., vapors via PID, ppbRAE, Jerome Mercury Vapor Analyzer, etc.), should be recorded.

Additional documentation that could be gathered to assist in the interpretation of the results includes information about air flow patterns and pressure relationships obtained by using smoke tubes or other devices (especially between floor levels and between suspected contaminant sources and other areas), the barometric pressure and photographs to accompany floor plan sketches.

The field sampling team should maintain a sample log sheet summarizing the following:

a. sample identification,
b. date and time of sample collection,
c. sampling height,
d. identity of samplers,
e. sampling methods and devices,
f. depending upon the method, volume of air sampled,
g. if canisters are used, vacuum of canisters before and after samples collected, and
h. chain of custody protocols and records used to track samples from sampling point to analysis.

2.7.4 Outdoor air

Outdoor air samples should be collected simultaneously with indoor air samples to evaluate the potential influence, if any, of outdoor air on indoor air quality. They may also be collected simultaneously with soil vapor samples to identify potential outdoor air interferences associated with infiltration of outdoor air into the sampling apparatus while the soil vapor was collected. To obtain representative samples that meet the data quality objectives, outdoor air samples should be collected in a manner consistent with that for indoor air samples (described in Section 2.7.3).

The following actions should be taken to document conditions during outdoor air sampling and ultimately to aid in the interpretation of the sampling results [Section 3]:

a. outdoor plot sketches should be drawn that include the building site, area streets, outdoor air sampling locations, the location of potential interferences (e.g., gasoline stations, factories, lawn movers, etc.), compass orientation (north), and paved areas;
b. weather conditions (e.g., precipitation and outdoor temperature) should be reported; and
c. any pertinent observations, such as odors, readings from field instrumentation, and significant activities in the vicinity (e.g., operation of heavy equipment or dry cleaners) should be recorded.

2.7.5 Tracer gas

When collecting soil vapor samples as part of a vapor intrusion evaluation, a tracer gas serves as a quality assurance/quality control measure to verify the integrity of the soil vapor probe seal. Without the use of a tracer, there is no way to verify that a soil vapor sample has not been diluted by outdoor air.

Depending on the nature of the contaminants of concern, a number of different compounds can be used as a tracer. Typically, sulfur hexafluoride (SF_6) or helium are used as tracers because they are readily available, have low toxicity, and can be monitored with portable measurement devices. Butane and propane (or other gases) could also be used as a tracer in some situations. Compounds other than those mentioned here may be appropriate, provided they meet project-specific data quality objectives. Where applicable, steps should be taken to ensure that the gas used by the laboratory to clean the air sampling container is different from the gas used as a tracer during sampling (e.g., helium).

The protocol for using a tracer gas is straightforward: simply enrich the atmosphere in the immediate vicinity of the area where the probe intersects the ground surface with the tracer gas, and measure a vapor sample from the probe for the presence of high concentrations (> 10%) of the tracer. A cardboard box, a plastic pail, or even a garbage bag can serve to keep the tracer gas in contact with the probe during the testing. If there are concerns about infiltration of ambient air through other parts of the sampling train (such as around the fittings, not just at the probe/ground interface), then consideration should be given to ensuring that the tracer gas is in contact with the entire sampling apparatus. In these cases, field personnel may prefer to use a liquid tracer — soaking paper towels with a liquid tracer and placing the towels around the probe/ground interface, around fittings, and/or in the corner of a shroud.

There are two basic approaches to testing for the tracer gas:

1. include the tracer gas in the list of target analytes reported by the laboratory; or
2. use a portable monitoring device to analyze a sample of soil vapor for the tracer prior to and after sampling for the compounds of concern. (Note that the tracer gas samples can be collected via syringe, Tedlar® bag etc. They need not be collected in Summa® canisters or minicans.)

The advantage of the second approach is that the real time tracer sampling results can be used to confirm the integrity of the probe seals prior to formal sample collection.

Figure 2.4 depicts common methods for using tracer gas. In examples a, b and c, the tracer gas is released in the enclosure prior to initially purging the sample point. Care should be taken to avoid excessive purging prior to sample collection. Care should also be taken to prevent pressure build-up in the enclosure during introduction of the tracer gas. Inspection of the installed sample probe, specifically noting the integrity of the surface seal and the porosity of the soil in which the probe is installed, will help to determine the tracer gas setup. Figure 2.4a may be most effective at preventing tracer gas infiltration, however, it may not be appropriate in some situations depending on site-specific conditions. Figures 2.4b and 2.4c may be sufficient for probes installed in tight soils with well-constructed surface seals. Figure 2d provides an example of using a liquid tracer. In all cases, the same tracer gas application should be used for all probes at any given site.

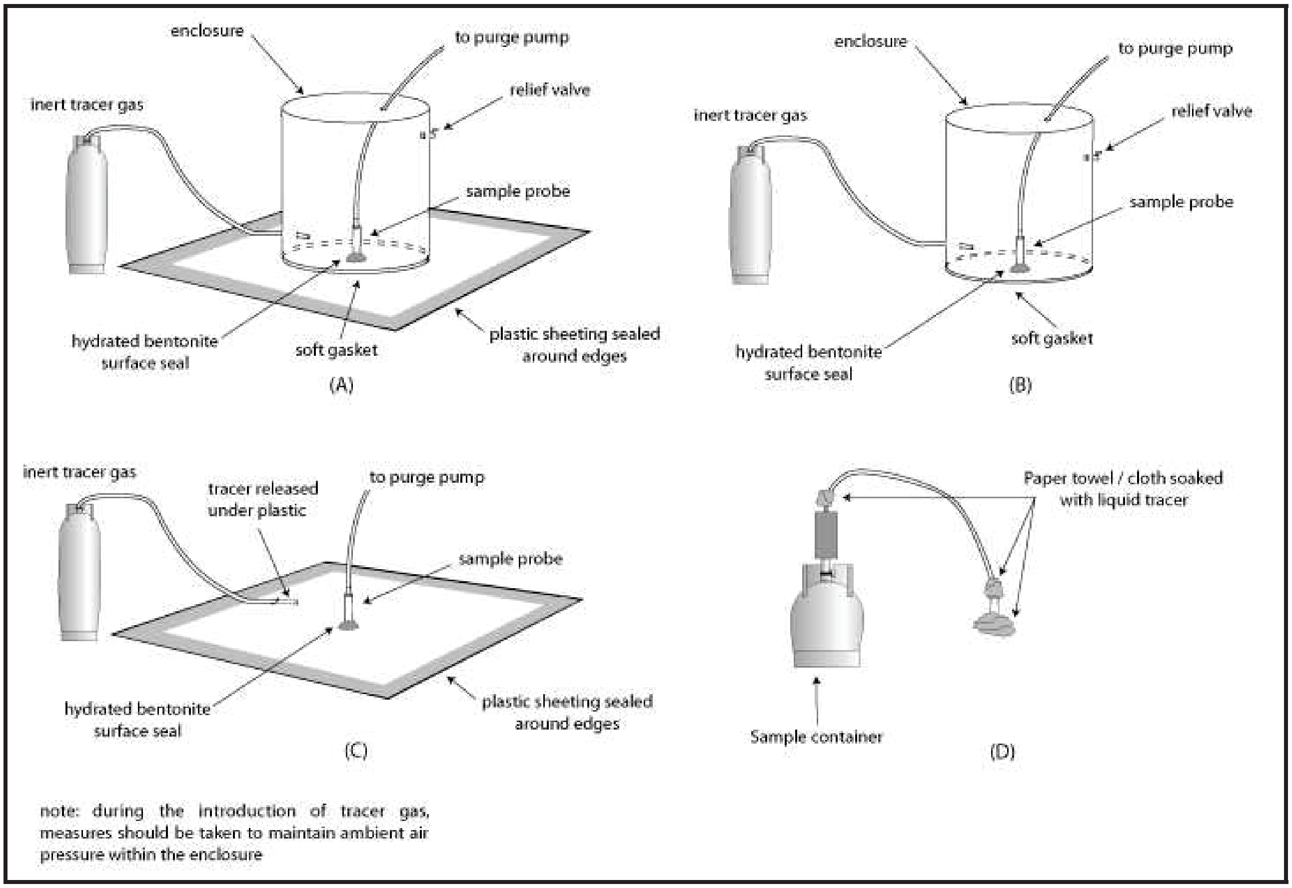


Figure 2.4
Schematics of generic tracer gas applications when collecting soil vapor samples

Because minor leakage around the probe seal should not materially affect the usability of the soil vapor sampling results, the mere presence of the tracer gas in the sample should not be a cause for alarm. Consequently, portable field monitoring devices with detection limits in the low ppm range are more than adequate for screening samples for the tracer. If high concentrations (> 10%) of tracer gas are observed in a sample, the probe seal should be enhanced to reduce the infiltration of outdoor air.

Where permanent or semi-permanent sampling probes are used, tracer gas samples should be collected at each of the sampling probes during the initial stages of a soil vapor sampling program. If the results of the initial samples indicate that the probe seals are adequate, reducing the number of locations at which tracer gas samples are employed may be considered. At a minimum, tracer gas samples should be collected with at least 10% of the soil vapor samples collected in subsequent sampling rounds. When using permanent soil vapor probes as part of a long-term monitoring program, annual testing of the probe integrity is recommended. Where temporary probes are used, tracer gas should be used at every sampling location, every time.

SUPPLEMENT C

Decontamination Materials and Procedures

SOP SUPPLEMENT: DECONTAMINATION

1.0 Objectives

Decontamination will occur any time a sampling tool or instrument used in field investigations contacts sampled media or personnel using the equipment. This procedure will be used in conjunction with all non-dedicated (i.e. reusable) equipment used during the handling, sampling or measuring of media. Special precautions are required when sampling for PFAS.

These procedures will be implemented primarily on-site at the point of use or at a designated equipment decontamination station at the project site. Examples of equipment usually requiring decontamination include pumps, depth gauges, hand augers, macro-core sampling barrels and other related equipment used for the collection of samples or the measurement of field parameters.

2.0 Required Materials

The equipment and supplies required for this SOP include the following:

- Plastic sheeting for the decontamination area
- Properly labeled drums to hold waste decontamination solutions and expendable supplies
- Plastic bags and/or aluminum foil to keep decontaminated equipment clean until the next use
- Gloves, aprons, safety glasses, and any other PPE required in the Site HASP
- Disposable towels and wipes
- Clean buckets or tubs to hold wash and rinse solutions, of a size appropriate to the equipment to be decontaminated
- Long-handled brushes for scrubbing and flat-bladed scrapers
- Dispensing bottles
- Tap water
- Deionized or distilled water (grade determined by project requirements)
- Non-phosphate detergent such as Alconox
- Methanol, nitric acid, etc. as required by the project work plan or quality assurance plan

Some Work Plans may include additional equipment rinses based on the contaminants being investigated. Examples of this are 0.1N nitric acid when cross-contamination from metals is a concern, and solvents such as methanol, isopropanol, or hexane, when cross-contamination from organics is a concern. If these are required, labeled inert dispensing bottles and Safety Data Sheets (SDS) for these rinses will be filed on site.

3.0 Methods

A decontamination station will be established for small equipment decontamination and PPE decontamination, either in the contaminant reduction zone or at the sampling location or well (if contamination zones are not established). A separate station may be utilized in close proximity to any mechanized apparatus, as practical, for the decontamination of relatively large or heavy equipment such as Geoprobe macro-core barrels and metal rods. Containers with cleaning solutions and clean buckets or tubs (5 gallon buckets are most common) will be used for this station. Containers and buckets will be placed on plastic sheeting to prevent spillage to the ground, and to help keep the decontamination area and equipment as clean as possible.

Decontamination procedures (scrapping, brushing, washing and rinsing) will be performed over buckets in order to catch all scrapings and spent rinsate. In conjunction with this procedure, pre-rinsing with water (as warranted) and/or cleaning with a detergent/water mixture may be accomplished by immersion within a clean bucket containing the cleaning solution (overflow due to submersion should be avoided). The buckets will not be allowed to accumulate waste liquids above three quarters of their capacity.

The decontamination sequence will be as follows (not all steps apply):

- Scrape, brush and wipe as warranted to removed bulk materials
- Pre-rinse with water
- Brush and/or rinse with a detergent/tap water mixture (e.g., Alconox or Liqui-Nox, made up as directed by the manufacturer)
- Rinse with tap water to remove soap residue
- Rinse with 2% nitric acid solution (if required, depending on work plan), followed by tap water
- Rinse with methanol or hexane (if required, depending on work plan) followed by tap water
- Final rinse with deionized or distilled water
- Allow to air dry on clean plastic (foil may only be used if no sampling is being conducted for PFAS)
- Cover dry equipment to keep clean

Submersible pumps may be allowed to run fully submerged in water and detergent/water mixes in order to clean and rinse all internal parts (care must be taken to avoid accidental discharge of water outside of the container).

Disposable gloves will be worn during all sampling and decontamination procedures (gloves will be changed frequently). All disposable supplies (gloves, towels, absorbent pads, etc.) will be placed into heavy-duty plastic garbage bags.

SUPPLEMENT D

PFAS Sampling Guidance

PFAS Field Sampling Guidelines for Groundwater and Soil

For Waters: 2 x 125 mL Bottles per sample filled to the neck of the bottle

PLEASE READ THESE INSTRUCTIONS PRIOR TO CONDUCTING SAMPLING

Sampling for PFAS for determination using EPA 537m can be challenging due to the prevalence of these compounds in consumer products. The following guidelines reflect current knowledge and are recommended when conducting sampling.

Consider Sampling for PFAS First...

Sample containers for other methods may have PFAS present on their sampling containers which could cross-contaminate your sample(s). We are analyzing down to the low parts-per-trillion (ppt) range so cross-contamination prevention is an important consideration.

SAMPLING

All Sampling done with Nitrile Gloves, provided by YORK

SAMPLE CONTAINERS

All sample containers - PP ONLY (Target list of 21 PFAS) Caps are unlined and made of PP (no Teflon® lined caps) Bottles are Batch Certified to be Target PFAS-free (< Reporting Limit)

FIELD EQUIPMENT

-Must not contain Teflon® (aka PTFE) or LDPE materials

-All sampling materials must be made from stainless steel, HDPE, acetate, silicone, or polypropylene

-No waterproof field notebooks can be used

-No plastic clipboards, binders, or the like

-No adhesives (e.g.Post-It® Notes, Duct tape) can be used

-Sharpies and permanent markers not allowed; regular ball point pens are acceptable

-Aluminum foil must not be used

-Keep PFAS samples in separate cooler, away from sampling containers that may contain PFAS

-Coolers filled with regular ice only - Do not use chemical (blue) ice packs

EQUIPMENT DECON

-"PFAS-free" water (e.g. Poland Spring*)-on-site for decontamination

-Only Alconox and Liquinox can be used for decontamination

* *Poland Spring has been demonstrated to be PFAS -free when freshly opened*

FIELD SAMPLING CLOTHING CONSIDERATIONS

Do not use fabric softener on clothing to be worn in field

Do not used cosmetics, moisturizers, hand cream, or other related products the morning of sampling

Do not use sunscreen or insect repellants

No materials containing Tyvek®

All safety boots made from polyurethane and PVC

No clothing or boots containing Gore-Tex®

Wet weather gear made of polyurethane and PVC only

FOOD CONSIDERATIONS

No food or drink when PFAS Sampling with exception of bottled water and/or hydration drinks (i.e., Gatorade and Powerade) that is available for consumption only in the staging area.

SAMPLE CONTAINER HANDLING

-For **AQUEOUS** Samples: Each sample set contains 2 x 125 mL containers. Fill each container to the neck

-For **SOILS**-1 x 250 mL container, FILL HALF WAY ONLY

-No preservative is necessary for this appliction at this time.

-Place closed, labeled Sample bottles into ZipLock bag.

-Dispose of Nitrile gloves in provided waste bag.

-Place in separate cooler from other samples, WET ICE only

-Follow instructions on next page for more detail.

-If you have a Quality Assurance Project Plan follow that guidance

PFAS -Recommended Field Sampling Guidelines

PLEASE READ INSTRUCTIONS ENTIRELY PRIOR TO SAMPLING EVENT

Sampler should wash hands before wearing nitrile gloves in order to limit contamination during sampling. Each sample set* requires a set of containers to comply with the method as indicated below. **Sample set is composed of samples collected from the same sample site and at the same time.* **A pair of Nitrile gloves is included with each sample Zip-lock bag/bottle set. One Field Blank set per day is provided.**

Note: PP is Polypropylene

Sample Containers	Bottle Type	Preservation
2 Sampling Containers - Empty- per sample-Waters **SOILS- 1 Container-fill only half way**	125 mL PP container-Waters 250 mL PP for Soils	None, Cool <6C
1 PP Bottle with PFAS-free Water for Field Blank	125 mL PP container	None, Cool <6C
1 Field Blank (FRB) - Empty-per sampling day	125 mL PP container	None, Cool <6C
2 - Empty PP bottles for MS/DUP when needed (Soils MS/DUP come from same Bottle)	125 mL PP container	None, Cool <6C

NOTE: Sampling containers for WATERS must be filled to the neck. **SOILS, fill bottle only 1/2 full**

FIELD BLANK and MS/DUP Bottles are labeled with NEON GREEN LABELS

Field blanks are required per sampling event day and the containers have been provided. Follow the instructions below.

Field Blank Instructions:

1. Locate the PFAS Field Blank bottle (empty, labeled) supplied The PFAS Field Blank Water container is pre-filled at YORK with PFAS-free water to transfer to the empty PFAS Field Blank bottle.
2. Locate the empty container labeled "Field Blank" with Neon green labels
3. Open both containers and proceed to transfer contents of the "PFAS FIELD BLANK WATER" container into the "PFAS FIELD BLANK" Bottle
4. Field Blanks to be analyzed must be listed on the Chain-of-Custody.
5. Both the empty Field Blank water container and the filled Field Blank container must be returned to YORK along with the samples taken.

Matrix Spike/ Matrix Dup Instructions: Note: Soil **MS/MSD** can be from the same container as the sample

1. Locate the PFAS MS and DUP bottles (empty, labeled-NEON GREEN) supplied -normally 1 set per 20 field samples
2. Transfer chosen Field MS /Dup as a normal sample and indicate sample ID on container and on Chain-of-Custody

Sampling Instructions: ALL SAMPLE BOTTLES HAVE NEON YELLOW LABELS

1. Do not overfill or rinse the container. Any sample(s) for Matrix Spike and Matrix Duplicates are treated similarly.
2. Close containers securely. Label legibly and place containers in ZipLoc® bags, and in a separate cooler (no other container types).
3. Ensure Chain-of-Custody and all sample labels contain required information. Place all samples in separate coolers (separate from other samples for different parameters). Place wet ice (bagged) on samples for return to YORK. Samples should be kept at 4°C ±2. Samples must not exceed 10°C during first 48 hours after collection. **Hold time is 14 days.**

NEW YORK STATE OF OPPORTUNITY. | Department of Environmental Conservation

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Under NYSDEC's Part 375 Remedial Programs

January 2021

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

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ERRATA SHEET for

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) Under NYSDEC's Part 375 Remedial Programs Issued January 17, 2020

Citation and Page Number	Current Text	Corrected Text	Date
Title of Appendix I, page 32	Appendix H	Appendix I	2/25/2020
Document Cover, page 1	Guidelines for Sampling and Analysis of PFAS	Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs	9/15/2020
Routine Analysis, page 9	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1 or ISO 25101."	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1, ISO 25101, or Method 533."	9/15/2020
Additional Analysis, page 9, new paragraph regarding soil parameters	None	"In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (EPA Method 9060), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils."	9/15/2020
Data Assessment and Application to Site Cleanup Page 10	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFAS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Target levels for cleanup of PFAS in other media, including biota and sediment, have not yet been established by the DEC.	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Water Sample Results Page 10	PFAS should be further assessed and considered as a potential contaminant of concern in groundwater or surface water (…) If PFAS are identified as a contaminant of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water (…) If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	9/15/2020
Soil Sample Results, page 10	"The extent of soil contamination for purposes of delineation and remedy selection should be determined by having certain soil samples tested by Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed for PFAS. Soil exhibiting SPLP results above 70 ppt for either PFOA or PFOS (individually or combined) are to be evaluated during the cleanup phase."	"Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values. " [Interim SCO Table] "PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP. As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf. "	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Testing for Imported Soil Page 11	Soil imported to a site for use in a soil cap, soil cover, or as backfill is to be tested for PFAS in general conformance with DER-10, Section 5.4(e) for the PFAS Analyte List (Appendix F) using the analytical procedures discussed below and the criteria in DER-10 associated with SVOCs. If PFOA or PFOS is detected in any sample at or above 1 µg/kg, then soil should be tested by SPLP and the leachate analyzed for PFAS. If the SPLP results exceed 10 ppt for either PFOA or PFOS (individually) then the source of backfill should be rejected, unless a site-specific exemption is provided by DER. SPLP leachate criteria is based on the Maximum Contaminant Levels proposed for drinking water by New York State's Department of Health, this value may be updated based on future Federal or State promulgated regulatory standards. Remedial parties have the option of analyzing samples concurrently for both PFAS in soil and in the SPLP leachate to minimize project delays. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable. PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Footnotes	None	[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances. [2] The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the soil cleanup objective for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	9/15/2020
Additional Analysis, page 9	In cases… soil parameters, such as Total Organic Carbon (EPA Method 9060), soil…	In cases… soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil…	1/8/2021
Appendix A, General Guidelines, fourth bullet	List the ELAP-approved lab(s) to be used for analysis of samples	List the ELAP- certified lab(s) to be used for analysis of samples	1/8/2021
Appendix E, Laboratory Analysis and Containers	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by ISO Method 25101.	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101	1/8/2021

Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs

Objective

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) performs or oversees sampling of environmental media and subsequent analysis of PFAS as part of remedial programs implemented under 6 NYCRR Part 375. To ensure consistency in sampling, analysis, reporting, and assessment of PFAS, DER has developed this document which summarizes currently accepted procedures and updates previous DER technical guidance pertaining to PFAS.

Applicability

All work plans submitted to DEC pursuant to one of the remedial programs under Part 375 shall include PFAS sampling and analysis procedures that conform to the guidelines provided herein.

As part of a site investigation or remedial action compliance program, whenever samples of potentially affected media are collected and analyzed for the standard Target Analyte List/Target Compound List (TAL/TCL), PFAS analysis should also be performed. Potentially affected media can include soil, groundwater, surface water, and sediment. Based upon the potential for biota to be affected, biota sampling and analysis for PFAS may also be warranted as determined pursuant to a Fish and Wildlife Impact Analysis. Soil vapor sampling for PFAS is not required.

Field Sampling Procedures

DER-10 specifies technical guidance applicable to DER's remedial programs. Given the prevalence and use of PFAS, DER has developed "best management practices" specific to sampling for PFAS. As specified in DER-10 Chapter 2, quality assurance procedures are to be submitted with investigation work plans. Typically, these procedures are incorporated into a work plan, or submitted as a stand-alone document (e.g., a Quality Assurance Project Plan). Quality assurance guidelines for PFAS are listed in Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS.

Field sampling for PFAS performed under DER remedial programs should follow the appropriate procedures outlined for soils, sediments or other solids (Appendix B), non-potable groundwater (Appendix C), surface water (Appendix D), public or private water supply wells (Appendix E), and fish tissue (Appendix F).

QA/QC samples (e.g. duplicates, MS/MSD) should be collected as specified in DER-10, Section 2.3(c). For sampling equipment coming in contact with aqueous samples only, rinsate or equipment blanks should be collected. Equipment blanks should be collected at a minimum frequency of one per day per site or one per twenty samples, whichever is more frequent.

Analysis and Reporting

As of October 2020, the United States Environmental Protection Agency (EPA) does not have a validated method for analysis of PFAS for media commonly analyzed under DER remedial programs (non-potable waters, solids). DER has developed the following guidelines to ensure consistency in analysis and reporting of PFAS.

The investigation work plan should describe analysis and reporting procedures, including laboratory analytical procedures for the methods discussed below. As specified in DER-10 Section 2.2, laboratories should provide a full Category B deliverable. In addition, a Data Usability Summary Report (DUSR) should be prepared by an independent, third party data validator. Electronic data submissions should meet the requirements provided at: https://www.dec.ny.gov/chemical/62440.html.

DER has developed a *PFAS Analyte List* (Appendix F) for remedial programs to understand the nature of contamination at sites. It is expected that reported results for PFAS will include, at a minimum, all the compounds listed. If lab and/or matrix specific issues are encountered for any analytes, the DER project manager, in consultation with the DER chemist, will make case-by-case decisions as to whether certain analytes may be temporarily or permanently discontinued from analysis at each site. As with other contaminants that are analyzed for at a site, the *PFAS Analyte List* may be refined for future sampling events based on investigative findings.

Routine Analysis

Currently, New York State Department of Health's Environmental Laboratory Approval Program (ELAP) does not offer certification for PFAS in matrices other than finished drinking water. However, laboratories analyzing environmental samples for PFAS (e.g., soil, sediments, and groundwater) under DER's Part 375 remedial programs need to hold ELAP certification for PFOA and PFOS in drinking water by EPA Method 537, 537.1, ISO 25101, or Method 533. Laboratories should adhere to the guidelines and criteria set forth in the DER's laboratory guidelines for PFAS in non-potable water and solids (Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids). Data review guidelines were developed by DER to ensure data comparability and usability (Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids).

LC-MS/MS analysis for PFAS using methodologies based on EPA Method 537.1 is the procedure to use for environmental samples. Isotope dilution techniques should be utilized for the analysis of PFAS in all media. Reporting limits for PFOA and PFOS in aqueous samples should not exceed 2 ng/L. Reporting limits for PFOA and PFOS in solid samples should not exceed 0.5 µg/kg. Reporting limits for all other PFAS in aqueous and solid media should be as close to these limits as possible. If laboratories indicate that they are not able to achieve these reporting limits for the entire *PFAS Analyte List*, site-specific decisions regarding acceptance of elevated reporting limits for specific PFAS can be made by the DER project manager in consultation with the DER chemist.

Additional Analysis

Additional laboratory methods for analysis of PFAS may be warranted at a site, such as the Synthetic Precipitation Leaching Procedure (SPLP) and Total Oxidizable Precursor Assay (TOP Assay).

In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils.

SPLP is a technique used to determine the mobility of chemicals in liquids, soils and wastes, and may be useful in determining the need for addressing PFAS-containing material as part of the remedy. SPLP by EPA Method 1312 should be used unless otherwise specified by the DER project manager in consultation with the DER chemist.

Impacted materials can be made up of PFAS that are not analyzable by routine analytical methodology. A TOP Assay can be utilized to conceptualize the amount and type of oxidizable PFAS which could be liberated in the environment, which approximates the maximum concentration of perfluoroalkyl substances that could be generated if all polyfluoroalkyl substances were oxidized. For example, some polyfluoroalkyl substances may degrade or transform to form perfluoroalkyl substances (such as PFOA or PFOS), resulting in an increase in perfluoroalkyl substance concentrations as contaminated groundwater moves away from a source. The TOP Assay converts, through oxidation, polyfluoroalkyl substances (precursors) into perfluoroalkyl substances that can be detected by routine analytical methodology.[1]

Commercial laboratories have adopted methods which allow for the quantification of targeted PFAS in air and biota. The EPA's Office of Research and Development (ORD) is currently developing methods which allow for air emissions characterization of PFAS, including both targeted and non-targeted analysis of PFAS. Consult with the DER project manager and the DER chemist for assistance on analyzing biota/tissue and air samples.

Data Assessment and Application to Site Cleanup

Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.

Water Sample Results

PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water if PFOA or PFOS is detected in any water sample at or above 10 ng/L (ppt) and is determined to be attributable to the site, either by a comparison of upgradient and downgradient levels, or the presence of soil source areas, as defined below. In addition, further assessment of water may be warranted if either of the following screening levels are met:

a. any other individual PFAS (not PFOA or PFOS) is detected in water at or above 100 ng/L; or
b. total concentration of PFAS (including PFOA and PFOS) is detected in water at or above 500 ng/L

If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.

Soil Sample Results

Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values.

Guidance Values for Anticipated Site Use	PFOA (ppb)	PFOS (ppb)
Unrestricted	0.66	0.88
Residential	6.6	8.8
Restricted Residential	33	44
Commercial	500	440
Industrial	600	440
Protection of Groundwater[2]	1.1	3.7

[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances.
[2] The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).

PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP.

As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf.

Testing for Imported Soil

Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable.

PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.

Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS

The following guidelines (general and PFAS-specific) can be used to assist with the development of a QAPP for projects within DER involving sampling and analysis of PFAS.

General Guidelines in Accordance with DER-10

- Document/work plan section title – Quality Assurance Project Plan
- Summarize project scope, goals, and objectives
- Provide project organization including names and resumes of the project manager, Quality Assurance Officer (QAO), field staff, and Data Validator
    - The QAO should not have another position on the project, such as project or task manager, that involves project productivity or profitability as a job performance criterion
- List the ELAP certified lab(s) to be used for analysis of samples
- Include a site map showing sample locations
- Provide detailed sampling procedures for each matrix
- Include Data Quality Usability Objectives
- List equipment decontamination procedures
- Include an "Analytical Methods/Quality Assurance Summary Table" specifying:
    - Matrix type
    - Number or frequency of samples to be collected per matrix
    - Number of field and trip blanks per matrix
    - Analytical parameters to be measured per matrix
    - Analytical methods to be used per matrix with minimum reporting limits
    - Number and type of matrix spike and matrix spike duplicate samples to be collected
    - Number and type of duplicate samples to be collected
    - Sample preservation to be used per analytical method and sample matrix
    - Sample container volume and type to be used per analytical method and sample matrix
    - Sample holding time to be used per analytical method and sample matrix
- Specify Category B laboratory data deliverables and preparation of a DUSR

Specific Guidelines for PFAS

- Include in the text that sampling for PFAS will take place
- Include in the text that PFAS will be analyzed by LC-MS/MS for PFAS using methodologies based on EPA Method 537.1
- Include the list of PFAS compounds to be analyzed (*PFAS Analyte List*)
- Include the laboratory SOP for PFAS analysis
- List the minimum method-achievable Reporting Limits for PFAS
    - Reporting Limits should be less than or equal to:
        - Aqueous – 2 ng/L (ppt)
        - Solids – 0.5 µg/kg (ppb)
- Include the laboratory Method Detection Limits for the PFAS compounds to be analyzed
- Laboratory should have ELAP certification for PFOA and PFOS in drinking water by EPA Method 537, 537.1, EPA Method 533, or ISO 25101
- Include detailed sampling procedures
    - Precautions to be taken
    - Pump and equipment types
    - Decontamination procedures
    - Approved materials only to be used
- Specify that regular ice only will be used for sample shipment
- Specify that equipment blanks should be collected at a minimum frequency of 1 per day per site for each matrix

Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids

General

The objective of this protocol is to give general guidelines for the collection of soil, sediment and other solid samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in to contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel spoon
- stainless steel bowl
- steel hand auger or shovel without any coatings

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Sampling is often conducted in areas where a vegetative turf has been established. In these cases, a pre-cleaned trowel or shovel should be used to carefully remove the turf so that it may be replaced at the conclusion of sampling. Surface soil samples (e.g. 0 to 6 inches below surface) should then be collected using a pre-cleaned, stainless steel spoon. Shallow subsurface soil samples (e.g. 6 to ~36 inches below surface) may be collected by digging a hole using a pre-cleaned hand auger or shovel. When the desired subsurface depth is reached, a pre-cleaned hand auger or spoon shall be used to obtain the sample.

When the sample is obtained, it should be deposited into a stainless steel bowl for mixing prior to filling the sample containers. The soil should be placed directly into the bowl and mixed thoroughly by rolling the material into the middle until the material is homogenized. At this point the material within the bowl can be placed into the laboratory provided container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification.   Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A soil log or sample log shall document the location of the sample/borehole, depth of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix C - Sampling Protocols for PFAS in Monitoring Wells

General

The objective of this protocol is to give general guidelines for the collection of groundwater samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including plumbers tape and sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel inertia pump with HDPE tubing
- peristaltic pump equipped with HDPE tubing and silicone tubing
- stainless steel bailer with stainless steel ball
- bladder pump (identified as PFAS-free) with HDPE tubing

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Monitoring wells should be purged in accordance with the sampling procedure (standard/volume purge or low flow purge) identified in the site work plan, which will determine the appropriate time to collect the sample. If sampling using standard purge techniques, additional purging may be needed to reduce turbidity levels, so samples contain a limited amount of sediment within the sample containers. Sample containers that contain sediment may cause issues at the laboratory, which may result in elevated reporting limits and other issues during the sample preparation that can compromise data usability. Sampling personnel should don new nitrile gloves prior to sample collection due to the potential to contact PFAS containing items (not related to the sampling equipment) during the purging activities.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Additional equipment blank samples may be collected to assess other equipment that is utilized at the monitoring well
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A purge log shall document the location of the sample, sampling equipment, groundwater parameters, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix D - Sampling Protocols for PFAS in Surface Water

General

The objective of this protocol is to give general guidelines for the collection of surface water samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel cup

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Where conditions permit, (e.g. creek or pond) sampling devices (e.g. stainless steel cup) should be rinsed with site medium to be sampled prior to collection of the sample. At this point the sample can be collected and poured into the sample container.

If site conditions permit, samples can be collected directly into the laboratory container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification.   Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A sample log shall document the location of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells

General

The objective of this protocol is to give general guidelines for the collection of water samples from private water supply wells (with a functioning pump) for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101. The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials (e.g. plumbers tape), including sample bottle cap liners with a PTFE layer.

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Locate and assess the pressure tank and determine if any filter units are present within the building. Establish the sample location as close to the well pump as possible, which is typically the spigot at the pressure tank. Ensure sampling equipment is kept clean during sampling as access to the pressure tank spigot, which is likely located close to the ground, may be obstructed and may hinder sample collection.

Prior to sampling, a faucet downstream of the pressure tank (e.g., washroom sink) should be run until the well pump comes on and a decrease in water temperature is noted which indicates that the water is coming from the well. If the homeowner is amenable, staff should run the water longer to purge the well (15+ minutes) to provide a sample representative of the water in the formation rather than standing water in the well and piping system including the pressure tank. At this point a new pair of nitrile gloves should be donned and the sample can be collected from the sample point at the pressure tank.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- If equipment was used, collect one equipment blank per day per site and a minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers.
- A field reagent blank (FRB) should be collected at a rate of one per 20 samples. The lab will provide a FRB bottle containing PFAS free water and one empty FRB bottle. In the field, pour the water from the one bottle into the empty FRB bottle and label appropriately.
- Request appropriate data deliverable (Category B) and an electronic data deliverable
- For sampling events where multiple private wells (homes or sites) are to be sampled per day, it is acceptable to collect QC samples at a rate of one per 20 across multiple sites or days.

Documentation

A sample log shall document the location of the private well, sample point location, owner contact information, sampling equipment, purge duration, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate and available (e.g. well construction, pump type and location, yield, installation date). Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appendix F - Sampling Protocols for PFAS in Fish

This appendix contains a copy of the latest guidelines developed by the Division of Fish and Wildlife (DFW) entitled "General Fish Handling Procedures for Contaminant Analysis" (Ver. 8).

Procedure Name: General Fish Handling Procedures for Contaminant Analysis

Number: FW-005

Purpose: This procedure describes data collection, fish processing and delivery of fish collected for contaminant monitoring. It contains the chain of custody and collection record forms that should be used for the collections.

Organization: Environmental Monitoring Section
Bureau of Ecosystem Health
Division of Fish and Wildlife (DFW)
New York State Department of Environmental Conservation (NYSDEC)
625 Broadway
Albany, New York 12233-4756

Version: 8

Previous Version Date: 21 March 2018

Summary of Changes to this Version: Updated bureau name to Bureau of Ecosystem Health. Added direction to list the names of all field crew on the collection record. Minor formatting changes on chain of custody and collection records.

Originator or Revised by: Wayne Richter, Jesse Becker

Date: 26 April 2019

Quality Assurance Officer and Approval Date: Jesse Becker, 26 April 2019

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

GENERAL FISH HANDLING PROCEDURES FOR CONTAMINANT ANALYSES

A. Original copies of all continuity of evidence (i.e., Chain of Custody) and collection record forms must accompany delivery of fish to the lab. A copy shall be directed to the Project Leader or as appropriate, Wayne Richter. All necessary forms will be supplied by the Bureau of Ecosystem Health. Because some samples may be used in legal cases, it is critical that each section is filled out completely. Each Chain of Custody form has three main sections:

1. The top box is to be filled out **and signed** by the person responsible for the fish collection (e.g., crew leader, field biologist, researcher). This person is responsible for delivery of the samples to DEC facilities or personnel (e.g., regional office or biologist).

2. The second section is to be filled out **and signed** by the person responsible for the collections while being stored at DEC, before delivery to the analytical lab. This may be the same person as in (1), but it is still required that they complete the section. Also important is the **range of identification numbers** (i.e., tag numbers) included in the sample batch.

3. Finally, the bottom box is to record any transfers between DEC personnel and facilities. Each subsequent transfer should be **identified, signed, and dated**, until laboratory personnel take possession of the fish.

B. The following data are required on each **Fish Collection Record** form:

1. Project and Site Name.

2. DEC Region.

3. All personnel (and affiliation) involved in the collection.

4. Method of collection (gill net, hook and line, etc.)

5. Preservation Method.

C. The following data are to be taken on each fish collected and recorded on the **Fish Collection Record** form:

1. Tag number - Each specimen is to be individually jaw tagged at time of collection with a unique number. Make sure the tag is turned out so that the number can be read without opening the bag. Use tags in sequential order. For small fish or composite samples place the tag inside the bag with the samples. The Bureau of Ecosystem Health can supply the tags.

2. Species identification (please be explicit enough to enable assigning genus and species). Group fish by species when processing.

3. Date collected.

4. Sample location (waterway and nearest prominent identifiable landmark).

5. Total length (nearest mm or smallest sub-unit on measuring instrument) and weight (nearest g or

smallest sub-unit of weight on weighing instrument). Take all measures as soon as possible with calibrated, protected instruments (e.g. from wind and upsets) and prior to freezing.

6. Sex - fish may be cut enough to allow sexing or other internal investigation, but do not eviscerate. Make any incision on the right side of the belly flap or exactly down the midline so that a left-side fillet can be removed.

D. General data collection recommendations:

1. It is helpful to use an ID or tag number that will be unique. It is best to use metal striped bass or other uniquely numbered metal tags. If uniquely numbered tags are unavailable, values based on the region, water body and year are likely to be unique: for example, R7CAY11001 for Region 7, Cayuga Lake, 2011, fish 1. If the fish are just numbered 1 through 20, we have to give them new numbers for our database, making it more difficult to trace your fish to their analytical results and creating an additional possibility for errors.

2. Process and record fish of the same species sequentially. Recording mistakes are less likely when all fish from a species are processed together. Starting with the bigger fish species helps avoid missing an individual.

3. If using Bureau of Ecosystem Health supplied tags or other numbered tags, use tags in sequence so that fish are recorded with sequential Tag Numbers. This makes data entry and login at the lab and use of the data in the future easier and reduces keypunch errors.

4. Record length and weight as soon as possible after collection and before freezing. Other data are recorded in the field upon collection. An age determination of each fish is optional, but if done, it is recorded in the appropriate "Age" column.

5. For composite samples of small fish, record the number of fish in the composite in the Remarks column. Record the length and weight of each individual in a composite. All fish in a composite sample should be of the same species and members of a composite should be visually matched for size.

6. Please submit photocopies of topographic maps or good quality navigation charts indicating sampling locations. GPS coordinates can be entered in the Location column of the collection record form in addition to or instead for providing a map. These records are of immense help to us (and hopefully you) in providing documented location records which are not dependent on memory and/or the same collection crew. In addition, they may be helpful for contaminant source trackdown and remediation/control efforts of the Department.

7. When recording data on fish measurements, it will help to ensure correct data recording for the data recorder to call back the numbers to the person making the measurements.

E. Each fish is to be placed in its own individual plastic bag. For small fish to be analyzed as a composite, put all of the fish for one composite in the same bag but use a separate bag for each composite. It is important to individually bag the fish to avoid difficulties or cross contamination when processing the fish for chemical analysis. Be sure to include the fish's tag number inside the bag, preferably attached to the fish with the tag number turned out so it can be read. Tie or otherwise secure the bag closed. **The Bureau of Ecosystem Health will supply the bags.** If necessary, food grade bags may be procured from a suitable vendor (e.g., grocery store). It is preferable to redundantly label each bag with a manila tag tied between the knot and the body of the bag. This tag should be labeled with the project name, collection location, tag number, collection date, and fish species. If scales are collected, the scale envelope should be labeled with the same information.

F. Groups of fish, by species, are to be placed in one large plastic bag per sampling location. **The Bureau of Ecosystem Health will supply the larger bags.** Tie or otherwise secure the bag closed. Label the site bag with a manila tag tied between the knot and the body of the bag. The tag should contain: project, collection location, collection date, species and **tag number ranges**. Having this information on the manila tag enables lab staff to know what is in the bag without opening it.

G. Do not eviscerate, fillet or otherwise dissect the fish unless specifically asked to. If evisceration or dissection is specified, the fish must be cut along the exact midline or on the right side so that the left side fillet can be removed intact at the laboratory. If filleting is specified, the procedure for taking a standard fillet (SOP PREPLAB 4) must be followed, including removing scales.

H. Special procedures for PFAS: Unlike legacy contaminants such as PCBs, which are rarely found in day to day life, PFAS are widely used and frequently encountered. Practices that avoid sample contamination are therefore necessary. While no standard practices have been established for fish, procedures for water quality sampling can provide guidance. The following practices should be used for collections when fish are to be analyzed for PFAS:
   No materials containing Teflon.
   No Post-it notes.
   No ice packs; only water ice or dry ice.
   Any gloves worn must be powder free nitrile.
   No Gore-Tex or similar materials (Gore-Tex is a PFC with PFOA used in its manufacture).
   No stain repellent or waterproof treated clothing; these are likely to contain PFCs.
   Avoid plastic materials, other than HDPE, including clipboards and waterproof notebooks.
   Wash hands after handling any food containers or packages as these may contain PFCs. Keep pre-wrapped food containers and wrappers isolated from fish handling.
   Wear clothing washed at least six times since purchase.
   Wear clothing washed without fabric softener.
   Staff should avoid cosmetics, moisturizers, hand creams and similar products on the day of sampling as many of these products contain PFCs (Fujii et al. 2013). Sunscreen or insect repellent should not contain ingredients with “fluor” in their name. Apply any sunscreen or insect repellent well downwind from all materials. Hands must be washed after touching any of these products.

I. All fish must be kept at a temperature <45° F (<8° C) immediately following data processing. As soon as possible, freeze at -20° C ± 5° C. Due to occasional freezer failures, daily freezer temperature logs are required. The freezer should be locked or otherwise secured to maintain chain of custody.

J. In most cases, samples should be delivered to the Analytical Services Unit at the Hale Creek field station. Coordinate delivery with field station staff and send copies of the collection records, continuity of evidence forms and freezer temperature logs to the field station. For samples to be analyzed elsewhere, non-routine collections or other questions, contact Wayne Richter, Bureau of Ecosystem Health, NYSDEC, 625 Broadway, Albany, New York 12233-4756, 518-402-8974, or the project leader about sample transfer. Samples will then be directed to the analytical facility and personnel noted on specific project descriptions.

K. A recommended equipment list is at the end of this document.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF FISH AND WILDLIFE
FISH COLLECTION RECORD

Project and Site Name ____ DEC Region ____________

Collections made by (include all crew) ____

Sampling Method: Electrofishing Gill netting Trap netting Trawling Seining Angling Other ____________________

Preservation Method: Freezing Other ______________ Notes (SWFDB survey number): ____________________

FOR LAB USE ONLY- LAB ENTRY NO.	COLLECTION OR TAG NO.	SPECIES	DATE TAKEN	LOCATION	AGE	SEX &/OR REPROD. CONDIT	LENGTH ( )	WEIGHT ( )	REMARKS

richter: revised 2011, 5/7/15, 10/4/16, 3/20/17; becker: 3/23/17, 4/26/19

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CHAIN OF CUSTODY

I, ______________________________, of ____ collected the
(Print Name) (Print Business Address)

following on ___________________, 20____ from ____
(Date) (Water Body)

in the vicinity of ____
(Landmark, Village, Road, etc.)

Town of _______________________________________, in _________________________________ County.

Item(s) ____

____

Said sample(s) were in my possession and handled according to standard procedures provided to me prior to collection. The sample(s) were placed in the custody of a representative of the New York State Department of Environmental Conservation on ___________________________________, 20______.

____ ___________________________
Signature Date

I, __________________________________, received the above mentioned sample(s) on the date specified and assigned identification number(s) ____ to the sample(s). I have recorded pertinent data for the sample(s) on the attached collection records. The sample(s) remained in my custody until subsequently transferred, prepared or shipped at times and on dates as attested to below.

_______________________________________ ___________________
Signature Date

SECOND RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
THIRD RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
FOURTH RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
RECEIVED IN LABORATORY BY (Print Name)	TIME & DATE	REMARKS
SIGNATURE	UNIT	
LOGGED IN BY (Print Name)	TIME & DATE	ACCESSION NUMBERS
SIGNATURE	UNIT	

richter: revised 21 April 2014; becker: 23 March 2017, 26 April, 2019

NOTICE OF WARRANTY

By signature to the chain of custody (reverse), the signatory warrants that the information provided is truthful and accurate to the best of his/her ability. The signatory affirms that he/she is willing to testify to those facts provided and the circumstances surrounding the same. Nothing in this warranty or chain of custody negates responsibility nor liability of the signatories for the truthfulness and accuracy of the statements provided.

HANDLING INSTRUCTIONS

On day of collection, collector(s) name(s), address(es), date, geographic location of capture (attach a copy of topographic map or navigation chart), species, number kept of each species, and description of capture vicinity (proper noun, if possible) along with name of Town and County must be indicated on reverse.

Retain organisms in manila tagged plastic bags to avoid mixing capture locations. Note appropriate information on each bag tag.

Keep samples as cool as possible. Put on ice if fish cannot be frozen within 12 hours. If fish are held more than 24 hours without freezing, they will not be retained or analyzed.

Initial recipient (either DEC or designated agent) of samples from collector(s) is responsible for obtaining and recording information on the collection record forms which will accompany the chain of custody. This person will seal the container using packing tape and writing his signature, the time and the date across the tape onto the container with indelible marker. Any time a seal is broken, for whatever purpose, the incident must be recorded on the Chain of Custody (reason, time, and date) in the purpose of transfer block. Container then is resealed using new tape and rewriting signature, with time and date.

EQUIPMENT LIST

Scale or balance of appropriate capacity for the fish to be collected.

Fish measuring board.

Plastic bags of an appropriate size for the fish to be collected and for site bags.

Individually numbered metal tags for fish.

Manila tags to label bags.

Small envelops, approximately 2" x 3.5", if fish scales are to be collected.

Knife for removing scales.

Chain of custody and fish collection forms.

Clipboard.

Pens or markers.

Paper towels.

Dish soap and brush.

Bucket.

Cooler.

Ice.

Duct tape.

Appendix G – PFAS Analyte List

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonates	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
Perfluoroalkyl carboxylates	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7
Fluorinated Telomer Sulfonates	6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2
	8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4
Perfluorooctane-sulfonamides	Perfluroroctanesulfonamide	FOSA	754-91-6
Perfluorooctane-sulfonamidoacetic acids	N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSAA	2991-50-6

Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) developed the following guidelines for laboratories analyzing environmental samples for PFAS under DER programs. If laboratories cannot adhere to the following guidelines, they should contact DER's Quality Assurance Officer, Dana Barbarossa, at dana.barbarossa@dec.ny.gov prior to analysis of samples.

Isotope Dilution

Isotope dilution techniques should be utilized for the analysis of PFAS in all media.

Extraction

For water samples, the entire sample bottle should be extracted, and the sample bottle rinsed with appropriate solvent to remove any residual PFAS.

For samples with high particulates, the samples should be handled in one of the following ways:

1. Spike the entire sample bottle with isotope dilution analytes (IDAs) prior to any sample manipulation. The sample can be passed through the SPE and if it clogs, record the volume that passed through.
2. If the sample contains too much sediment to attempt passing it through the SPE cartridge, the sample should be spiked with isotope dilution analytes, centrifuged and decanted.
3. If higher reporting limits are acceptable for the project, the sample can be diluted by taking a representative aliquot of the sample. If isotope dilution analytes will be diluted out of the sample, they can be added after the dilution. The sample should be homogenized prior to taking an aliquot.

If alternate sample extraction procedures are used, please contact the DER remedial program chemist prior to employing. Any deviations in sample preparation procedures should be clearly noted in the case narrative.

Signal to Noise Ratio

For all target analyte ions used for quantification, signal to noise ratio should be 3:1 or greater.

Blanks

There should be no detections in the method blanks above the reporting limits.

Ion Transitions

The ion transitions listed below should be used for the following PFAS:

PFOA	413 > 369
PFOS	499 > 80
PFHxS	399 > 80
PFBS	299 > 80
6:2 FTS	427 > 407
8:2 FTS	527 > 507
N-EtFOSAA	584 > 419
N-MeFOSAA	570 > 419

Branched and Linear Isomers

Standards containing both branched and linear isomers should be used when standards are commercially available. Currently, quantitative standards are available for PFHxS, PFOS, NMeFOSAA, and NEtFOSAA. As more standards become available, they should be incorporated in to the method. All isomer peaks present in the standard should be integrated and the areas summed. Samples should be integrated in the same manner as the standards.

Since a quantitative standard does not exist for branched isomers of PFOA, the instrument should be calibrated using just the linear isomer and a technical (qualitative) PFOA standard should be used to identify the retention time of the branched PFOA isomers in the sample. The total response of PFOA branched and linear isomers should be integrated in the samples and quantitated using the calibration curve of the linear standard.

Secondary Ion Transition Monitoring

Quantifier and qualifier ions should be monitored for all target analytes (PFBA and PFPeA are exceptions). The ratio of quantifier ion response to qualifier ion response should be calculated for each target analyte and the ratio compared to standards. Lab derived criteria should be used to determine if the ratios are acceptable.

Reporting

Detections below the reporting limit should be reported and qualified with a J qualifier.

The acid form of PFAS analytes should be reported. If the salt form of the PFAS was used as a stock standard, the measured mass should be corrected to report the acid form of the analyte.

Appendix I - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

These guidelines are intended to be used for the validation of PFAS analytical results for projects within the Division of Environmental Remediation (DER) as well as aid in the preparation of a data usability summary report. Data reviewers should understand the methodology and techniques utilized in the analysis. Consultation with the end user of the data may be necessary to assist in determining data usability based on the data quality objectives in the Quality Assurance Project Plan. A familiarity with the laboratory's Standard Operating Procedure may also be needed to fully evaluate the data. If you have any questions, please contact DER's Quality Assurance Officer, Dana Barbarossa, at dana.barbarossa@dec.ny.gov.

Preservation and Holding Time

Samples should be preserved with ice to a temperature of less than 6°C upon arrival at the lab. The holding time is 14 days to extraction for aqueous and solid samples. The time from extraction to analysis for aqueous samples is 28 days and 40 days for solids.

Temperature greatly exceeds 6ºC upon arrival at the lab*	Use professional judgement to qualify detects and non-detects as estimated or rejected
Holding time exceeding 28 days to extraction	Use professional judgement to qualify detects and non-detects as estimated or rejected if holding time is grossly exceeded

*Samples that are delivered to the lab immediately after sampling may not meet the thermal preservation guidelines. Samples are considered acceptable if they arrive on ice or an attempt to chill the samples is observed.

Initial Calibration

The initial calibration should contain a minimum of five standards for linear fit and six standards for a quadratic fit. The relative standard deviation (RSD) for a quadratic fit calibration should be less than 20%. Linear fit calibration curves should have an R^2 value greater than 0.990.

The low-level calibration standard should be within 50% - 150% of the true value, and the mid-level calibration standard within 70% - 130% of the true value.

%RSD >20%	J flag detects and UJ non detects
R^2 >0.990	J flag detects and UJ non detects
Low-level calibration check <50% or >150%	J flag detects and UJ non detects
Mid-level calibration check <70% or >130%	J flag detects and UJ non detects

Initial Calibration Verification

An initial calibration verification (ICV) standard should be from a second source (if available). The ICV should be at the same concentration as the mid-level standard of the calibration curve.

ICV recovery <70% or >130%	J flag detects and non-detects

Continuing Calibration Verification

Continuing calibration verification (CCV) checks should be analyzed at a frequency of one per ten field samples. If CCV recovery is very low, where detection of the analyte could be in question, ensure a low level CCV was analyzed and use to determine data quality.

CCV recovery <70 or >130%	J flag results

Blanks

There should be no detections in the method blanks above the reporting limits. Equipment blanks, field blanks, rinse blanks etc. should be evaluated in the same manner as method blanks. Use the most contaminated blank to evaluate the sample results.

Blank Result	Sample Result	Qualification
Any detection	<Reporting limit	Qualify as ND at reporting limit
Any detection	>Reporting Limit and >10x the blank result	No qualification
>Reporting limit	>Reporting limit and <10x blank result	J+ biased high

Field Duplicates

A blind field duplicate should be collected at rate of one per twenty samples. The relative percent difference (RPD) should be less than 30% for analyte concentrations greater than two times the reporting limit. Use the higher result for final reporting.

RPD >30%	Apply J qualifier to parent sample

Lab Control Spike

Lab control spikes should be analyzed with each extraction batch or one for every twenty samples. In the absence of lab derived criteria, use 70% - 130% recovery criteria to evaluate the data.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects

Matrix Spike/Matrix Spike Duplicate

One matrix spike and matrix spike duplicate should be collected at a rate of one per twenty samples. Use professional judgement to reject results based on out of control MS/MSD recoveries.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only
RPD >30%	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only

Extracted Internal Standards (Isotope Dilution Analytes)

Problematic analytes (e.g. PFBA, PFPeA, fluorotelomer sulfonates) can have wider recoveries without qualification. Qualify corresponding native compounds with a J flag if outside of the range.

Recovery <50% or >150%	Apply J qualifier
Recovery <25% or >150% for poor responding analytes	Apply J qualifier
Isotope Dilution Analyte (IDA) Recovery <10%	Reject results

Secondary Ion Transition Monitoring

Quantifier and qualifier ions should be monitored for all target analytes (PFBA and PFPeA are exceptions). The ratio of quantifier ion response to qualifier ion response should be calculated from the standards for each target analyte. Lab derived criteria should be used to determine if the ratios are acceptable. If the ratios fall outside of the laboratory criteria, qualify results as an estimated maximum concentration.

Signal to Noise Ratio

The signal to noise ratio for the quantifier ion should be at least 3:1. If the ratio is less than 3:1, the peak is discernable from the baseline noise and symmetrical, the result can be reported. If the peak appears to be baseline noise and/or the shape is irregular, qualify the result as tentatively identified.

Branched and Linear Isomers

Observed branched isomers in the sample that do not have a qualitative or quantitative standard should be noted and the analyte should be qualified as biased low in the final data review summary report. Note: The branched isomer peak should also be present in the secondary ion transition.

Reporting Limits

If project-specific reporting limits were not met, please indicate that in the report along with the reason (e.g. over dilution, dilution for non-target analytes, high sediment in aqueous samples).

Peak Integrations

Target analyte peaks should be integrated properly and consistently when compared to standards. Ensure branched isomer peaks are included for PFAS where standards are available. Inconsistencies should be brought to the attention of the laboratory or identified in the data review summary report.

Michigan Department of Environmental Quality

MDEQ PFAS SAMPLING QUICK REFERENCE FIELD GUIDE[1]

All Items Used During Sampling Event

● Prohibited
• Items or materials that contain fluoropolymers such as o Polytetrafluoroethylene (PTFE), that includes the trademarks Teflon® and Hostaflon® o Polyvinylidene fluoride (PVDF), that includes the trademark Kynar® o Polycholotrifluoroethylene (PCTFE), that includes the trademark Neoflon ® o Ethylene-tetrafluoro-ethylene (ETFE), that includes the trademark Tefzel® o Fluorinated ethylene propylene (FEP), that includes the trademarks Teflon® FEP and Hostaflon® FEP • Items or materials that contain any other fluoropolymer

Pumps, Tubing, and Sampling Equipment

● Prohibited	■ Allowable	▲ Needs Screening[2]
• Items or materials containing any fluoropolymer (potential items include tubing, valves, or pipe thread seal tape)	• High-density polyethylene (HDPE) • Low-density polyethylene (LDPE) tubing • Polypropylene • Silicone • Stainless-steel • Any items used to secure sampling bottles made from: o Natural rubber o Nylon (cable ties) o Uncoated metal springs o Polyethylene	• Any items or materials that will come into direct contact with the sample that have **not** been verified to be PFAS-free o Do not assume that any sampling items or materials are PFAS-free based on composition alone

Sample Storage and Preservation

● Prohibited	■ Allowable	▲ Needs Screening[2]
• Polytetrafluoroethylene (PTFE): Teflon® lined bottles or caps	• Glass jars[4] • Laboratory-provided PFAS-Free bottles: o HDPE or polypropylene • Regular wet ice • Thin HDPE sheeting • LDPE resealable storage bags (i.e. Ziploc®) that will not contact the sample media[6]	• Aluminium foil[4] • Chemical or blue ice[5] • Plastic storage bags other than those listed as ■ Allowable • Low-density polyethylene (LDPE) bottles

Field Documentation

● Prohibited	■ Allowable	▲ Needs Screening[2]
• Clipboards coated with PFAS • Notebooks made with PFAS treated paper • PFAS treated loose paper • PFAS treated adhesive paper products	• Loose paper (non-waterproof, non-recycled) • Rite in the Rain® notebooks • Aluminium, polypropylene, or Masonite field clipboards • Ballpoint pens, pencils, and Fine or Ultra-Fine Point Sharpie® markers	• Plastic clipboards, binders, or spiral hard cover notebooks • All markers not listed as ■ Allowable • Post-It® Notes or other adhesive paper products • Waterproof field books

Decontamination

● Prohibited	■ Allowable	▲ Needs Screening[2]
• Decon 90® • PFAS treated paper towel	• Alconox®, Liquinox®, or Citranox® • Triple rinse with PFAS-free deionized water • Cotton cloth or untreated paper towel	• Municipal water • Recycled paper towels or chemically treated paper towels

Clothing, Boots, Rain Gear, and PPE

● Prohibited	■ Allowable	▲Needs Screening[2]
• New or unwashed clothing • Anything made of or with: o Gore-Tex™ or other water-resistant synthetics • Anything applied with or recently washed with: o Fabric softeners o Fabric protectors, including UV protection o Insect resistant chemicals o Water, dirt, and/or stain resistant chemicals	• Powderless nitrile gloves • Well-laundered synthetic or 100% cotton clothing, with most recent launderings not using fabric softeners • Made of or with: o Polyurethane o Polyvinyl chloride (PVC) o Wax coated fabrics o Rubber / Neoprene o Uncoated Tyvek®	• Latex gloves • Water and/or dirt resistant leather gloves • Any special gloves required by a HASP • Tyvek® suits, clothing that contains Tyvek®, or coated Tyvek®

Food and Beverages

● Prohibited	■ Allowable
• No food should be consumed in the staging or sampling areas, including pre-packaged food or snacks. ■ If consuming food on-site becomes necessary, move to the staging area and remove PPE. After eating, wash hands thoroughly and put on new PPE.	• Brought and consumed only outside the vicinity of the sampling area: o Bottled water o Hydration drinks (i.e. Gatorade®, Powerade®)

Personal Care Products (PCPs) - for day of sample collection[6]

● Prohibited	■ Allowable	▲Needs Screening[2]
• Any PCPs[6], sunscreen, and insect repellent applied in the sampling area.	PCPs[6], sunscreens, and insect repellents applied in the staging area, away from sampling bottles and equipment followed by thoroughly washing hands: **PCPs[6]:** • Cosmetics, deodorants/antiperspirants, moisturizers, hand creams, and other PCPs[6] **Sunscreens:** • Banana Boat® for Men Triple Defense Continuous Spray Sunscreen SPF 30 • Banana Boat® Sport Performance Coolzone Broad Spectrum SPF 30 • Banana Boat® Sport Performance Sunscreen Lotion Broad Spectrum SPF 30 • Banana Boat® Sport Performance Sunscreen Stick SPF 50 • Coppertone® Sunscreen Lotion Ultra Guard Broad Spectrum SPF 50 • Coppertone® Sport High Performance AccuSpray Sunscreen SPF 30 • Coppertone® Sunscreen Stick Kids SPF 55 • L'Oréal® Silky Sheer Face Lotion 50 • Meijer® Clear Zinc Sunscreen Lotion Broad Spectrum SPF 50 • Meijer® Sunscreen Continuous Spray Broad Spectrum SPF 30 • Meijer® Clear Zinc Sunscreen Lotion Broad Spectrum SPF 15, 30 and 50 • Meijer® Wet Skin Kids Sunscreen Continuous Spray Broad Spectrum SPF 70 • Neutrogena® Beach Defense Water+Sun Barrier Lotion SPF 70 • Neutrogena® Beach Defense Water+Sun Barrier Spray Broad Spectrum SPF 30 • Neutrogena® Pure & Free Baby Sunscreen Broad Spectrum SPF 60+ • Neutrogena® UltraSheer Dry-Touch Sunscreen Broad Spectrum SPF 30 **Insect Repellents:** • OFF® Deep Woods • Sawyer® Permethrin	• Products other than those listed as ■Allowable

[1] This table is not considered to be a complete listing of prohibited or allowable materials. All materials should be evaluated prior to use during sampling. The manufacturers of various products should be contacted in order to determine if PFAS was used in the production of any particular product.

[2] Equipment blank samples should be taken to verify these products are PFAS-free prior to use during sampling.

[3] **For surface water foam samples:** LDPE storage bags may be used in the sampling of foam on surface waters. In this instance, it is allowable for the LDPE bag to come into direct contact with the sample media.

[4] **For fish and other wildlife samples:** Depending on the project objectives, glass jars and aluminum foil might be used for PFAS sampling. PFAS has been found to bind to glass and if the sample is stored in a glass jar, a rinse of the jar is required during the sample analysis. PFAS are sometimes used as a protective layer for some aluminum foils. An equipment blank sample should be collected prior to any aluminum foil use.

[5] Regular ice is recommended as there are concerns that chemical and blue ice may not cool and maintain the sample at or below 42.8°F (6°C) (as determined by EPA 40 CFR 136 – NPDES) during collection and through transit to the laboratory.

[6] Based on evidence, avoidance of PCPs is considered to be precautionary because none have been documented as having cross-contaminated samples due to their use. However, if used, application of PCPs must be done at the staging area and away from sampling bottles and equipment, and hands must be thoroughly washed after the use of any PCPs prior to sampling.

●- Prohibited ■- Allowable ▲- Needs Screening

ATTACHMENT C

SCO Tables

Department of Environmental Conservation

Division of Environmental Remediation

6 NYCRR PART 375

Environmental Remediation Programs

Subparts 375-1 to 375- 4 & 375-6

Effective December 14, 2006

New York State Department of Environmental Conservation

Subpart 375-6
Remedial Program Soil Cleanup Objectives

375-6.1 Purpose; applicability.

(a) This subpart applies to the development and implementation of the remedial programs for soil and other media set forth in subparts 375-2 through 375-4.

(b) This subpart includes the soil cleanup objective tables developed pursuant to ECL 27-1415(6).

375-6.2 Definitions.

(a) “Contract required quantitation limit” or “CRQL” means the minimum level of quantitation acceptable for Department analytical services contracts. The value represents minimum quantitation limits, not absolute detection limits. The minimum quantitation limit is the lowest level at which the analytical instrument can determine the concentration of a chemical that exists in the sample. The detection limit is the minimum level at which the analytical instrument can confirm the presence of the chemical in the sample. At the detection limit, the analytical instrument can confirm that there is some amount of the chemical in the sample but can not determine the concentration that exists with certainty.

(b) “Technical Support Document” means the “New York State Brownfield Cleanup Program Development of Soil Cleanup Objectives Technical Support Document” dated September 2006, which is the document that presents the assumptions, rationale, algorithms and calculations utilized by the Department and the New York State Department of Health to develop the soil cleanup objectives in ECL 27-1415(6).

375-6.3 Unrestricted use soil cleanup objectives.

(a) Applicability. The unrestricted use soil cleanup objectives represent the concentration of a contaminant in soil which, when achieved at a site, will require no use restrictions on the site for the protection of public health, groundwater and ecological resources due to the presence of contaminants in the soil.

(b) Soil cleanup objectives.

(1) The calculated values for the protection of groundwater, ecological resources and public health were considered in developing the unrestricted use soil cleanup objectives. The unrestricted soil cleanup objectives in Table 375-6.8(a) represent the lowest of the three values for protection of groundwater, ecological resources and public health developed as set forth in ECL 27-1415(6).

(2) Unrestricted use, as set forth in subparagraph 375-1.8(g)(1)(i), is achieved when a remedial program for soil meets the unrestricted use soil cleanup objectives in Table 375-6.8(a).

375-6.4 Restricted use soil cleanup objectives for the protection of public health.

(a) Applicability. A protection of public health soil cleanup objective is applicable for the protection of public health at every restricted use site where contamination has been identified in soil above the residential use soil cleanup objectives for a compound included in Table 375-6.8(b), and the Department has determined that remediation is required to protect public health.

(b) Soil cleanup objectives. Protection of public health soil cleanup objectives have been developed for:

(1) Residential use, as set forth in subparagraph 375-1.8(g)(2)(i). The residential use soil cleanup objectives are presented in the protection of public health-residential use column of Table 375-6.8(b).

(2) Restricted-residential use, as set forth in subparagraph 375-1.8(g)(2)(ii). The restricted-residential use soil cleanup objectives are presented in the protection of public health, restricted-residential use column of Table 375-6.8(b).

(3) Commercial use, as set forth in subparagraph 375-1.8(g)(2)(iii). The commercial use soil cleanup objectives are presented in the protection of public health-commercial use column of Table 375-6.8(b).

(4) Industrial use, as set forth in subparagraph 375-1.8(g)(2)(iv). The industrial use soil cleanup objectives are presented in the protection of public health-industrial use column of Table 375-6.8(b).

(c) Selection of the restricted use soil cleanup objectives. In addition to the protection of public health soil cleanup objective for the identified use of the site, protection of groundwater and ecological resources soil cleanup objectives shall be considered where applicable. The contaminant-specific soil cleanup objectives for the soil cleanup component of the remedial program shall be the lowest of the applicable contaminant-specific soil cleanup objectives which are identified for the site as set forth in paragraphs (1) through (3) below.

(1) The protection of groundwater soil cleanup objectives in Table 375-6.8(b) will be applicable to the site and evaluated in determining the soil cleanup objectives for a site as set forth in section 375-6.5.

(2) The protection of ecological resources soil cleanup objectives in Table 375-6.8(b) will be applicable to the site and evaluated in determining the soil cleanup objectives in section 375-6.6

(3) The protection of public health soil cleanup objective for the current, intended and reasonably anticipated future use of the site in Table 375-6.8(b) will be applicable and evaluated in determining the soil cleanup objectives for every site, unless a site-specific soil cleanup objective is proposed.

375-6.5 Soil cleanup objectives for the protection of groundwater.

(a) Applicability. Except as provided in paragraph (1) and (2) below, the protection of groundwater soil cleanup objectives are applicable at restricted use sites where contamination has been identified in on-site soil by the remedial investigation and groundwater standards are, or are threatened to be, contravened by the presence of soil contamination at concentrations above the protection of groundwater soil cleanup objectives.

(1) The protection of groundwater soil cleanup objectives may not be applicable where:

(i) the groundwater standard contravention is the result of an on-site source which is addressed by the remedial program;

(ii) an environmental easement will be put in place which provides for a groundwater use restriction on the site as set forth in paragraph 375-1.8(h)(2);

(iii) the Department determines that contaminated groundwater at the site:

(a) is not migrating, or likely to migrate, off-site; or

(b) is migrating, or is likely to migrate, off-site, however, the remedy includes controls or treatment to address off-site migration; and

(iv) the Department determines the groundwater quality will improve over time.

(2) The protection of groundwater soil cleanup objectives are not applicable if the contravention of groundwater standards at the site is determined to be the result of an off-site source, as set forth in paragraph 375-1.8(d)(2).

(b) Soil cleanup objectives. The protection of groundwater soil cleanup objectives are in Table 375-6.8(b) in the protection of groundwater column.

375-6.6 Soil cleanup objectives for the protection of ecological resources.

(a) Applicability. The soil cleanup objectives for protection of ecological resources must be considered and applied as set forth in this section for the upland soils at sites where terrestrial flora and fauna and the habitats that support them are identified.

(1) Protection of ecological resources soil cleanup objectives apply to sites or portions of sites where the Department determines:

(i) ecological resources at or adjacent to a site, as set forth in subdivision 375-6.6(b):

(a) are present, or will be present under the reasonably anticipated future use of the site; and

(b) constitute an important component of the environment at, or in the vicinity of, the site;

(ii) an impact or threat to the ecological resource has been identified as set forth in subdivision 375-6.6(c); and

(iii) soil contaminant concentrations exceed the protection of ecological resources soil cleanup objectives, as set forth in subdivision 375-6.6(d).

(2) Protection of ecological resources soil cleanup objectives do not and/or will not apply to:

(i) sites or portions of sites where the condition of the land (e.g., paved, covered by impervious surfaces, buildings and other structures) precludes the existence of an ecological resource which constitutes an important component of the environment;

(ii) protection of the aquatic environment; or

(iii) such non-wild biota as:

(1) pets or livestock;

(2) agricultural or horticultural crops; and

(3) landscaping in developed areas.

(b) Identification of ecological resources. The presence of ecological resources shall be determined during the investigation of a site.

(1) The remedial party for a remedial program undertaken pursuant to either subparts 375-2 or 375-4 shall conduct an ecological resource characterization as part of a fish and wildlife impact analysis according to Department guidance to document the presence of fish, wildlife, plants and habitats both on and adjacent to the site.

(2) The remedial party for a remedial program undertaken pursuant to subpart 375-3 shall conduct a resource characterization as part of the qualitative exposure assessment required by ECL 27-1415(2)(b) and in accordance with Department guidance to document the presence of fish, wildlife, plants and habitats both on and adjacent to the site.

(3) The Department shall determine whether the characterization conducted as set forth in paragraphs (1) and (2) above:

(i) has identified ecological resources to be present at or adjacent to a site, or a portion thereof; and

(ii) if such ecological resources constitute an important component of the environment at, or in the vicinity of, the site.

(c) Consideration of impact or threat of impact. If ecological resources that constitute an important component of the environment at, or adjacent to, the site are determined to be present the protection of ecological resources soil cleanup objectives must be considered in the remedial program for the site.

(1) An impact or theat of impact exists when:

(i) a threat to the environment exists, as set forth in subparagraphs 375-2.7(a)(1)(i) to (iv), as a result of contaminants in the soil of the site, unless the Department determines that a more stringent cleanup is necessary to met the requirements of subdivision 375-2.8(a) and paragraph 375-2.8(b)(1); or

(ii) an ecological resource is, or is potentially, impacted by contaminants in the soil of the site.

(d) Soil cleanup objectives. The protection of ecological resources soil cleanup objectives are the same for both unrestricted and restricted use and are incorporated in the soil cleanup objective tables.

(1) For an unrestricted use site, Table 375-6.8(a) presents the lower of the protection of groundwater, ecological resources and unrestricted public health soil cleanup objectives, as calculated and presented in the Technical Support Document.

(2) For a restricted use site, Table 375-6.8(b) includes a protection of ecological resources column, which is applicable to a site regardless of the identified use, as set forth in subdivision (a) above.

(3) Protection of ecological resources soil cleanup objectives were not developed for contaminants identified in Table 375-6.8(b) as "NS". For such contaminants, the applicant may be required to calculate a protection of ecological resources soil cleanup objective for any site, as set forth in section 375-6.9.

375-6.7 Other considerations and media.

(a) Soil vapor and vapor intrusion.

(1) The soil cleanup objectives presented in this subpart do not account for the impact of concentrations of contaminants in soil relative to soil vapor or vapor intrusion attributable to a remedial site.

(2) The nature and extent of any contamination of the soil vapor media, if present at the site, will be evaluated by the remedial investigation.

(3) The remedy will be protective for soil vapor and vapor intrusion and shall address through appropriate removal or engineering controls the migration of contaminants in soil and groundwater at levels which could impact the indoor air of buildings.

(b) Surface water and sediments.

(1) The soil cleanup objectives presented in this subpart do not account for the impact of contaminants in soil relative to surface water and surface water sediments attributable to a remedial site.

(2) The nature and extent of any contamination of the surface water and sediment, if present at the site, will be evaluated by the remedial investigation.

(3) The remedy for a site will eliminate or mitigate the threat to public health and the environment from contaminated surface water and surface water sediments and shall, to the extent feasible:

(i) remove, contain or treat the source of a discharge of contaminants from the site to the surface water and sediments;

(ii) address through appropriate removal or engineering controls the migration of contaminants in soil and groundwater at levels which could impact the water quality or adversely impact the sediments of a surface water body on or adjacent to the site; and

(iii) remove, contain or treat the impacted surface water and surface water sediments based upon the cleanup objectives developed for the remedial program.

(c) Adjacent residential properties.

(1) The soil cleanup objectives presented for commercial or industrial use in this subpart do not directly account for the impact of concentrations of contaminants in soil relative to adjacent residential properties attributable to a remedial site.

(2) The remedy for a site using the commercial or industrial soil cleanup objectives will be protective of adjacent residential properties and shall address, through appropriate removal or engineering controls, the migration of contaminants in soil which could impact residential properties adjacent to the site.

(d) Soil covers and backfill.

(1) Soil brought to the site for use as a soil cover or backfill must:

(i) be comprised of soil or other unregulated material as set forth in Part 360 of this title;

(ii) not exceed the applicable soil cleanup objectives for the use of the site, as set forth in Tables 375-6.8(a) or (b), as follows:

(a) for unrestricted use sites, as set forth in Table 375-6.8(a);

(b) for residential, restricted-residential, and commercial use sites use the lower of the protection of groundwater or the protection of public health soil cleanup objectives, for the identified use of the site as set forth in Table 375-6.8(b);

(c) for industrial use sites, use the lower of the protection of groundwater or the protection of public health soil cleanup objectives for commercial use as set forth in Table 375-6.8(b);

(d) for restricted use sites where an ecological resource that constitutes an important component of the environment is determined to be present, the protection of ecological resources soil cleanup objective must also be considered, so as not to preclude the growth and development of plants and soil dwelling organisms nor inhibit the activity of burrowing organisms; or

(e) a site specific modification to a soil cleanup objective, as set forth in subdivision 375-6.9(c), may also be utilized in compliance with clauses (ii)*(a)* through *(d)* above.

(2) Analytical data is required to demonstrate that the material complies with the requirements of paragraph (1) above. The number of samples required to confirm compliance will be approved in the work plan. The Department may issue a site specific exemption for the analytical testing requirements, based upon documentation of the origin and composition of the material.

(3) The Department may issue a site specific exemption for one or more of the requirements set forth in paragraph (1) above, based upon site specific conditions, including but not limited to, the following:

(i) the use and redevelopment of the site;

(ii) the depth of placement of the backfill material;

(iii) the depth of placement of the backfill material relative to groundwater;

(iv) the volume of backfill material;

(v) the potential for odor from the backfill material;

(vi) the presence of historic fill in the vicinity of the site;

(vii) a Department issued beneficial use determination, pursuant to Part 360 of this title; or

(viii) background levels of contamination in areas surrounding the site.

375-6.8 **Soil cleanup objective tables.**

(a) Unrestricted use soil cleanup objectives.

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
Metals		
Arsenic	7440-38-2	13 [c]
Barium	7440-39-3	350 [c]
Beryllium	7440-41-7	7.2
Cadmium	7440-43-9	2.5 [c]
Chromium, hexavalent [e]	18540-29-9	1[b]
Chromium, trivalent [e]	16065-83-1	30 [c]
Copper	7440-50-8	50
Total Cyanide [e, f]		27
Lead	7439-92-1	63 [c]
Manganese	7439-96-5	1600 [c]
Total Mercury		0.18 [c]
Nickel	7440-02-0	30
Selenium	7782-49-2	3.9[c]
Silver	7440-22-4	2
Zinc	7440-66-6	109 [c]
PCBs/Pesticides		
2,4,5-TP Acid (Silvex) [f]	93-72-1	3.8
4,4’-DDE	72-55-9	0.0033 [b]
4,4’-DDT	50-29-3	0.0033 [b]
4,4’-DDD	72-54-8	0.0033 [b]
Aldrin	309-00-2	0.005 [c]
alpha-BHC	319-84-6	0.02
beta-BHC	319-85-7	0.036
Chlordane (alpha)	5103-71-9	0.094

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
delta-BHC [g]	319-86-8	0.04
Dibenzofuran [f]	132-64-9	7
Dieldrin	60-57-1	0.005 [c]
Endosulfan I [d, f]	959-98-8	2.4
Endosulfan II [d, f]	33213-65-9	2.4
Endosulfan sulfate [d, f]	1031-07-8	2.4
Endrin	72-20-8	0.014
Heptachlor	76-44-8	0.042
Lindane	58-89-9	0.1
Polychlorinated biphenyls	1336-36-3	0.1
Semivolatile organic compounds		
Acenaphthene	83-32-9	20
Acenapthylene [f]	208-96-8	100 [a]
Anthracene [f]	120-12-7	100 [a]
Benz(a)anthracene [f]	56-55-3	1[c]
Benzo(a)pyrene	50-32-8	1[c]
Benzo(b)fluoranthene [f]	205-99-2	1[c]
Benzo(g,h,i)perylene [f]	191-24-2	100
Benzo(k)fluoranthene [f]	207-08-9	0.8 [c]
Chrysene [f]	218-01-9	1[c]
Dibenz(a,h)anthracene [f]	53-70-3	0.33 [b]
Fluoranthene [f]	206-44-0	100 [a]
Fluorene	86-73-7	30
Indeno(1,2,3-cd)pyrene [f]	193-39-5	0.5 [c]
m-Cresol [f]	108-39-4	0.33 [b]
Naphthalene [f]	91-20-3	12
o-Cresol [f]	95-48-7	0.33 [b]

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
p-Cresol [f]	106-44-5	0.33 [b]
Pentachlorophenol	87-86-5	0.8 [b]
Phenanthrene [f]	85-01-8	100
Phenol	108-95-2	0.33 [b]
Pyrene [f]	129-00-0	100
Volatile organic compounds		
1,1,1-Trichloroethane [f]	71-55-6	0.68
1,1-Dichloroethane [f]	75-34-3	0.27
1,1-Dichloroethene [f]	75-35-4	0.33
1,2-Dichlorobenzene [f]	95-50-1	1.1
1,2-Dichloroethane	107-06-2	0.02 [c]
cis -1,2-Dichloroethene [f]	156-59-2	0.25
trans-1,2-Dichloroethene [f]	156-60-5	0.19
1,3-Dichlorobenzene [f]	541-73-1	2.4
1,4-Dichlorobenzene	106-46-7	1.8
1,4-Dioxane	123-91-1	0.1 [b]
Acetone	67-64-1	0.05
Benzene	71-43-2	0.06
n-Butylbenzene [f]	104-51-8	12
Carbon tetrachloride [f]	56-23-5	0.76
Chlorobenzene	108-90-7	1.1
Chloroform	67-66-3	0.37
Ethylbenzene [f]	100-41-4	1
Hexachlorobenzene [f]	118-74-1	0.33[b]
Methyl ethyl ketone	78-93-3	0.12
Methyl tert-butyl ether [f]	1634-04-4	0.93
Methylene chloride	75-09-2	0.05

Table 375-6.8(a):Unrestricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Unrestricted Use
n - Propylbenzene [f]	103-65-1	3.9
sec-Butylbenzene [f]	135-98-8	11
tert-Butylbenzene [f]	98-06-6	5.9
Tetrachloroethene	127-18-4	1.3
Toluene	108-88-3	0.7
Trichloroethene	79-01-6	0.47
1,2,4-Trimethylbenzene [f]	95-63-6	3.6
1,3,5-Trimethylbenzene[f]	108-67-8	8.4
Vinyl chloride[f]	75-01-4	0.02
Xylene (mixed)	1330-20-7	0.26

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

Footnotes

[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.

(b) Restricted use soil cleanup objectives.

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
Metals							
Arsenic	7440-38-2	16[f]	16[f]	16[f]	16[f]	13[f]	16[f]
Barium	7440-39-3	350[f]	400	400	10,000 [d]	433	820
Beryllium	7440-41-7	14	72	590	2,700	10	47
Cadmium	7440-43-9	2.5[f]	4.3	9.3	60	4	7.5
Chromium, hexavalent [h]	18540-29-9	22	110	400	800	1[e]	19
Chromium, trivalent [h]	16065-83-1	36	180	1,500	6,800	41	NS
Copper	7440-50-8	270	270	270	10,000 [d]	50	1,720
Total Cyanide [h]		27	27	27	10,000 [d]	NS	40
Lead	7439-92-1	400	400	1,000	3,900	63[f]	450
Manganese	7439-96-5	2,000[f]	2,000[f]	10,000 [d]	10,000 [d]	1600[f]	2,000[f]
Total Mercury		0.81[j]	0.81[j]	2.8[j]	5.7[j]	0.18[f]	0.73
Nickel	7440-02-0	140	310	310	10,000 [d]	30	130
Selenium	7782-49-2	36	180	1,500	6,800	3.9[f]	4[f]
Silver	7440-22-4	36	180	1,500	6,800	2	8.3
Zinc	7440-66-6	2200	10,000 [d]	10,000 [d]	10,000 [d]	109[f]	2,480
PCBs/Pesticides							
2,4,5-TP Acid (Silvex)	93-72-1	58	100[a]	500[b]	1,000[c]	NS	3.8
4,4'-DDE	72-55-9	1.8	8.9	62	120	0.0033 [e]	17
4,4'-DDT	50-29-3	1.7	7.9	47	94	0.0033 [e]	136
4,4'- DDD	72-54-8	2.6	13	92	180	0.0033 [e]	14
Aldrin	309-00-2	0.019	0.097	0.68	1.4	0.14	0.19
alpha-BHC	319-84-6	0.097	0.48	3.4	6.8	0.04[g]	0.02
beta-BHC	319-85-7	0.072	0.36	3	14	0.6	0.09
Chlordane (alpha)	5103-71-9	0.91	4.2	24	47	1.3	2.9

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
delta-BHC	319-86-8	100[a]	100[a]	500[b]	1,000[c]	0.04[g]	0.25
Dibenzofuran	132-64-9	14	59	350	1,000[c]	NS	210
Dieldrin	60-57-1	0.039	0.2	1.4	2.8	0.006	0.1
Endosulfan I	959-98-8	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan II	33213-65-9	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan sulfate	1031-07-8	4.8[i]	24[i]	200[i]	920[i]	NS	1,000[c]
Endrin	72-20-8	2.2	11	89	410	0.014	0.06
Heptachlor	76-44-8	0.42	2.1	15	29	0.14	0.38
Lindane	58-89-9	0.28	1.3	9.2	23	6	0.1
Polychlorinated biphenyls	1336-36-3	1	1	1	25	1	3.2
Semivolatiles							
Acenaphthene	83-32-9	100[a]	100[a]	500[b]	1,000[c]	20	98
Acenapthylene	208-96-8	100[a]	100[a]	500[b]	1,000[c]	NS	107
Anthracene	120-12-7	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Benz(a)anthracene	56-55-3	1[f]	1[f]	5.6	11	NS	1[f]
Benzo(a)pyrene	50-32-8	1[f]	1[f]	1[f]	1.1	2.6	22
Benzo(b)fluoranthene	205-99-2	1[f]	1[f]	5.6	11	NS	1.7
Benzo(g,h,i)perylene	191-24-2	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Benzo(k)fluoranthene	207-08-9	1	3.9	56	110	NS	1.7
Chrysene	218-01-9	1[f]	3.9	56	110	NS	1[f]
Dibenz(a,h)anthracene	53-70-3	0.33[e]	0.33[e]	0.56	1.1	NS	1,000[c]
Fluoranthene	206-44-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Fluorene	86-73-7	100[a]	100[a]	500[b]	1,000[c]	30	386
Indeno(1,2,3-cd)pyrene	193-39-5	0.5[f]	0.5[f]	5.6	11	NS	8.2
m-Cresol	108-39-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
Naphthalene	91-20-3	100[a]	100[a]	500[b]	1,000[c]	NS	12

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
o-Cresol	95-48-7	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
p-Cresol	106-44-5	34	100[a]	500[b]	1,000[c]	NS	0.33[e]
Pentachlorophenol	87-86-5	2.4	6.7	6.7	55	0.8[e]	0.8[e]
Phenanthrene	85-01-8	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Phenol	108-95-2	100[a]	100[a]	500[b]	1,000[c]	30	0.33[e]
Pyrene	129-00-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Volatiles							
1,1,1-Trichloroethane	71-55-6	100[a]	100[a]	500[b]	1,000[c]	NS	0.68
1,1-Dichloroethane	75-34-3	19	26	240	480	NS	0.27
1,1-Dichloroethene	75-35-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33
1,2-Dichlorobenzene	95-50-1	100[a]	100[a]	500[b]	1,000[c]	NS	1.1
1,2-Dichloroethane	107-06-2	2.3	3.1	30	60	10	0.02[f]
cis-1,2-Dichloroethene	156-59-2	59	100[a]	500[b]	1,000[c]	NS	0.25
trans-1,2-Dichloroethene	156-60-5	100[a]	100[a]	500[b]	1,000[c]	NS	0.19
1,3-Dichlorobenzene	541-73-1	17	49	280	560	NS	2.4
1,4-Dichlorobenzene	106-46-7	9.8	13	130	250	20	1.8
1,4-Dioxane	123-91-1	9.8	13	130	250	0.1[e]	0.1[e]
Acetone	67-64-1	100[a]	100[b]	500[b]	1,000[c]	2.2	0.05
Benzene	71-43-2	2.9	4.8	44	89	70	0.06
Butylbenzene	104-51-8	100[a]	100[a]	500[b]	1,000[c]	NS	12
Carbon tetrachloride	56-23-5	1.4	2.4	22	44	NS	0.76
Chlorobenzene	108-90-7	100[a]	100[a]	500[b]	1,000[c]	40	1.1
Chloroform	67-66-3	10	49	350	700	12	0.37
Ethylbenzene	100-41-4	30	41	390	780	NS	1
Hexachlorobenzene	118-74-1	0.33[e]	1.2	6	12	NS	3.2
Methyl ethyl ketone	78-93-3	100[a]	100[a]	500[b]	1,000[c]	100[a]	0.12

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
Methyl tert-butyl ether	1634-04-4	62	100[a]	500[b]	1,000[c]	NS	0.93
Methylene chloride	75-09-2	51	100[a]	500[b]	1,000[c]	12	0.05
n-Propylbenzene	103-65-1	100[a]	100[a]	500[b]	1,000[c]	NS	3.9
sec-Butylbenzene	135-98-8	100[a]	100[a]	500[b]	1,000[c]	NS	11
tert-Butylbenzene	98-06-6	100[a]	100[a]	500[b]	1,000[c]	NS	5.9
Tetrachloroethene	127-18-4	5.5	19	150	300	2	1.3
Toluene	108-88-3	100[a]	100[a]	500[b]	1,000[c]	36	0.7
Trichloroethene	79-01-6	10	21	200	400	2	0.47
1,2,4-Trimethylbenzene	95-63-6	47	52	190	380	NS	3.6
1,3,5- Trimethylbenzene	108-67-8	47	52	190	380	NS	8.4
Vinyl chloride	75-01-4	0.21	0.9	13	27	NS	0.02
Xylene (mixed)	1330-20-7	100[a]	100[a]	500[b]	1,000[c]	0.26	1.6

All soil cleanup objectives (SCOs) are in parts per million (ppm).
NS=Not specified. See Technical Support Document (TSD).

Footnotes

[a] The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.

[b] The SCOs for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.

[c] The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See TSD section 9.3.

[d] The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.

[e] For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

[f] 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 2 SCO value for this use of the site.

[g] This SCO is derived from data on mixed isomers of BHC.

[h] 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.

[i] This SCO is for the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[j] This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See TSD Table 5.6-1.

375-6.9 Development or modification of soil cleanup objectives.

(a) Applicability. This section identifies when and the procedures under which a contaminant-specific soil cleanup objective may be developed or modified.

(1) Soil cleanup objectives for contaminants not included in Tables 375-6.8(a) and (b) may be developed by the remedial party or required by the Department.

(2) Soil cleanup objectives for contaminants included in Tables 375-6.8(a) and (b), may be modified based on site-specific data if desired by the remedial party; as set forth in:

(i) subpart 375-3 for Tracks 3 or 4, as set forth in paragraphs 375-3.8(e)(3) or (4), respectively; or

(ii) subparts 375-2 and 375-4, as set forth in subparagraph 375-2.8(b)(1)(iii) and subparagraph 375-4.8(c)(1)(iii).

(3) Protection of ecological resources soil cleanup objectives were not developed for certain contaminants, which are identified in Table 375-6.8(b) as "NS". Where such contaminants:

(i) appear in Table 375-6.8(a), the applicant may be required by the Department to calculate a protection of ecological resources soil cleanup objective for the contaminant for use in Track 1 and apply such soil cleanup objective where it is lower than the soil cleanup objective set forth in Table 375-6.8(a); or

(ii) are identified as impacting or threatening an ecological resource for a restricted use remedial program the Department may require a protection of ecological resources soil cleanup objective be developed.

(b) New soil cleanup objectives must:

(1) Be developed utilizing the same methodologies that were used by the Department to develop the respective soil cleanup objective, as provided in the Technical Support Document.

(2) Apply the following caps, as set forth in section 9.3 of the Technical Support Document, on any soil cleanup objective included in Tables 375-6.8(a) and (b), with the exception of metals, as set forth in paragraph (3) below, developed for:

(i) unrestricted use, residential use, restricted-residential use and the protection of ecological resources, a maximum value of 100 ppm;

(ii) commercial use, a maximum value of 500 ppm; and

(iii) industrial use and the protection of groundwater a maximum value of 1000 ppm, and

(3) Apply a cap for metals at a maximum value of 10,000 ppm.

(c) Development of unrestricted use soil cleanup objectives. The unrestricted use soil cleanup objective for a compound will be the lowest of the soil cleanup values, calculated as set forth in appendix E of the Technical Support Document, for the protection of groundwater, protection of ecological resources and protection of public health.

(d) Development of restricted use soil cleanup objectives. The protection of:

(1) Groundwater soil cleanup objective will be the values calculated for the protection of groundwater as set forth in appendix E of the Technical Support Document;

(2) Ecological resources soil cleanup objectives will be the values calculated for the protection of ecological resources as set forth in appendix E of the Technical Support Document; and

(3) Public health cleanup objective will be the values calculated for the protection of public health for the identified use of the site, as set forth in appendix E of the Technical Support Document.

(e) Modification of soil cleanup objectives. The contaminant-specific soil cleanup objectives set forth at Tables 675-6.8(a) and (b)[1] may be modified by site specific data as set forth in this subdivision.

[1] Original should read "Tables 375-6.8(a) and (b)"

(1) Contaminant-specific soil cleanup objectives modified in accordance with this subdivision may be utilized by the remedial party for a site remedial program undertaken pursuant to:

(i) subpart 375-3 in Tracks 3 or 4, as set forth in paragraphs 375-3.8(e)(3) or (4), respectively; or

(ii) subparts 375-2 and 375-4, as set forth in subparagraph 375-2.8(b)(1)(ii) and subparagraph 375-4.8(c)(1)(ii).

(2) For the calculation of a protection of groundwater or ecological resources contaminant -specific soil cleanup objective, the site-specific percentage of total organic carbon in the soil at the site may be substituted in the algorithms provided in appendix E of the Technical Support Document.

(3) For the calculation of a protection of public health contaminant-specific soil cleanup objective, site-specific data may be used to modify two of the five exposure pathways, as follows:

(i) for the particulate inhalation pathway six parameters rely on site-specific data; and

(ii) for the volatile inhalation pathway, four parameters rely on site-specific data.

(4) The algorithms to be used for each protection of public health pathway and details on the parameters which can be substituted are included in appendix E of the Technical Support Document.

(f) Use of soil cleanup objectives developed or modified. Once approved by the Department, contaminant-specific soil cleanup objectives developed or modified as set forth in this section may be utilized by the Department at other sites consistent with paragraphs (1) and (2) below.

(1) Contaminant-specific soil cleanup objectives developed for contaminants not included in Tables 375-6.8(a) and (b), as set forth in subdivision 375-6.9(b) above, will be used as guidance and shall be considered by the Department for inclusion in the Tables in this subpart during any subsequent reevaluation of the soil cleanup objectives, as set forth by ECL 27-1415.

(2) Contaminant-specific soil cleanup objectives modified for site specific parameters, as set forth in subdivision 375-6.9(e) above, may be utilized at sites manifesting similar parameters, if approved by the Department.

CP-51 / Soil Cleanup Guidance

New York State Department of Environmental Conservation

DEC Policy

Issuing Authority: Alexander B. Grannis, Commissioner	
Date Issued: October 21, 2010	**Latest Date Revised:**

I. Summary

This policy provides the framework and procedures for the selection of soil cleanup levels appropriate for each of the remedial programs in the New York State Department of Environmental Conservation (DEC) Division of Environmental Remediation (DER). This policy applies to the Inactive Hazardous Waste Disposal Site Remedial Program, known as the State Superfund Program (SSF); Brownfield Cleanup Program (BCP); Voluntary Cleanup Program (VCP); Environmental Restoration Program (ERP); Spill Response Program - Navigation Law (NL) section 176 (SRP); and the Resource Conservation and Recovery Act (RCRA) Corrective Action Program. It replaces *Technical and Administrative Guidance Memorandum (TAGM) 4046: Determination of Soil Cleanup Objectives and Cleanup Levels* (January 24, 1994); the *Petroleum Site Inactivation and Closure Memorandum* (February 23, 1998); and Sections III and IV of *Spill Technology and Remediation Series (STARS) #1* (August 1992).

This document is used in conjunction with the applicable statutes, regulations and guidance. Site-specific soil cleanup levels, determined in accordance with this guidance, are only applied after:

- the site, or area of concern, is fully investigated to determine the nature and extent of contamination;
- all sources of contamination are addressed consistent with the hierarchy provided in 6 NYCRR 375-1.8(c) or consistent with the RCRA Corrective Action Program (as appropriate);
- groundwater, if contaminated, has been evaluated for appropriate remedial actions consistent with 6 NYCRR 375-1.8(d) or consistent with the RCRA Corrective Action Program (as appropriate); and
- impacts on adjacent residential properties, surface water, aquatic ecological resources are evaluated, as well as indoor air, soil vapor, vapor intrusion and other appropriate media.

II. Policy

It is DEC’s policy, consistent with applicable statutes and regulations, that all remedies will be protective of public health and the environment. DEC's preference is that remedial programs, including the selection of soil cleanup levels, be designed such that the performance standard results in the implementation of a permanent remedy resulting in no future land use restrictions. However, some of

DEC's remedial programs are predicated on future site use. Further, it is not always feasible to return to a condition where no restrictions are required.

The procedures set forth herein are intended for the use and guidance of both DEC and remedial parties to provide a uniform and consistent process for the determination of soil cleanup levels. This guidance is not intended to create any substantive or procedural rights, enforceable by any party in administrative or judicial litigation with DEC. DEC reserves the right to act at variance with these procedures to address site-specific circumstances and to change the procedures in this guidance at any time.

Please note that this guidance focuses only on soil cleanup levels. All remedies must be fully protective of public health and the environment and must prevent further off-site migration to the extent feasible, with special emphasis on preventing or minimizing migration onto adjacent residential properties. A remedial party is required to evaluate and investigate, if necessary, all environmental media including soil, groundwater, surface water, sediments, soil vapor, ambient air, and biota. [See 6 NYCRR 375-1.8(a)(6) or RCRA Corrective Action Program (as appropriate)]. This investigation will determine if any of the referenced media are, or may be, impacted by site contamination. Applicable guidance should be consulted for media other than soil.

Nothing contained in this guidance, in itself, forms the basis for changes to previously selected remedies. However, a change in the site remedy may be considered consistent with *DER-2: Making Changes to Selected Remedies* (April 1, 2008). [See Section VI, Related References.] To the extent that a change to a selected remedy at a site in one of DER's remedial programs is necessary as provided in DER-2, as applicable, the Soil Cleanup Objectives (SCOs) may be considered in the evaluation of appropriate changes to the selected remedy. For sites in other programs, applicable regulations and guidance must be used.

III. Purpose and Background

DEC has a number of different remedial programs that were developed over time based on separate and distinct authorities. These programs use different procedures to determine the extent of soil cleanup necessary to satisfy the remedial program goals. The purpose of this document is to set forth how soil cleanup levels are selected for the different programs.

Legislation establishing New York State's Brownfield Cleanup Program (Article 27, Title 14 of the Environmental Conservation Law [ECL]) required DEC, in consultation with the New York State Department of Health (NYSDOH), to develop an approach for the remediation of contamination at brownfield sites. The resulting regulation includes seven sets of SCOs. Four sets provide for the protection of public health for different land uses (residential, restricted residential, commercial, and industrial); two sets provide for the protection of other resources (groundwater and ecological resources); and one set includes SCOs for protection of public health and the environment for all uses (unrestricted use).

With the promulgation of the SCOs, it is necessary to discuss how the SCOs, and soil cleanup levels generally, are arrived at for a specific site. Some key definitions in understanding how cleanup levels for soil are arrived at follow.

Feasible, which means suitable to site conditions, capable of being successfully carried out with available technology, implementable and cost effective [see 6 NYCRR 375-1.2(s)].

Presumptive remedy, which means a technology or technique where experience has shown the remedy to be a proven solution for specific types of sites and/or contaminant classes [See *DER-15: Presumptive/Proven Remedial Technologies* February 27, 2007. Refer to Section VI, Related References.]

Soil cleanup level, which means the concentration of a given contaminant for a specific site that must be achieved under a remedial program for soil. Depending on the regulatory program, a soil cleanup level may be based on the regulation [6 NYCRR 375-6.8(a) or (b)], modified from the regulatory value based on site-specific differences, or based on other information, including background levels or feasibility. Soil cleanup levels may include:

- SCOs promulgated at 6 NYCRR 375-6;
- Supplemental Soil Cleanup Objectives (SSCOs);
- a "totals" approach for a family of contaminants known as Polycyclic Aromatic Hydrocarbons (PAHs);
- Presumptive remedy for Polychlorinated Biphenyls (PCBs); and
- Nuisance Condition.

Soil Cleanup Objective (SCO), which means the chemical concentrations for soil cleanup of individual chemicals contained in 6 NYCRR 375-6.8(a) or (b). The SCOs were developed using the process outlined in the Technical Support Document (TSD). The SCOs and the SSCOs defined below are applicable statewide and do not account for many site-specific considerations which could potentially result in higher levels. Soil concentrations that are higher than the SCOs and SSCOs are not necessarily a health or environmental concern. When an SCO (or SSCO) is exceeded, the degree of public health or environmental concern depends on several factors, including the magnitude of the exceedance, the accuracy of the exposure estimates, other sources of exposure to the contaminant, and the strength and quality of the available toxicological information on the contaminant.

Supplemental Soil Cleanup Objective (SSCO), which means a) an existing soil cleanup level for a contaminant which had been included in former TAGM 4046 and was not included in 6 NYCRR 375-6; b) has been developed using the same process used for development of the SCOs; and c) new cleanup levels for soil developed by the remedial party following the approach detailed in Appendix E of the TSD. The TSD provides information relative to the development of cleanup objectives for soil that are not set forth in 6 NYCRR 375-6. Cleanup objectives that have been established at the direction of DEC or the election of remedial parties are included in Table 1.

Technical Support Document (TSD), which refers to the document dated December 2006 detailing the development of the SCOs that were promulgated in 6 NYCRR 375-6. It provides the technical background and provides a detailed discussion of the considerations for development of the SCOs for the different land uses and exposure pathways. The TSD is available on DEC's website [see Section VI, Related References].

The purpose of this guidance is NOT to focus on media other than soil. Accordingly, the remedial program may require remedial activities to address media other than soil (e.g., groundwater, surface water, sediment, and vapor). Applicable guidance should be consulted for media other than soil. This guidance is to be used in conjunction with the applicable statutes, regulations and guidance. Site-specific soil cleanup levels, determined in accordance with this guidance, are only applied after:

- the site, or area of concern, is fully investigated to determine the nature and extent of contamination;
- all sources of contamination are addressed consistent with the hierarchy provided in 6 NYCRR 375-1.8(c) or consistent with the RCRA Corrective Action Program (as appropriate);
- groundwater, if contaminated, has been evaluated for appropriate remedial actions consistent with 6 NYCRR 375-1.8(d) or consistent with the RCRA Corrective Action Program (as appropriate); and
- an evaluation of impacts on adjacent residential properties, surface water, aquatic ecological resources, as well as indoor air, soil vapor, vapor intrusion and other appropriate media.

IV. Responsibility

The responsibility for maintaining and updating this policy lies with DER. DEC staff are responsible for implementing this policy, with input (as applicable) from NYSDOH.

V. Procedures

A. General Approaches to the Selection of Soil Cleanup Levels

The determination of soil cleanup levels for a site is dependent on:

1. The regulatory program pursuant to which the site is being addressed;
2. Whether the groundwater beneath or down gradient of the site is, or may become contaminated with site-related contaminants;
3. Whether ecological resources constitute an important component of the environment at or adjacent to a site, and which are, or may be, impacted by site-related contaminants; and
4. Other impacted environmental media such as surface water, sediment, and soil vapor.

After fully evaluating the nature and extent of soil contamination associated with a site, the soil cleanup levels will be based on one, or a combination of, the following four approaches.

Approach 1: **Utilize the Unrestricted Use Soil Cleanup Objectives** [see 6 NYCRR Table 375-6.8(a)]. Under this approach, the soil cleanup levels will be established consistent with the SCOs set forth in 6 NYCRR Table 375-6.8(a). For contaminants of concern which are not included in the rule, DEC may direct development of a soil cleanup level which is protective of public health and the environment without restrictions following the procedure outlined in Appendix E of the TSD. Under this approach, the unrestricted SCOs are applied throughout the soil matrix to the top of bedrock (including the saturated zone).

Approach 2: **Utilize the Restricted Use Soil Cleanup Objectives** [see 6 NYCRR Table 375-6.8(b)]. Under this approach, soil cleanup levels will be established consistent with the SCOs set forth in 6 NYCRR Table 375-6.8(b) selecting the lowest SCO in the categories described in A through C below. Generally, after source removal, the soil cleanup levels do not need to be achieved to more than 15 feet below ground surface or to the top of bedrock, whichever is shallower.

A. Select the applicable land use category for the protection of public health (residential, restricted residential, commercial or industrial);

B. Determine if the SCOs for the protection of groundwater are applicable (see Section V.D); and

C. Determine if the SCOs for the protection of ecological resources are applicable (see Section V.C).

Approach 3: **Limited Site-Specific Modifications to Soil Cleanup Objectives.** This approach allows for consideration of site-specific information to modify the SCOs promulgated in 6 NYCRR Tables 375-6.8 (a) and (b) following the approach detailed in Appendix E of the TSD. The equations and basic methodology specified for calculating the 6 NYCRR 375-6.8 (a) and (b) values may not be modified under this approach. However, in instances where site-specific parameters were used in the calculation of the SCOs, site data different from the assumptions used to calculate the SCOs may be used to modify the soil cleanup levels for a specific site. These instances are very limited and occur only in certain pathways that are listed below.

- Protection of groundwater pathway
- Particulate inhalation pathway
- Volatile inhalation pathway
- Protection of ecological resources pathway

It should be noted that even if site-specific data modifies these pathways, it may not result in modifying the SCOs because the lowest value from all applicable pathways is used to determine each SCO. The inhalation pathway is very seldom the controlling pathway in the determination of the protection of public health. The specific parameters that can be modified are identified in Appendix E of the TSD (e.g., inhalation dispersion terms, fraction of organic carbon in soil, etc.).

The remedial party should consider the cost of collecting the data necessary to support a request to modify the SCOs with the potential for deriving a higher SCO that provides an appropriate level of protection. The remedial party may be required to submit additional data to support the use of modified SCOs. Once DEC approves one or more modified SCOs, they are applied in the manner described under Approach 2.

Approach 4: **Site-Specific Soil Cleanup Objectives.** Under this approach, the remedial party may propose site-specific cleanup levels or approaches for soil which are protective of public health and the environment based on other information. This approach sets forth a flexible framework to develop soil cleanup levels by allowing the remedial party to conduct a more detailed evaluation of site information in an effort to calculate protective soil cleanup levels or approaches unique to a site. Under this approach, the remedial party may propose a remedy that does not include specific soil cleanup levels (e.g., excavate the top 6 feet in an area extending 75 feet in all directions from boring B12); modify the input parameters used in the SCO calculations; use site data to improve or confirm predictions of exposures to receptors to contaminants of concern; analyze site-specific risks using risk assessments; use toxicological information available from alternate sources; or consider site background and historic fill. Data supporting these site-specific adjustments or use of alternate methodologies must also be provided to DEC for review and approval to ensure that the resulting soil cleanup levels are protective.

The Approach 4 framework leaves DEC with discretion to determine whether a different approach is appropriate for the site and, if a different approach is to be used, the proper method of implementation. The remedial party should consider the cost of collecting the data necessary to develop site-specific soil cleanup levels (or approaches) with the potential for deriving a soil cleanup level which is higher than a particular SCO and which provides an appropriate level of protection. The remedial party may also be required to submit additional data to support the use of methodologies in the calculation of site-specific soil cleanup levels or to support the proposed approach.

B. Application of Soil Cleanup Levels for the Specific Remedial Programs: Soil cleanup levels are determined on a site-specific basis depending on the program under which the site is being remediated. In some cases (e.g., BCP Track 1 or Track 2), the soil cleanup levels are the SCOs taken directly from 6 NYCRR 375-6. In other cases, soil cleanup levels may be derived from the Part 375 SCOs but modified based on other information. In yet other cases, the soil cleanup levels may have no relationship or connection to the SCOs, but rather be developed in accordance with DEC-approved methodologies or approaches.

1. <u>Inactive Hazardous Waste Disposal Site Remedial Program (State Superfund Program)</u>: The goal of the remedial program for a specific site is to restore that site to pre-disposal conditions, to the extent feasible. The unrestricted use SCOs are considered to be representative of pre-disposal conditions unless an impact to ecological resources has been identified (see 6 NYCRR 375-2.8(b)(2)). However, it must be recognized that achievement of this goal may not be feasible in every case. At a minimum, all remedies must be protective of public health and the environment. The following procedure is used to determine the most feasible remedy.

(a) The remedial party shall evaluate, and if feasible, implement a cleanup utilizing Approach 1 (application of unrestricted SCOs).

(b) Where DEC determines that achieving unrestricted SCOs is not feasible as documented in a feasibility study, the remedial party may evaluate alternatives to remediate the site to the greatest extent feasible (see *DER-10: Technical Guidance for Site Investigation and Remediation*, Chapter 4.3). [See Section VI, Related References.] In this event, the remedial party may propose soil cleanup levels in accordance with any of the general approaches. However, when considering restricted use soil cleanup levels, the remedial party should apply the least restrictive use category feasible. For purposes of this discussion, residential use is the least restrictive use and industrial use is the most restrictive category. This process starts with consideration of residential use, followed by restricted residential use, commercial use, and then industrial use. The evaluation proceeds through the different land uses until a feasible remedy is found. This evaluation is not bound to the SCOs in regulation or SSCOs set forth in this guidance but may result in a site-specific soil cleanup level that is between the SCOs or soil cleanup level for two different land uses (e.g., above the restricted residential SCO and below the commercial SCO).

2. Brownfield Cleanup Program The remedy shall be fully protective of public health and the environment, including, but not limited to, groundwater according to its classification pursuant to ECL 17-0301, drinking water, surface water, air (including indoor air), sensitive populations (including children), and ecological resources (including fish and wildlife). Soil cleanup levels corresponding to the cleanup track under which the site is being remediated are required to be met. The four cleanup tracks are:

Track 1: Cleanups pursuant to this track must achieve unrestricted use of the site. This track requires that the remedial party implement a cleanup utilizing Approach 1. Institutional and engineering controls are allowed only for periods of less than five years (defined as short-term controls) except in the limited instance where a volunteer has conducted remedial activities resulting in a bulk reduction in groundwater contamination to asymptotic levels.

Track 2 : Cleanups pursuant to this track may consider the current, intended, or reasonably anticipated future use in determining the appropriate cleanup levels for soil. This track requires that the remedial party implement a cleanup that achieves the SCOs in the tables in 6 NYCRR 375-6.7(b) for the top 15 feet of soil (or bedrock if less than 15 feet). This track follows approach 2. Institutional and engineering controls are allowed for soil (for the top 15 feet of soil or bedrock if less than 15 feet) for less than five years (defined as short-term controls). Institutional and engineering controls which limit site use and the use of onsite groundwater can be used without regard to duration. Track 2 cleanups at restricted residential, commercial or industrial use sites require site management plans to ensure that material removed from the site (post remedial action) is managed appropriately and to ensure that any buffer zone protecting adjacent residential use sites or ecological resources is maintained.

Track 3: Cleanups pursuant to this track may consider the current, intended, or reasonably anticipated use in determining the appropriate cleanup levels for soil. This track requires that the remedial party implement a cleanup utilizing Approach 3 for those SCOs which the remedial party seeks to modify an established SCO. Institutional and engineering controls are allowed for soil (for the top 15 feet of soil or bedrock if less than 15 feet) for less than 5 years (defined as short-term controls). Institutional and engineering controls which limit site use and the use of on-site groundwater can be used without regard to duration. Track 3 cleanups at restricted residential, commercial or industrial use sites require site management plans to ensure that material removed from the site (post remedial action)is managed appropriately and to ensure that any buffer zone protecting adjacent residential use sites or ecological resources is maintained.

Track 4: Cleanups pursuant to this track may consider the current, intended, or reasonably anticipated use in determining the appropriate cleanup levels for soil. This track allows for the development of site-specific soil cleanup levels below the cover system in accordance with Approach 4. Track 4 remedies must address all sources as a component of the remedy. Short- and long-term institutional and engineering controls are allowed to achieve protection of public health and the environment. The remedy under Track 4 must provide a cover system over exposed residual soil contamination. Soils which are not otherwise covered by structures such as buildings, sidewalks or pavement (i.e., exposed surface soils) must be covered with soil that complies with the use-based SCOs in 6 NYCRR Table 375-6.8(b) levels for the top one foot (non-residential uses) or top two feet (restricted residential use).

3. Environmental Restoration Program: The goal of the program for a specific site is to select a remedy that is protective of public health and the environment, including, but not limited to, groundwater according to its classification pursuant to ECL 17-0301, drinking water, surface water and air (including indoor air), sensitive populations (including children) and ecological resources (including fish and wildlife). At a minimum, the remedy selected shall eliminate or mitigate all significant threats to public health and to the environment presented by contaminants disposed at the site through the proper application of scientific and engineering principles. Soil cleanup levels may be developed in accordance with Approaches 1 – 4 without restriction.

4. Voluntary Cleanup Program: The goal of the program for a specific site is to select a remedy that is protective of public health and the environment for the contemplated use. The soil cleanup levels may be developed in accordance with Approaches 1 – 4 without restriction.

5. Petroleum Spill Response Program: The goal of the Petroleum Spill Response Program is to achieve pre-spill conditions [6 NYCRR 611.6(a)(4)]. Remedial activities under this program shall be undertaken relative to the petroleum contamination that was released along with any co-mingled contamination from other sources. The remedial party shall achieve, to the extent feasible, the unrestricted SCOs for petroleum-related contaminants listed in 6 NYCRR Table 375-6.8(a). For petroleum contaminants not included in 6 NYCRR Table 375-6.8(a) (discussed in Section E below), the remedial party shall apply, to the extent feasible, the soil cleanup levels provided in Table 1. For ease of implementation, two lists of petroleum contaminants (Gasoline and Fuel Oil, Tables 2 and 3) are attached. The tables combine the applicable petroleum-related SCOs from 6 NYCRR 375-6.8(a) and the applicable petroleum related SSCOs from Table 1. Where DEC determines that it is not feasible to achieve the soil cleanup levels as set forth in this paragraph, the remedial party may propose soil cleanup levels in accordance with any of the general approaches. However, when considering restricted use soil cleanup levels, the remedial party should apply the least restrictive use category feasible.

For purposes of this discussion, residential use is the least restrictive use, and industrial use is the most restrictive category. This process starts with consideration of residential use, followed by restricted residential use, commercial use, and then industrial use. The evaluation proceeds through the different land uses until a feasible remedy is found. If the protection of groundwater or ecological SCOs apply, the lower of the applicable protection of the public health SCO or the applicable protection of groundwater or ecological SCO should be achieved to the extent feasible. This evaluation is not bound to the SCOs in regulation or the SSCOs set forth in this guidance but may result in a site-specific soil cleanup level that is between the SCOs or soil cleanup level for two different land uses (e.g., above the restricted residential SCO and below the commercial SCO).

6. RCRA Corrective Action Program: The RCRA program was promulgated to regulate facilities that actively manage hazardous waste. DER administers the RCRA Corrective Action Program, with a goal of achieving soil cleanup levels at Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) that eliminate risks to public health and the environment (i.e., clean the site to unrestricted use) or control said risks (i.e., clean the site or unit(s) to the lowest possible soil cleanup objective, regardless of site use), to the extent feasible. This goal takes into account that certain units at the facility may be permitted to manage hazardous waste under New York State's Hazardous Waste Management (HWM) regulations (6 NYCRR Part 373). The requirements of active HWM facilities, as well as the site's history, will be considered when soil cleanup levels are determined. Selected remedies must be protective of public health and the environment. Soil cleanup levels will be selected using the following procedure.

(a) The remedial party shall evaluate, and if feasible, implement a cleanup utilizing Approach 1. Under this approach, the unrestricted SCOs apply to the entire soil matrix to the top of bedrock. For contaminants not listed in 6 NYCRR 375-6, a new or existing SSCO may be used.

(b) If DEC determines that achieving unrestricted SCOs is not feasible, the remedial party may evaluate other alternatives to remediate the site. In this event, the remedial party may propose soil cleanup levels in accordance with any of the general approaches. However, when considering restricted use soil cleanup levels, the remedial party shall apply the use category which is both feasible and least restricted. For purposes of this discussion, residential use is the least restricted category and industrial use is the most restricted category. A soil cleanup level between two different land uses (e.g., residential and restricted residential) may be determined to be feasible, and if selected, must be achieved.

Any soil cleanup levels specified in regulation (i.e., 6 NYCRR 373-2.6(b)-(k) for "regulated units" as defined in 6 NYCRR 373-2.6 (a)(1)(ii)) or in a DEC enforceable document (Part 373 permits, Consent Orders, etc.) shall take precedence over the soil cleanup levels which could be established through use of this document.

C. Determination of Whether Ecological Resources SCOs Apply to a Site: SCOs developed to protect ecological resources (ESCOs) are incorporated in the Unrestricted Use SCO in 6 NYCRR Table 375-6.8(a) and are included as a separate category in 6 NYCRR Table 375-6.8(b). For contaminants of concern which do not have a calculated ESCO in regulation, DEC may direct the remedial party to develop a soil cleanup level which is protective of ecological resources where appropriate, based on the process outlined in Appendix E of the TSD.

The presence of ecological resources and any impact to those resources will be assessed during the remedial investigation. For sites where there is the potential for an ecological resource impact to be present, or where it is likely to be present, an assessment of fish and wildlife resource impacts will be performed. For sites in DER's SSF, BCP, VCP and ERP, the assessment will be performed in accordance with DEC's guidance, *Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites*, October, 1994, as described in DER-10, Section 3.10. For sites in the RCRA Corrective Action Program, the assessment will be performed using the above referenced fish and wildlife impact analysis document as guidance, and by consulting with appropriate personnel in DEC's Division of Fish, Wildlife and Marine Resources.

Soil cleanup levels which are protective of ecological resources must be considered and applied, as appropriate, for the upland soils (not sediment) at sites where DEC determines, based on the foregoing analysis, that:

- ecological resources are present, or will be present, under the reasonably anticipated future use of the site, and such resources constitute an important component of the environment at, or adjacent to, the site;

- an impact or threat of impact to the ecological resource has been identified; and

- contaminant concentrations in soil exceed the ESCOs as set forth in 6 NYCRR 375-6.8(b) or the Protection of Ecological Resources SSCOs contained in this document.

Sites or portions thereof that will be covered by buildings, structures or pavement are not subject to the ESCOs. Further, ecological resources do not include pets, livestock, agricultural or horticultural crops, or landscaping in developed areas. (See 6 NYCRR 375-6.6 for more detail.)

D. Determination of Whether Protection of Groundwater SCOs Apply: SCOs developed to protect groundwater are incorporated in the Unrestricted Use SCOs in 6 NYCRR Table 375-6.8(a) and are included as a separate category in 6 NYCRR Table 375-6.8(b). For contaminants of concern which do not have a protection of groundwater SCO, DEC may direct the remedial party to develop a soil cleanup level which is protective of groundwater using the process in Appendix E of the TSD.

1. Except as provided for in (2) below, the protection of groundwater SCOs will be applicable where:

   (i) contamination has been identified in on-site soil by the remedial investigation; and
   (ii) groundwater standards are, or are threatened to be, contravened by the presence of soil contamination at concentrations above the protection of groundwater SCOs.

2. DEC may provide an exception to the applicability of the protection of groundwater SCOs, as set forth in 6 NYCRR 375-6.5(a)(1), when (i), (ii), and (iii) exist and either (iv) or (v) also apply, as described below.

   (i) The groundwater standard contravention is the result of an on-site source which is addressed by the remedial program.
   (ii) An environmental easement or other institutional control will be put in place which provides for a groundwater use restriction.
   (iii) DEC determines that contaminated groundwater at the site:
      (a) is not migrating, nor is likely to migrate, off-site; or
      (b) is migrating, or is likely to migrate, off-site; however, the remedy includes active groundwater management to address off-site migration.
   (iv) DEC determines the groundwater quality will improve over time.
   (v) The groundwater contamination migrating from the site is the result of an off-site source of contamination, and site contaminants are not contributing consequential amounts to the groundwater contamination.

3. In determining whether to provide the exemption set forth in subparagraph 2 above, DEC will consider:

   (i) all of the remedy selection criteria at 6 NYCRR 375-1.8(h) or in the RCRA Corrective Action program;
   (ii) the amount of time that the groundwater will need to be actively managed for the protection of public health and the environment; and
   (iii) the potential impact that groundwater contamination may have on media not specifically addressed by the SCOs (e.g., vapor intrusion, protection of surface water, and protection of aquatic ecological resources).

E. Supplemental Soil Cleanup Objectives: SSCOs are either existing cleanup levels in Table 1 or are new soil cleanup levels developed by the remedial party as part of its remedial program. These SSCOs are in addition to the SCOs that are included in Part 375.

Existing SSCOs: The Table 1 list of SSCOs includes contaminants from former TAGM 4046 that were not included in 6 NYCRR 375-6.8 and soil cleanup levels developed using the process detailed in Appendix E of the TSD but not promulgated. For those contaminants which were part of the former TAGM 4046, soil cleanup levels exist for the protection of public health (based on ingestion) and for the protection of groundwater. In some cases, to be determined on a site-by-site basis, evaluation of other factors is likely needed for the protection of public health, especially when the use of a site includes residential use.

These other factors include other exposure pathways (e.g., homegrown vegetable ingestion, inhalation and dermal contact), potential non-site exposures to the contaminant and current toxicological data on the contaminant. In these instances, DEC (in consultation with NYSDOH) will determine if the additional factors have been adequately addressed. The SSCOs identified in Table 1 (subject to the limitation described above) may be used as if they were included in Part 375. A remedial party is not required to use the SSCOs set forth in Table 1. In lieu of applying an SSCO, the remedial party may elect to develop a soil cleanup level (using the process described in Appendix E of the TSD and discussed below.) Table 1 also includes SSCOs that were developed for some pathways using the same process detailed in the TSD. A remedial party may elect to use those SSCOs directly or confirm that the calculated value for that pathway is correct.

New SSCOs: The remedial party may elect to, or DEC may direct a remedial party to, develop a contaminant-specific SCO for any contaminant not included in 6 NYCRR Tables 375-6.8(a) or (b). Generally, DEC will request that an SCO be developed only where the contaminant is a predominant contaminant of concern (COC) at the site and is not otherwise being addressed to DEC's satisfaction as part of the proposed remedy. This could happen, for example, when a remedial party is seeking a Track 1 cleanup and non-SCO/SSCO contaminants are present and may not be satisfactorily addressed by the remedial activities addressing the SCOs or SSCOs. Guidance on the process for developing new SCOs is provided in Appendix E of the TSD. DEC will include all newly developed soil cleanup levels, developed and approved pursuant to this paragraph in a revised Table 1. The developed SSCO must:

1. be developed utilizing the same methodologies that were used by DEC to develop SCOs that are set forth in Part 375; and

2. apply the maximum acceptable soil concentrations (caps), as set forth in section 9.3 of the TSD.

F. Use of SCOs and SSCOs as a Screening Tool: The SCOs and SSCOs may be used to identify areas of soil contamination and to determine the extent of soil contamination. As noted in Section V.K, consideration of other media is required to determine if remedial action is needed.

1. At sites or areas of concern where contaminant concentrations are equal to or below the unrestricted SCOs in 6 NYCRR Table 375-6.8(a), no action or study is warranted because of soil contamination.

2. The exceedance of one or more applicable SCOs or SSCOs, (which is the lower of protection of public health, protection of groundwater, or protection of ecological resources soil cleanup objectives as described in Section III below), alone does not trigger the need for remedial action, define "unacceptable" levels of contaminants in soil, or indicates that a site qualifies for any DEC remedial program (e.g., BCP, SSF). As noted in the definition of SCO above, SCOs and SSCOs are applicable statewide and do not account for many site-specific considerations which could potentially result in higher levels. Therefore, soil concentrations that are higher than the applicable SCOs or SSCOs are not necessarily health or environmental concerns.

3. When an applicable SCO or SSCO is exceeded, the degree of public health or environmental concern depends on several factors, including:

   - magnitude of the exceedance;
   - accuracy of the exposure estimates;
   - other sources of exposure to the contaminant; and
   - strength and quality of the available toxicological information on the contaminant.

G. Soil Cleanup Levels for Nuisance Conditions: Experience has shown that contaminants in soil that meets the DEC-approved soil cleanup levels can exhibit a distinct odor or other type of nuisance (e.g., staining). This is true even though the contaminants will not leach from the soil (e.g., certain soils with more insoluble substances at higher concentrations). When DEC determines that soil remaining after the remedial action will result in the continuation of a nuisance (e.g., odors, staining, etc), DEC will require that additional remedial measures be evaluated, and may require additional remedial actions be taken to address the nuisance condition.

H. Subsurface Soil Cleanup for Total Polycyclic Aromatic Hydrocarbons: For non-residential use sites (i.e., commercial or industrial use sites) where the ESCOs are not applicable, DEC may approve a remedial program which achieves a soil cleanup level of 500 parts per million (ppm) for total PAHs for all subsurface soil. The 500 ppm soil cleanup level is in lieu of achieving all of the PAH-specific SCOs in 6 NYCRR 375-6. For purposes of this provision, subsurface soil shall mean the soil beneath permanent structures, pavement, or similar cover systems; or at least one foot of soil cover (which must meet the applicable SCOs). Institutional controls (e.g., an environmental easement) along with a site management plan will be required when this soil cleanup level is employed at a site. This cleanup level is determined to be feasible and protective based on DEC's experience in its various remedial programs. This approach has existed in TAGM 4046 since it was first issued in 1992.

I. Soil Cleanup for PCBs: DEC may approve a remedial program which achieves a soil cleanup level for PCBs as set forth herein:

1. **For Non-BCP sites:** An acceptable presumptive remedy for soil where neither the unrestricted SCOs nor the ESCOs are applied in the remedial program may include a soil cleanup level for PCBs of 1 ppm in the surface soils and 10 ppm in subsurface soils.

2. **For BCP sites:** An acceptable presumptive remedy for soil may include a soil cleanup level for PCBs of 1 ppm (the applicable SCO) in the surface soils and 10 ppm in subsurface in limited circumstances as follows:

- cleanup track is Track 4;
- site use will be restricted residential, commercial or industrial; and
- ESCOs do not apply.

3. **At industrial use sites,** a level of 25 ppm for PCBs provided that access is limited and individual occupancy is restricted to less than an average of 6.7 hours per week.

For purposes of this provision, subsurface soil shall mean:

- soil beneath permanent structures, pavement, or similar cover systems;
- soil beneath 1 foot of soil cover for commercial and industrial uses; or
- soil beneath 2 feet of soil cover for residential and restricted residential uses.

Institutional controls (i.e., an environmental easement), along with a site management plan, will be required when this soil cleanup level is employed at a site. As with all presumptive remedies, just because a remedy is presumptive does not mean that it will work at every site. For example, this presumptive remedy for PCBs in soil is not applicable at most landfills. This cleanup level is determined to be feasible and protective based on DEC's experience in its various remedial programs. Further, this approach has existed in TAGM 4046 since it was first issued in 1992.

J. Sampling and Compliance with Soil Cleanup Levels: The number of samples to determine if the SCOs have been achieved should be sufficient to be representative of the area being sampled. See attached Table 4 for suggested sampling frequency and subdivision 5.4(e) of DER-10 for details. This frequency can be used for confirmatory samples or for backfill. It is DEC's goal that all confirmatory samples demonstrate that the remedy has achieved the DEC-approved soil cleanup levels. However, recognizing the heterogeneity of contaminated sites and the uncertainty of sampling and analysis, DEC project manager has limited discretion to determine that remediation is complete where some discrete samples do not meet the soil cleanup levels established for a site. See DER-10 for more information regarding the determination that remediation is complete.

K. Other Considerations: All remedies must be fully protective of public health and the environment and prevent off-site migration to the extent feasible with special emphasis for the prevention or minimization of migration onto adjacent residential properties or into ecological resources. A remedial party is required to investigate all environmental media including soil, groundwater, surface water, sediments, soil vapor, indoor air, and biota. (See 6 NYCRR 375-1.8(a)(6) or RCRA Corrective Action Program). This investigation will determine if any of the referenced media are, or may be, impacted by site contamination. However, the SCOs do not directly address these other media. DEC may require remedial actions to address such media and impacts, including but not limited to the application of lower soil cleanup levels or buffer zones where it determines, based on the investigation, that any of these media are, or may be, impacted by site contamination.

VI. Related References:

- ♦ Environmental Conservation Law, Article 27 Titles 3, 5, 9, 13 and 14.

- ♦ Article 12 of the Navigation Law, Section 178.

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

- 6 NYCRR Subparts 373-1, 373-2 and 373-3, Requirements for Hazardous Waste Management Facilities. September 6, 2006.

- 6 NYCRR Part 611, Environmental Priorities and Procedures in Petroleum Cleanup and Removal. November 5, 1984 (amended).

- Development of Soil Cleanup Objectives: Technical Support Document. New York State Department of Environmental Conservation. December 14, 2006.

- Supplemental Guidance to RAGS: Calculating the Concentration Term. United States Environmental Protection Agency. Publication 9285.7-081. May 1992.

- New York State Guidelines for Urban Erosion and Sediment Control. 1997.

- Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites. New York State Department of Environmental Conservation. October 1994.

- Program Policy DER-2, *Making Changes to Selected Remedies*. New York State Department of Environmental Conservation. April 1, 2008.

- Program Policy DER-10, *Technical Guidance for Site Investigation and Remediation*. New York State Department of Environmental Conservation. May 3, 2010.

- Program Policy DER-15, *Presumptive/Proven Remedial Technologies*. New York State Department of Environmental Conservation. February 27, 2007.

TABLES

1 - Supplemental Soil Cleanup Objectives
2 - Soil Cleanup Levels for Gasoline Contaminated Soils
3 - Soil Cleanup Levels for Fuel Oil Contaminated Soils
4 - Recommended Number of Soil Samples for Soil Imported to or Exported From a Site

Table 1

Supplemental Soil Cleanup Objectives
(ppm)

Contaminant	CAS Number	Residential	Restricted Residential	Commercial	Industrial	Protection of Ecological Resources	Protection of Ground-water
METALS							
Aluminum	7429-90-5					10,000 [a,b]	
Antimony	7440–36-0					12[c]	
Boron	7440-42-8					0.5	
Calcium	7440-70-2					10,000 [a,b]	
Cobalt	7440-48-4	30				20	
Iron	7439-89-6	2,000					
Lithium	7439-93-2					2	
Molybdenum	7439-98-7					2	
Technetium	7440-26-8					0.2	
Thallium	7440-28-0					5 [c]	
Tin	7440-31-5					50	
Uranium	7440-61-1					5	
Vanadium	7440-62-2	100 [a]				39[b]	
PESTICIDES							
Biphenyl	92-52-4					60	
Chlordecone (Kepone)	143-50-0					0.06	
Dibenzofuran	132-64-9						6.2
2,4-D (2,4-Dichloro-phenoxyacetic acid)	94-75-7	100 [a]					0.5
Furan	110-00-9					600	
Gamma Chlordane	5103-74-2	0.54					14
Heptachlor Epoxide	1024-57-3	0.077					0.02
Methoxychlor	72-43-5	100 [a]				1.2	900

Contaminant	CAS Number	Residential	Restricted Residential	Commercial	Industrial	Protection of Ecological Resources	Protection of Ground-water
Parathion	56-38-2	100 [a]					1.2
2,4,5-T	93-76-5	100 [a]					1.9
2,3,7,8-TCDD	1746-01-6					0.000001	
2,3,7,8-TCDF	51207-31-9					0.000001	
SEMIVOLATILE ORGANIC COMPOUNDS							
Aniline	62-53-3	48	100[a]	500[a]	1000[a]		0.33[b]
Bis(2-ethylhexyl) phthalate	117-81-7	50				239	435
Benzoic Acid	65-85-0	100[a]					2.7
Butylbenzyl-phthalate	85-68-7	100 [a]					122
4-Chloroaniline	106-47-8	100 [a]					0.22
Chloroethane	75-00-3						1.9
2-Chlorophenol	95-57-8	100 [a]				0.8	
3-Chloroaniline	108-42-9					20	
3-Chlorophenol	108-43-0					7	
Di-n-butyl-phthalate	84-74-2	100 [a]				0.014	8.1
2,4-Dichlorophenol	120-83-2	100 [a]				20	0.40
3,4-Dichlorophenol	95-77-2					20	
Diethylphthalate	84-66-2	100 [a]				100	7.1
Di-*n*-hexyl-phthalate	84-75-3					0.91	
2,4-Dinitrophenol	51-28-5	100 [a]				20	0.2
Dimethylphthlate	131-11-3	100 [a]				200	27
Di-n-octylphthlate	117-84-0	100 [a]					120
1,2,3,6,7,8-HCDF	57117-44-9					0.00021	
Hexachloro-benzene	118-74-1	0.41					1.4
2,6-Dinitrotoluene	606-20-2	1.03					1.0
Isophorone	78-59-1	100 [a]					4.4

Contaminant	CAS Number	Residential	Restricted Residential	Commercial	Industrial	Protection of Ecological Resources	Protection of Ground-water
4-methyl-2-pentanone	108-10-1						1.0
2-methyl-naphthalene	91-57-6	0.41					36.4
2-Nitroaniline	88-74-4						0.4
3-Nitroaniline	99-09-2						0.5
Nitrobenzene	98-95-3	3.7	15	69	140	40	0.17[b]
2-Nitrophenol	88-75-5					7	0.3
4-Nitrophenol	100-02-7					7	0.1
Pentachloroaniline	527-20-8					100	
2,3,5,6-Tetrachloroaniline	3481-20-7					20	
2,3,4,5-Tetrachlorophenol	4901-51-3					20	
2,4,5-Trichloroaniline	636-30-6					20	
2,4,5-Trichlorophenol	95-95-4	100 [a]				4	0.1
2,4,6-Trichlorophenol	88-06-2					10	
VOLATILE ORGANIC COMPOUNDS							
2-Butanone	78-93-3	100 [a]					0.3
Carbon Disulfide	75-15-0	100 [a]					2.7
Chloroacetamide	79-07-2					2	
Dibromochloro-methane	124-48-1					10	
2,4-Dichloro aniline	554-00-7					100	
3,4-Dichloroaniline	95-76-1					20	
1,2-Dichloropropane	78-87-5					700	
1,3-Dichloropropane	142-28-9						0.3
2,6-Dinitrotoluene	606-20-2	1.03					0.17[b]
Ethylacetate	141-78-6					48	

Contaminant	CAS Number	Residential	Restricted Residential	Commercial	Industrial	Protection of Ecological Resources	Protection of Ground-water
4-methyl-2-pentanone	108-10-1						1.0
113 Freon (1,1,2- TFE)	76-13-1	100 [a]					6
isopropylbenzene	98-82-8	100 [a]					2.3
p-isopropyltoluene	99-87-6						10
Hexachlorocyclo-pentadiene	77-47-4					10	
Methanol	67-56-1					6.5	
N-nitrosodiphenyl-amine	86-30-6					20	
Pentachloro-benzene	608-93-5					20	
Pentachloronitro-benzene	82-68-8					10	
Styrene	100-42-5					300	
1,2,3,4-Tetrachlorobenzene	634-66-2					10	
1,1,2,2-Tetrachloroethane	79-34-5	35					0.6
1,1,2,2-Tetrachloroethylene	127-18-4					2	
1,2,3-Trichlorobenzene	87-61-6					20	
1,2,4-Trichlorobenzene	120-82-1					20	3.4
1,2,3-Trichloropropane	96-18-4	80					0.34

[a] SCOs for organic contaminants (volatile organic compounds, semivolatile organic compounds, and pesticides) are capped at 100 ppm for residential use, 500 ppm for commercial use, 1000 ppm for industrial use. SCOs for metals are capped at 10,000 ppm.

[b] Based on rural background study

[c] SCO limited by contract required quantitation limit.

Table 2

Soil Cleanup Levels for Gasoline Contaminated Soils

Contaminant	CAS Registry Number	Soil Cleanup Level (ppm)
Benzene	71-43-2	0.06
n-Butylbenzene	104-51-8	12.0
sec-Butylbenzene	135-98-8	11.0
Ethylbenzene	100-41-4	1.0
Isopropylbenzene	98-82-8	2.3
p-Isopropyltoluene	99-87-6	10.0
Methyl-Tert-Butyl-Ether	1634-04-4	0.93
Naphthalene	91-20-3	12.0
n-Propylbenzene	103-65-1	3.9
Tert-Butylbenzene	98-06-6	5.9
Toluene	108-88-3	0.7
1,2,4-Trimethylbenzene	95-63-6	3.6
1,3,5-Trimethylbenzene	108-67-8	8.4
Xylene (Mixed)	1330-20-7	0.26

Table 3

Soil Cleanup Levels for Fuel Oil Contaminated Soil

Contaminant	CAS Registry Number	Soil Cleanup Level (ppm)
Acenaphthene	83-32-9	20
Acenaphthylene	208-96-8	100
Anthracene	120-12-7	100
Benz(a)Anthracene	56-55-3	1.0
Dibenzo(a,h)Anthracene	53-70-3	0.33
Benzene	71-43-2	0.06
n-Butylbenzene	104-51-8	12.0
sec-Butylbenzene	135-98-8	11.0
Tert-Butylbenzene	98-06-6	5.9
Chrysene	218-01-9	1.0
Ethylbenzene	100-41-4	1.0
Fluoranthene	206-44-0	100
Benzo(b)Fluoranthene	205-99-2	1.0
Benzo(k)Fluoranthene	207-08-9	0.8
Fluorene	86-73-7	30
Isopropylbenzene	98-82-8	2.3
p-Isopropyltoluene	99-87-6	10.0
Naphthalene	91-20-3	12.0
n-Propylbenzene	103-65-1	3.9
Benzo(g,h,i)Perylene	191-24-2	100
Phenanthrene	85-01-8	100
Pyrene	129-00-0	100
Benzo(a)Pyrene	50-32-8	1.0
Indeno(1,2,3-cd)Pyrene	193-39-5	0.5
1,2,4-Trimethylbenzene	95-63-6	3.6
1,3,5-Trimethylbenzene	108-67-8	8.4
Toluene	108-88-3	0.7
Xylene (Mixed)	1330-20-7	0.26

Table 4

Recommended Number of Soil Samples for Soil Imported To or Exported From a Site

Contaminant	VOCs[a]	SVOCs, Inorganics & PCBs/Pesticides	
Soil Quantity (cubic yards)	**Discrete Samples**	**Composite**	**Discrete Samples/Composite**
0-50	1	1	Each composite sample for analysis is created from 3-5 discrete samples from representative locations in the fill.
50-100	2	1	
100-200	3	1	
200-300	4	1	
300-400	4	2	
400-500	5	2	
500-800	6	2	
800-1000	7	2	
➢ 1000	Add an additional 2 VOC and 1 composite for each additional 1000 Cubic yards or consult with DER.[b]		

[a] VOC samples cannot be composited. Discrete samples must be taken to maximize the representativeness of the results.

[b] For example, a 3,000 cubic yard soil pile to be sampled and analyzed for VOCs would require 11 discrete representative samples. The same pile to be sampled for SVOCs would require 4 composite samples with each composite sample consisting of 3-5 discrete samples.

ATTACHMENT D

Resumes

Erick Salazar

Current Position:
Assistant Project Manager

Education:
BS, Biology, State University at New Paltz, NY

Registrations/ Certifications:

- OSHA, 40-hr. Hazardous Waste Operations & Emergency Response Health & Safety Certification
- OSHA, 10-hr. General Construction Industry Training and Certification

Professional Summary

Erick Salazar serves as Assistant Project Manager for environmental site assessments and Phase II technical environmental investigations. His responsibilities include: investigating site histories, conducting facility inspections, reviewing regulatory agency records, documenting facility compliance with relevant State and Federal regulations, and preparing reports. He assists with Phase II technical environmental investigations and fieldwork including implementation of community air monitoring plans (CAMP), collecting soil and water samples and tank removal oversight.

Mr. Salazar has experience in the implementation of CAMP monitoring, personal sampling for lead and dust of workers, coordinating pre-demolition C&D waste inventory as part of Sandy relief work on Staten Island, and providing oversight of site remedial activities on rural properties.

Mr. Salazar's experience with Health and Safety services include:

•Complete OSHA training and three years' experience of Sites handling regulated materials as well as hazardous and non-hazardous wastes.

•Preparation of Environmental Health & Safety Plan for (EHASP) for debris removal and soil sampling project in Ulster County, New York.

•Assistance in the preparation of EHASPs for NYSDEC sites in Dutchess and Westchester Counties.

•Implementation of CAMP at sites in Dutchess, Ulster, Bronx and Queens Counties, including preparation of status reports, preparation of incident reports, and communication with involved regulatory agencies.

•Collection/analysis of media samples (air, water and soil) per requirements of the EHASP and/or remedial work plans.

Mr. Salazar graduated from State University of New York at New Paltz where he completed a BS in Biology with specialization in Organism and Environmental Studies. Mr. Salazar is bilingual in Spanish and English.

JAMES BLANEY, CHMM

Current Position:

Operations Manager, Environmental

Education:

B.A., Environmental Studies, Ramapo College of New Jersey
M.S. Environmental Policy and Planning, New Jersey Institute of Technology

Registrations/ Certifications:

- Certified Hazardous Materials Manager (CHMM)
- 8-Hour OSHA HAZWOPER Supervisor, 2014
- 8-Hour OSHA HAZWOPER Refresher, 2018
- 10-Hour OSHA Construction Safety Training, 2016
- 40-Hour OSHA HAZWOPER, 1997
- 80-hour Hazardous Materials Technician Level 3, 2000
- Domestic Preparedness Hazardous Materials Technician, 2002
- USDJ CDP Chemical Ordnance Biological Radiological Technician, 2000

PROFESSIONAL SUMMARY

James Blaney is Environmental Services Division Manager and Operations Manager with more than 21 years of specialized technical and regulatory experience in managing large site remediation and redevelopment projects. As construction and remediation risk manager for multiple blighted sites in both the public and private sectors, Mr. Blaney has a deep understanding of New York Metro environmental regulations, employs strong project and site construction management skills, and uses his extensive technical knowledge to guide clients and foster expedient resolutions for many troubled sites. Mr. Blaney, and his team, are eminently qualified to run all phases of an environmental remediation and redevelopment project, either in a phased approach or in complete turnkey fashion.

As an environmental and remediation risk manager with WCD, Mr. Blaney manages projects for commercial, industrial, and institutional properties. He and his team are responsible for all phases of environmental remediation or restoration projects, including investigations, engineering, regulatory interface, plan development, estimating, scheduling, and project execution.

Mr. Blaney earned a Master of Science degree in Environmental Policy Studies from the New Jersey Institute of Technology, and a Bachelor of Arts degree in Environmental Studies from Ramapo College of New Jersey. He is a Certified Hazardous Materials Manager (CHHM) and holds many certifications and licenses, including 40 hour Hazardous Waste Operations & Emergency Response – 29 CFR 1910.12(e)(2); Hazardous Materials Incident Response Awareness and Operations; 80-hour Hazardous Materials Technician Level 3; Domestic Preparedness Hazardous Materials Technician; USDJ CDP Chemical Ordnance Biological Radiological; On-Scene Incident Commander; NJ Enhanced Radiological Response; Air Monitoring for Hazardous Materials.

Mr. Blaney is also a proud veteran of the United States Armed Services where he served as a Damage Control Technician and Machinists Mate in the United States Navy.

PROFESSIONAL EXPERIENCE

New York City Economic Development Corporation New York, NY – Served as Project Manager for the remediation of the former Manufactured Gas Plant site known as Site A Operable Unit 2 (AOU-2) located in the Hunts Point section of Bronx, NY. This heavily contaminated 7.5 acre site with mixed wastes required very detailed coordination between the Project Engineer (GEI), the owner (NYCEDC) and the Construction Manager at Risk (WCD). Working closely with these stakeholders during the Preconstruction Phase of the project, WCD created bidding documents and specifications to govern the remediation work. WCD led the bidding period phase including inviting pre-approved contractors, receiving bids, issuing addenda, performing detailed scope review meetings with bidders and subcontract documents development with the selected bidder. During implementation of the remedial action, it became evident due to substantially changed field conditions that a revision to the original remedy was necessary. WCD put forth a significant value engineering recommendation that was adopted by the stakeholder team, resulting in approximately $1MM of cost avoidance. The project has recently been completed substantially on time and the owner is pursuing design and construction of the new development planned for this site. The overall project value was $13.5MM.

Hudson County Chromium Cleanup Projects – Served as Construction Manager as Agent (CMAA) for the environmental remediation and site restoration of several Hudson County Chromium sites located in Jersey City, NJ. Specific responsibilities include preparation and implementation of construction management plans encompassing the specific processes for reporting, permitting, contractor coordination, health & safety, and communication requirements and procedures; cost and design requirements; site security; health and safety compliance; construction quality assurance/control testing and reporting; and recordkeeping for the project. Other responsibilities include development of a master construction schedules including regular updates; chairing preconstruction, regular construction progress, issue-specific and close-out meetings, including distribution of project record meeting minutes; constructability review of engineering designs, review of contractor-required submittals; review and approval of contractor applications for payment; review and approval of construction change order requests; construction close-out inspections and punch list development and resolution; and post-construction asbuilt documentation.

Statue of Liberty Harbor North – Jersey City, NJ – Served as Construction Manager, general contractor, and comprehensive remediation project manager for the pre-development remediation of this former manufacturing facility prior to its redevelopment as a 5-Star luxury hotel. The 2.7 acre property was formerly operated and occupied by an asbestos shingle manufacturer and is located north and west of Jersey City's Liberty Harbor Marina and the NYC Water Taxi - Liberty Harbor terminal. The property, after being abandoned by the shingle manufacture, became a dumping ground for construction and other wastes. The work involved historic fill/soil excavation with TPH and PCB contaminants, asbestos in soils, the placement of engineered backfill, installation of a TSCA liner followed by the construction of a NJDEP-approved cap and the installation of temporary soil erosion sediment control stabilization measures. WCD provided planning, preconstruction, and turnkey remediation services. All work was performed under a pay-for-performance contract.

Two Trees - 60 Water Street, Brooklyn, NY – Sr. Project Manager responsible for the development and implementation of a Remedial Action Work Plan during the redevelopment of the 46,000-square-foot NYC OER Voluntary Cleanup site. Work involves the oversight of the excavation and off-site disposal of approximately 33,000-cubic yards of historic fill and soil from the site, daily reporting to the NYC OER, collection of postexcavation end-point soil samples, removal of underground storage tanks, inspection during installation of a passive sub-slab depressurization system, and preparation of a Remedial Action Report.

Berry Lane Park, Jersey City, NJ – Served as Project Manager for comprehensive construction management services including field oversight and project management, as well as contractor and consultant coordination during the construction phase of a site remediation and development project on one of the worst brownfields in the country. The 17 acre project site consisted of multiple historic uses including residential, industrial, manufacturing, and rail yard with a portion of the site consisting of a previously backfilled canal. The site, which is located in Jersey City, NJ, was developed by the Jersey City Redevelopment Agency (JCRA) into a municipal park entitled Berry Lane Park. Over the years, the property was used as a dumping ground for a variety of municipal and industrials wastes. In addition, the former Morris Canal (which ran through the site) was backfilled with a hazardous Contaminated Chromium Processed Waste (CCPW) material.

Former Crucible Steel Site, Harrison, NJ - Provided environmental consulting services at this 80-acre Brownfield site along the Passaic River (opposite downtown Newark, NJ). Responsibilities included Phase I, Phase II Environmental Site Assessments as well as Remedial Investigations and Site restoration activities.

Current Position:
Senior Project Manager

Education:
Ph.D., University of St. Andrews, Scotland
BA, Staffordshire University, England

Registrations/ Certifications:

- OSHA-40 Hazwoper
- OSHA-10 Construction
- OSHA Hazardous Waste Site Operations
- OSHA Emergency Response Training
- OER TurboTraining Gold Certified Professional

GALLAGHER BASSETT | TECHNICAL SERVICES

RICHARD HOOKER, PH.D.

PROFESSIONAL SUMMARY

Richard Hooker serves as Senior Project Manager for investigative and remedial projects including NYSDEC and OER Brownfields sites, Phase II investigations, and environmental management of construction projects. He also prepares and evaluates interdisciplinary, comprehensive environmental impact assessment reviews (NEPA, SEQR and CEQR) and has a particular expertise in noise issues. Mr. Hooker develops investigative and remedial work plans, health and safety plans, performs fieldwork, and prepares technical reports. He works with regulatory authorities and subcontractors including construction personnel, waste repositories and haulage contractors, laboratories and drillers. His responsibilities include: designing noise studies, investigating site histories, document reviews, cost benefit analysis of remedial alternatives, overseeing excavations and in situ remediation, sampling, sample data evaluation, report preparation, and obtaining regulatory closure. He has extensive experience of sampling and sample collection protocols for soil, vapor, indoor air, sediment, and groundwater and has worked to remediate a wide range of environmental contaminants including petroleum, heavy metals, PCBs, and solvents.

Mr. Hooker holds a Ph.D. from the University of St. Andrews, St. Andrews, Scotland and a BA from Staffordshire University, Stoke-on-Trent, England. Prior to relocating to the Hudson Valley, he served as an Assistant Professor at the University of Glasgow, Scotland.

PROFESSIONAL EXPERIENCE

<u>3475 Third Avenue, Bronx, NY</u>—Investigated and remediated this former manufacturing facility to NYSDEC Brownfields to Track 1 cleanup standards. This site was the first project in the OER Jumpstart program established to assist cleanup on governmentsupported affordable and supportive housing projects in NYC. Under this program OER sponsored enrollment in the NYS Brownfield Cleanup Program. Work on this trailblazing project required liaising with OER and NYSDEC Region 2 to ensure documentation met the requirements of both agencies. Certificate of Completion secured in 2016.

<u>Former A.C. Dutton Lumber Yard, Dutchess County, NY</u>—Documented hazardous concentrations of arsenic and chromium in soils and concrete surfaces at this NYSDEC Brownfields site contaminated by the historical pressure treatment of lumber. Developed a Workplan for site remediation and directed environmental restoration activities, including: characterization, excavation and removal of hazardous soils, scarification concrete warehouse floors, removal aboveground and underground chemical and petroleum storage tanks.

<u>Lincoln Place, Brooklyn, NY</u>—performed CEQR, SEQR and NEPA reviews including shadow and noise studies for this site prior to development. Prepared Remedial Workplan and oversaw remediation of metals-contaminated soils during construction and implemented remedy for the site including SSDS system installation, vapor barrier, and installation of composite cover system. Prepared FER and obtained NYCHPD and NYCDEP closeout for the site.

Grace Terrace, Mount Vernon, NY—oversaw remediation and obtained NTSDEC Spill file closure after a previously unknown UST and associated petroleum contaminated soil were encountered during construction excavations. Coordinated with the GC to ensure appropriate cleanup was performed without delaying the construction schedule. Remedial actions included characterization and appropriate off-site disposition of petroleum contaminated soil and groundwater, application of chemical oxidation treatment, installation vapor barrier and active SSDS system.

Former Fur Processing Facility, Bronx, NY—Documented the presence of chlorinated hydrocarbon, petroleum, and metals contamination beneath and/or near a former industrial structure. Coordinated the sampling and removal of multiple drums of hazardous and non-hazardous material from the structure and secured NYCDEP approval. Developed a Workplan for site remediation and directed environmental restoration activities, including: excavation and removal of both aboveground and underground storage tanks, removal of contaminated soils, installation of a barrier layer soil cap, and pre-demolition removal of asbestos materials.

Jamaica Hospital Medical Center, Queens, NY—Coordinated and supervised the removal of two, large underground storage tanks and documented site conditions through soil and groundwater sampling. Secured NYSDEC approval of PBS tank closure and registration requirements.

SCOTT SPITZER

GALLAGHER BASSETT | TECHNICAL SERVICES

Current Position:
Director of Environmental Investigations

Education:
BS, Biology, SUNY at Stony Brook, NY
Extensive Studies in Environmental Science

Registrations/ Certifications:

- OSHA, 40-hr. Hazardous Waste Operations & Emergency Response Health & Safety Certification
- OSHA, 10-hr. General Construction Industry Training and Certification

PROFESSIONAL SUMMARY

Scott Spitzer serves as Director of Environmental Investigations, overseeing the technical elements of Phase I and Phase II technical environmental investigations and remedial projects, including Brownfield sites. Mr. Spitzer supervises all WCD field staff and reviews all documents prepared by WCD to ensure consistency and technical accuracy.

His responsibilities associated with the preparation of site assessments include: investigating site histories, conducting facility inspections, reviewing regulatory agency records, documenting facility compliance with relevant State and Federal regulations, and preparing reports. As project manager for complex technical environmental investigations (including sites currently on the NYSDEC Registry of Inactive Hazardous Waste Sites), Mr. Spitzer is involved with: coordinating subcontractors; overseeing fieldwork; designing and implementing material, soil, and water sampling plans, preparing technical reports and interfacing with regulatory agency personnel.

Mr. Spitzer has 11 years' experience in the preparation of Phase I and II investigations and in the management of complex remediation projects. He is knowledgeable in both New York State and Federal environmental regulations and has an understanding of a broad range of remedial technologies. Mr. Spitzer studied environmental science at SUNY Purchase and holds a BS in Biology from SUNY at Stony Brook, Stony Brook, New York.

PROFESSIONAL EXPERIENCE

<u>Former NuHart Plastics Manufacturing Site, Brooklyn, NY</u>: WCD conducted a complex remedial investigation of a NYSDEC Class 2 Inactive Hazardous Waste Disposal ("Superfund") site, where a plume of liquid phthalates and chlorinated solvents had impacted groundwater. Extensive sampling was conducted of both on- and off-site soil, soil vapor and groundwater, and phthalates were removed from recovery wells as an interim remedial measure. A Remedial Investigation Report was completed, allowing the site owner to move create a Remedial Design Document.

<u>Scenic Hudson Land Trust, Inc., Beacon Waterfront Project, Beacon, NY</u>: WCD conducted soil and groundwater investigations on a former MOSF and adjacent scrap yard. Projects involved soil remediation of both petroleum and PCB-contaminated soils and long-term groundwater monitoring. Both projects were classified as Voluntary Clean-Up projects by the NYSDEC and closure status was attained.

<u>Sakmann Restaurant Corporation Site, Fort Montgomery, NY</u>: Conducted Phase I Environmental Site Assessment and Phase II Subsurface Investigations for former filling station and automotive repair garage contaminated by solvent and waste-oil discharges to an on-site drywell. Designed and implemented a sampling plan for soils impacted by chlorinated hydrocarbons, petroleum, and metals. Created Workplan (in coordination with the NYSDEC Voluntary Cleanup Program) for remediation of on-site contamination and longterm sampling of on-site groundwater monitoring wells.

Staten Island Marina Site, Staten Island, NY: Conducted Phase I Environmental Site Assessment and Phase II Subsurface Investigation for an active marine facility engaged in boat painting and engine maintenance activities. Coordinated the delineation of metals contamination over a three-acre area and analyzed potential impacts from onsite fill materials. Submitted remedial and budgetary analysis in support of regulatory agency approval for conversion of boatyard into a public park.

Octagon House Development Site, Roosevelt Island, NY: Conducted Phase I Environmental Site Assessment and Phase II Subsurface Investigations at the former site of a large, urban hospital. Interpreted the results of geotechnical studies, extended test pits, and conducted extensive soil sampling, to document subsurface soil conditions in support of client's application to the U.S. Housing and Urban Development Agency (HUD). Created Workplan (in coordination with the NYCDEP Office of Environmental Planning and Assessment) for site-wide remediation of contaminated soils and secured NYCDEP approval for site remediation as required by HUD.

Camp Glen Gray Boy Scout Facility, Mahwah, NJ: Conducted Phase I Environmental Site Assessment and Phase II Subsurface Investigations at an approximately 800-acre campground containing numerous structures. Documented subsurface soil conditions at the locations of aboveground and underground storage tanks, and delineated lead contamination at a former firing range. Assisted in design and implementation of remediation plans for removal of petroleum and lead contaminated soils, and obtained NJDEP approvals.

APPENDIX C

Previous Environmental Reports

Phase I Environmental Site Assessment Report

US Polychem/Woolzies
584 Chestnut Ridge Road
Spring Valley, New York

LCS PROJECT NO. 18N10530.39

PREPARED FOR:

JACOB MOSKOWITZ
P.O. BOX 802
MONSEY, NEW YORK 10952

PREPARED BY:

LCS, INC.
40 LA RIVIERE DRIVE, SUITE 120
BUFFALO, NY 14202
(716) 845-6145, (800) 474-6802

BASED ON A SITE INVESTIGATION CONDUCTED ON JANUARY 8, 2019, BY ELIZABETH BRUEN
INTERVIEWS CONDUCTED BY: MS. BRUEN AND OVERSEEN BY RYAN WARD

Lauren Gilday

LAUREN GILDAY
ENVIRONMENTAL ANALYST

DAVID CRANDALL
VICE PRESIDENT, DUE DILIGENCE SERVICES

JANUARY 16, 2019

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1.0 EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment was performed in general conformance with the scope and limitations of ASTM Standard Practice E1527-13 and includes only a portion of the User's requirements in the All Appropriate Inquiries process (See Appendix 9.13). The following report details the Environmental Professional's findings in the all appropriate inquiries of the subject property in accordance with ASTM E1527-13.

The Executive Summary details the specific findings of LCS' assessment. This section is provided for convenience to the reader. The reader is encouraged to read the entire report.

The property is identified as US Polychem/Woolzies located at 584 Chestnut Ridge Road, Spring Valley (Town of Ramapo), Rockland County, New York (hereinafter referred to as "subject property"). The subject property includes 7.98 acres of land developed with a single-story, 18,870-square foot structure that was constructed in 1965. Refer to *Section 9.2 SITEMAPS.* The subject structure utilized by US Polychem for offices and the manufacture (mixing/bottling) of household cleaning products and by Woolzies for the storage of natural soaps and essential oils. Exterior areas on the subject property included asphalt-paved parking, grassy areas, trees, and concrete sidewalks.

The history of the property is summarized as:

Date Range	Apparent Use	Source
At least 1931 through at least 1953	Undeveloped/wooded land	Aerial photographs, topographic maps, and previous studies
1965 through present	Developed with the existing structure with an addition by 1974 and used for the manufacture (mixing/bottling) of cleaning supplies	Aerial photographs, city directories, topographic map, municipal records, previous studies, and site reconnaissance

The following conditions indicative of releases or threatened releases of hazardous substances or petroleum products were identified during LCS' site reconnaissance, historical research, regulatory review, interviews, and other resources:

- On-site operations have included cleaning chemical manufacturing since the 1960s. Current operations include mixing/bottling of solvents; several totes and 55-gallon drums of associated solvents/glycols were noted throughout the structure. According to historical and municipal information, the subject property was previously served by a septic system and floor drains within the structure historically discharged to a swampy area southwest of the structure. The drains had been sealed by 1976 but 1977 correspondence indicated that they had not been suitably sealed at that time; it was indicated that the drains had to be sealed with concrete. Furthermore, records indicated the historical use of chlorinated solvents and other chemicals on-site and indicated that the property was identified as a potential source of odors and poor tasting water in a local waterway in the 1970s. A subsurface investigation completed by others in 2017, elevated concentrations of VOCs and SVOCs were identified in soil, groundwater, and soil gas at the subject property; based upon this, Spill No. 17-08369 was assigned to the subject property. Additional investigation was recommended to delineate the documented impacts; however, it is unknown if that work has been completed to date. As of May 2018, the NYSDEC determined that the Division of Environmental Remediation would need to review the information relative solvent contamination which may cause vapor intrusion; the spill is currently classified as "active."
- According to the EDR report, the subject property was identified as the following:
    - Former Large Quantity Generator of spent halogenated solvents between 1980 and 1998 (identified as a non-generator in 2006) with written violations recorded in 1986 and 2003 which have subsequently achieved compliance.
    - Manifest facility
    - Within the FINDS database in association with Toxic Substances Control Act and Compliance and Emissions reporting and ICIS enforcement/compliance activity; no additional details were provided.
    - NY Spill No. 9007840 involved the release of non-PCB oil due to a transformer failure and is classified as "closed."

1.1 Findings, Opinion, and Recommendations

RECs	**Rationale/Opinion**	**Recommendation(s)**
Long term chemical manufacturing operations with associated areas of concern (former septic system and previous floor drain discharges to ground surface); a 2017 subsurface investigation identified impacts to the subject property and the associated spill is classified as "active."	Impact was identified to soil, groundwater, and soil gas on the subject property relative the long term chemical manufacturing operations. Associated Spill No. 17-08369 is classified as "active;" NYSDEC notes indicate that in May 2018 it was determined that the Division of Environmental Remediation would need to review the documentation relative solvent contamination which may cause vapor intrusion. It is unknown if additional work has been completed to date.	**The responsible party should continue to work with the NYSDEC to properly address the identified impacts and work to obtain closure for the "active" spill.** **It should be noted that due to the nature and extent of impact, the cost to remediate may be significant; the NYSDEC should be contacted for additional information regarding what additional work may be required by that agency.**

CRECs	**Rationale/Opinion**	**Recommendation(s)**
None	N/A	**No further investigation is warranted at this time.**

HRECs and *de minimis* conditions	**Rationale/Opinion**	**Recommendation(s)**
Former on-site spill and documented generator of hazardous waste	The spill was minor in nature and addressed to the satisfaction of the NYSDEC; any violations associated with previous generation of hazardous waste have been resolved to the satisfaction of the regulator.	**No further investigation is warranted at this time.**

1.2 Conclusions

LCS has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-13 for 584 Chestnut Ridge Road, Spring Valley (Town of Ramapo), New York. Any exceptions to, or deletions from, this practice are described in Section 1.3 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property, other than identified in Section 1.1 above.

If you have any questions about this report, please contact Ryan Ward, the LCS Project Manager associated with this project at (646) 660-4492. This report constitutes the findings and recommendations of LCS' investigation conducted for the subject property as written and reviewed by the following personnel:

Lauren Gilday
Environmental Analyst

David Crandall
Vice President, Due Diligence Services

1.3 Data Gaps

The following data gaps were encountered during the completion of the report. A data gap is defined by ASTM Standard 1527-13 as a lack of or inability to obtain information required by the standards and practices in the preparation of the report despite good faith efforts by the environmental professional.

Type of Data Gap	Details of Data Gap	Sources Consulted	Significance
Historical Use	Historical uses for each five year period were not obtained.	Aerial photographs, city directories, previous studies, topographic map, municipal records, and site contact	While data for each year was not obtained, the data did provide relatively complete records of site uses.
Site Reconnaissance	LCS' observations of the subject property were limited due to stored materials, parked vehicles, and the large acreage of the subject property. The roof of the subject structure was not inspected as it was not readily accessible.	N/A	Not anticipated to be significant, based on information reviewed to date.
Regulatory Review	Complete responses from regulatory agencies have not been received.	FOIA requests submitted to the Town of Ramapo and NYSDEC	Unknown; however, not anticipated to be significant based on information reviewed to date.
Interviews	LCS was not able to identify and/or contact historic owners and/or occupants. In addition, a completed LCS Owner/Operator Questionnaire was not provided to LCS.	Current owners and municipal records for historic ownership information.	Unknown.

Refer to Section 9.12 for standard limitations.

1.4 Reliance and Declaration

LCS authorizes Jacob Moskowitz to use the above-referenced report in order to determine his interest in the subject property.

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 40 CFR 312.10. [See Qualifications in Section 10.]

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

David Crandall
Environmental Professional

2.0 PURPOSE

The purpose of the *Phase I Environmental Site Assessment Report* is to:

1. Provide an objective third party opinion as to the environmental status or condition of the subject property.
2. Identify the following:
    a. ***Recognized environmental conditions***: The presence or likely presence of any *hazardous substances* or *petroleum products* in, on, or at the subject property:
        i. due to a release to the environment;
        ii. under conditions indicative of a release to the environment; or,
        iii. under conditions that pose a material threat of a future release to the environment.
    b. ***Controlled recognized environmental conditions***: A *recognized environmental condition* resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (evidenced by a no further action letter or equivalent, or meeting risk-based criteria established by the regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (such as property use restrictions, activity and use limitations, institutional controls, or engineering controls).
    c. ***Historical recognized environmental conditions***: Current or past release of any hazardous substances or petroleum products that has occurred in connection with the subject property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the subject property to any required controls (such as property use restrictions, activity and use limitations, institutional controls, or engineering controls).
    d. ***De minimis conditions****:* A condition that generally does not present a threat to human health or the *environment* and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis conditions* are neither *recognized environmental conditions* nor *controlled recognized environmental conditions*.
    e. ***Business environmental risks***: A risk that can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate related to non-scope considerations.
3. Recommend any additional testing or investigation warranted by the findings of the Phase I; (vii) gather preliminary information regarding the compliance of the subject property with applicable environmental laws, regulations and permits.
4. Permit the User [as defined by "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM E 1527-13)] to satisfy "all appropriate inquiry" as defined at 42 U.S.C. §9601(35)(B)."

This practice is intended to permit a User to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability if the User qualifies for such protections subject to (hereinafter, the "landowner liability protections," or "LLPs"): that is, the practice that constitutes all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35)(B). Controlled substances are not included within the scope of this standard. Persons conducting an environmental site assessment as part of an EPA Brownfields Assessment and Characterization Grant awarded under CERCLA 42 U.S.C. §9604(k)(2)(B) must include controlled substances as defined in the Controlled Substances Act (21 U.S.C. §802) within the scope of the assessment investigations to the extent directed in the terms and conditions of the specific grant or cooperative agreement.

This practice does not address whether requirements in addition to all appropriate inquiries have been met in order to qualify for the LLPs, including the continuing obligation not to impede the integrity and effectiveness of activity and use limitations (AULs), or the duty to take reasonable steps to prevent releases, or the duty to comply with legally required release reporting obligations). Refer to Appendix 9.13.

3.0 SCOPE OF WORK

This Phase I Environmental Assessment report has been prepared in accordance with “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process,” ASTM E 1527-13. This standard was devised to address the site assessment portion for *Innocent Landowners, Standards for Conducting All Appropriate Inquiries* (40 CFR 312). The scope of work is intended to identify conditions indicative of releases or threatened releases of hazardous substances or petroleum products in, on, or at the subject property, via the following tasks:

A) A review of information provided by the person seeking liability protection related to environmental cleanup liens; specialized knowledge or experience regarding the subject property; relationship of the purchase price to the fair market value of the property, if the property were not contaminated; and, commonly known or reasonably available information about the subject property.

B) Interviews with past and present owners, operators, and occupants.

C) A review of historical sources of information documenting the subject property’s first use.

D) A review of federal, state, tribal, and local government records, as defined in 40 CFR 312.26.

E) A visual inspection of the subject property and adjacent properties (to the extent possible).

F) Preparation of this written report on all appropriate inquiries.

4.0 PROPERTY AND VICINITY DESCRIPTION

4.1 Site Reconnaissance

A visual site review of the subject property was completed by Elizabeth Bruen on January 8, 2019 to document site conditions and to identify recognized environmental conditions. The site reconnaissance included a walkthrough of all accessible units/spaces on the subject property, including interior and exterior areas. Of note, the roof was not inspected as it was not readily accessible. Limitations also included stored materials, parked vehicles, and the large acreage of the property.

The following summarizes LCS' observations.

4.1.1 Current Owner/Operator Interviews

The subject property Owner was identified as 584 Chestnut Ridge LLC.

At the time of the site inspection, LCS was accompanied by Jacob Moskowitz, owner associated with the subject property for two years, who provided access and background information about the subject property.

The LCS Owner/Operator Questionnaire was forwarded to Mr. Moskowitz the current owner/operator, on January 2, 2019, for completion. As of the date of this report, LCS has not received the completed questionnaire. If a response alters or affects the findings and conclusions of this report, the information will be forwarded in an addendum.

4.1.2 Property Overview

General Site Information	
Name of Site	US Polychem/Woolzies
Site Address	584 Chestnut Ridge Road
Municipality, County, State	Spring Valley(Town of Ramapo), Rockland County, New York
Fronting Streets	Chestnut Ridge
Site Size (acres)	7.98
Site Elevation (feet above mean sea level)	Approximately 435
Site Topography	Level at grade
Nearest Water Body (Name/Distance)	Pine Brook/ approximately 780 feet west
Exterior Conditions/Improvements	Asphalt-paved parking, grassy areas, trees, and concrete sidewalks

Building Information	
No. Buildings	One
Square Footage of Building	18,870
No. Stories	One
Basement Present?	None
Roof Type	Flat
Current Building Uses	Manufacture (mixing/bottling) of household cleaning products (US Polychem) of natural soaps and essential oils (Woolzies)
Heating System	Natural gas
Building Construction Date	1965
Utilities Provided	All public
Wastes Generated	General refuse, recyclables, and waste solvent

Refer to Sections *9.2 SITE SURVEY/TAX MAP*, *9.3 SITE CONDITION REPORT* and *9.5 OWNER/ OPERATOR QUESTIONNAIRE*.

4.1.3 Storage Tanks

There was no evidence of USTs or ASTs for the containment of petroleum products (such as fill ports, vent pipes, accessways, etc.) on the subject property with the exception of approximately 40 totes of aromatic solvents stored in the US Polychem area and used for mixing/bottling of cleaning supplies).

4.1.4 Hazardous and/or Regulated Materials

In addition to the above totes, the following hazardous and/or regulated materials were stored and used on the subject property. MSDS documents, if provided, are included in the appendix of this report.

Material	Storage Location	Approximate Quantities On-Site	Staining or Odors Noted?
Manufacturing chemicals (ethyl glycol)	55-gallon drums in US Polychem	~50	None

There were no unidentified substance containers (unlabeled drums, etc.).

4.1.5 Solid, Hazardous, and/or Regulated Waste

Operations on the subject property produce general wastes and recyclables that are stored in dumpsters; the transporter of these wastes was not indicated at the time of the site reconnaissance. The following hazardous and/or regulated wastes are also generated on the subject property. Waste disposal documentation, if provided, is included in the appendix of this report.

Material	Source/Process	Storage Location	Approximate Quantity On-Site	Transporter
Waste Solvents	Manufacture of cleaning products	55-gallon drums	At least 10	Licensed hauler – not indicated at time of inspection

4.1.6 Staining, Corrosion, Stressed Vegetation and/or Dead Vegetation

There were no stained soils, stained pavement, stressed vegetation or corroded surfaces on the subject property.

4.1.7 Fill Dirt and/or Land Disposal

There was no evidence of fill dirt or land disposal activities currently or previously conducted on the subject property.

4.1.8 Wastewaters

The subject property is connected to the municipal sewer system; however, the date of connection was not provided to LCS. Operations on the subject property are not believed to produce wastewaters that require treatment or monitoring.

No floor drains and sumps were noted within the subject structure. *Based upon a previous study and municipal records indicate that drains in the structure had been sealed in 1976 and formerly discharged to the exterior of the structure.* No storm drains were identified; however, based upon a previous study, storm drains on the properoty are connected to the municipal sewer system.

There was no evidence of a current or historic private septic system or cesspool on the subject property. In addition, there was no evidence of any pits, ponds or lagoons used in connection with waste treatment or waste disposal on the subject property.

4.1.9 Potable Water Supply/Wells

The subject property is connected to the municipal water supply system. There was no evidence of an active or abandoned supply well, drywell, monitoring well or irrigation well on the subject property.

4.1.10 Air Emissions

There were no process exhaust systems on the subject property.

4.1.11 Suspect PCBs

The following suspect PCB-containing materials were noted on the subject property:

Suspect PCB Container	Location	Owner	Evidence of Leaks (Y/N)
Fluorescent lights*	Throughout subject structure	Property owner	N/A

*According to ASTM, PCB-containing light ballasts are not considered a recognized environmental condition.

4.1.12 Suspect ACMs

A cursory, visual assessment for ACMs was completed as a part of this environmental site assessment. A full asbestos inspection was not completed; as such, additional suspect materials may be present on the subject property. Asbestos may be present in the following materials observed:

Materials*	Location	Condition	Approx. Quantity of Damaged Materials
Ceiling Tiles – 2'x4'	Within the offices	Good	None
Drywall and plaster	Throughout structure	Good	None
Floor tiles - varied	Throughout structure	Good	None
Roofing felts and/or materials	Roof	Unknown, not inspected	N/A

*Refer to Limitations in Section 9.12

4.1.13 Suspect Lead-Based Paint

The Consumer Product Safety Commission banned the manufacture of lead-based paints for residential and commercial application in 1978 and federal regulations enforced this ban in 1993. As such, structures constructed prior to 1978 may contain lead-based paints. There is the potential for lead-based paints to exist in the existing structure. A cursory visual assessment of painted surfaces, including walls, ceilings, doors, windows and exterior surfaces was conducted. The observations are based on the areas easily observed during the site reconnaissance and did not include identification of suspect lead-based paint dust associated with windows, doors, etc. Additional suspect materials may be present as a full lead-based paint inspection was not completed.

The painted surfaces observed by LCS were in good condition with no significant peeling or chipping paint. Refer to Limitations in Section 9.12

4.1.14 Lead in Drinking Water

According to public water analysis conducted by the Rockland County Water Authority, the 90th percentile for lead for the year 2013 was 0.003 mg/L. According to the USEPA, the action level of 0.015 mg/L is applicable to municipal potable water supplies and distribution systems.

It should be understood that buildings constructed prior to 1970 may include lead piping.

4.1.15 Suspect Mold

Mold can germinate and colonize when a food source (such as drywall, wood, insulation, and paper), a certain temperature, and moisture are present. The speed of the growth depends on the combination of these conditions. For example, areas that experience water damage and areas of high humidity are of particular concern. Mold can also grow in hidden areas and are consequently not visible. The musty odor commonly present with mold is associated with the mVOCs produced by molds. Some, but not all, molds produce a Mycotoxin that is considered a poison and may have negative health effects on humans.

A cursory, visual assessment for suspect mold was completed as a part of this environmental site assessment.

There were no suspect mold covered areas or mold-related odors within the subject structure.

4.1.16 Other Issues

There was no evidence of any other issues of concern associated with the subject property.

4.2 ADJACENT PROPERTY USE

The adjacent properties were visually inspected from the subject property boundaries.

Direction	Current Use	Apparent Past Use	Concerns
North:	Commercial (560 Chestnut Ridge Road)	Commercial	None
South:	Commercial (600 Chestnut Ridge Road)	Commercial	None
East:	Residential (3 and 4 Gail Court)	Residential	None
West:	Warehouse (2 Alpine Court)	Warehouse	None

4.3 SUBJECT SITE PHOTOGRAPHS

Photographs of the subject property were taken by LCS on January 8, 2019. Photographs were taken to document the physical condition of the subject property and any improvements thereon. Photographs are included in Appendix 9.4.

4.4 SUMMARY OF OBSERVATIONS OF POTENTIAL CONCERNS

The following conditions indicative of releases or threatened releases of hazardous substances or petroleum products were identified during LCS' site reconnaissance:

- On-site operations include the mixing/botting of solvents in association with the production of cleaning chemicals. Several totes and 55-gallon drums of associated solvents/glycols were noted throughout the structure.

5.0 SUBJECT PROPERTY HISTORY AND USE

The historical use of the subject property has been researched through a review of reasonably obtainable information, as follows:

5.1 Sanborn Maps
Source: EDR

A letter was provided indicating Sanborn coverage is not available for the area of the subject property (included in Appendix).

5.2 City Directories
Source: EDR

The following occupants of the subject property were identified:

- 1973, 1989, 1992, and 1995: Not listed
- 1999: US Polychemical Corporation
- 2003: American Polychemical Manufacturing, Dalco Industries Limited, US Polychemical Corp., and Occupant Unknown
- 2008: Not listed
- 2013: US Polychemical Corporation

No adjacent sites of obvious environmental concern were identified.

5.3 Aerial Photographs
Source: www.historicaerials.com

YEAR	SITE	OBSERVATIONS/PROPERTY USES
1952 and 1953	**Subject Property**	Wooded land
	North	Wooded land
	South	Wooded land
	East	Wooded land
	West	Suspected agricultural and residential land
1965	**Subject Property**	Developed with the northern portion of the subject structure
	North	Wooded land
	South	Wooded land and suspected residential
	East	Wooded land
	West	Suspected residential
1974	**Subject Property**	Developed with the existing structure in its current configuration
	North	Wooded land
	South	Wooded land and suspected residential
	East	Suspected residential
	West	Suspected residential
1987	**Subject Property**	No coverage
	North	No coverage
	South	No coverage
	East	No coverage
	West	No coverage
1995, 2004, 2009, and 2013	**Subject Property**	Developed with the existing structure in its current configuration
	North	Suspected commercial
	South	Suspected commercial
	East	Suspected residential
	West	Suspected commercial

5.4 Topographic Maps

Source: USGS and www.historicaerials.com

The subject property is included on the Park Ridge Quadrangle Topographic Map dated 1998. Due to the extensive development in the area of the subject property, individual structures are not indicated on this map.

Historic topographic maps, available through www.historicaerials.com, were reviewed for additional information regarding the subject property. These maps indicate that the subject property was undeveloped from at least 1938 to 1947.

5.5 Municipal Research

Source: http://www.sca-corp.com and www.real-info.com

Subject Property Information	
Tax Parcel No.	63.06-1-1
Size (acres)	7.98
Current Owner	584 Chestnut Ridge LLC
Past Owners	Spring Valley Industrial (sold 2018)
Square Footage of Building	18,870
Date of Construction	1965
Utilities Provided	All public

There was no indication of historic heating systems or previous site development.

The Abstract of Title Search for the subject property was not available for review.

5.6 Other Research

Source: Site contact

Other historical sources were not readily ascertainable from local sources.

5.7 Previous Studies

LCS previously completed "ASTM E1527-13 All Appropriate Inquiries Phase I Environmental Site Assessment Report For The Property identified as: US Polychemcial Corporation (Jacop Moskowitz), 584 Chestnut Ridge Road, Spring Valley (Town of Ramapo), New York, 10977," dated September 1, 2017.

According to this report, the subject property measured 7.98 acres and was developed with a single-story 18,870 square foot structure constructed in 1965 and used for the manufacture of household cleaning products; uses including the mixing of solvents to make the cleaning chemicals. Solvents were stored in totes and 55-gallon drums within the structure and sealed floor drains were noted which formerly discharge to the exterior of the structure.

According to municipal records reviewed by LCS, on-site operations have included chemical manufacturing since at least 1969. According to that documentation, a septic system appears to have been installed on-site in 1969; it is unknown when the property was connected to the municipal sewer system. In 1976, it was reported to the Health Department that floor drains within the subject structure discharged to a swampy area southwest of the structure and had been sealed by 1976. It was indicated that the area was filled in over the pipes. Rockland County sent a letter to U.S Polychemical Corporation dated March 11, 1977 indicating that the drains were not sealed satisfactory as fill/dirt materials had been used. The letter indicated if the drains are to be sealed, concrete or other suitable material should be poured into the lines. Additionally, in 1977, US Polychemical Corporation indicated that chemicals utilized on-site included chlorinated solvents, glycol ethers, aromatic solvents, surface active agents, and aliphatic napthas. The Health Department requested a list of chemicals due to the discovery of odors and taste of water from local waterways.

5.7 Previous Studies (continued)

Prior to current development, the subject property was identified as undeveloped/wooded land from at least 1931 through at least 1953.

The subject property was identified in regulatory records as a former RCRA Large Quantity Generator with no unresolved violations listed, Manifest facility, within the FINDS database due to ICIS Enforcement/Compliance Activity, and as NY Spill No. 9007840 which involved a release of non PCB oil due to a transformer failure and listed as "closed.:

Adjacent/proximate sites were also listed as Spills, AST/UST facilities, and as a solid waste facility; of note, no visual evidence or records were identified to suggest a significant on-site concern relative these listings.

The on-site cleaning chemical operations, former on-site septic system, previous floor drain discharges to the ground surface, and reported potential source of odors and poor tasting water in the 1970 were all identified as RECs; LCs noted that potential for impact to the subject property based upon the use of solvents on-site.

LCS recommended a subsurface investigation to assess environmental conditions on-site, including the area of the former floor drain discharge and septic system.

LCS was provided with and reviewed the following:

Title: Phase II Environmental Site Assessment
584 Chestnut Ridge Road
Spring Valley, Rockland County, New York
NYSDEC Spill No. 17-08369
Consultant: DT Consulting Services, Inc.
Date: December 29, 2017

According to this report, the subject property measured 7.98 acres and was developed with an approximately 18,870 square foot structure built in 1965 with later additions and used by PolyChem since the mid-1960s. The structure was utilized for office space, warehouse, and operational areas. The subject property contained a historical production well, reportedly only ever used for manufacturing purposes, and a historical septic system west of the structure.

Based on a Phase I completed by LCS in September 1, 2017, several RECs were identified warranting additional investigation. The identified RECs include potential residual subsurface contamination issues associated with on-site operations, historical floor drains and septic system, potential source of odors and poor tasting water in the 1970s, and adjacent properties of concern.

To investigate the identified concerns, a GPR survey and sub-surface sampling investigation were conducted in locations surrounding warehouse/operational areas, floor drains, and septic system. The GPR survey was conducted to determine information regarding the closed floor drain system and identify buried anomalies, including the historical septic system. Sealed floor drains were determined to discharge to the east, however a definite location could not be identified due to stored inventory. An anomaly was detected to the west of the structure, and was assumed to be the septic system.

Soil was collected from six borings spread throughout the property to a depth of approximately 8 ft. bgs. Soil was field screened using a PID, as well as visually and using olfactory means. Borings with the highest PID readings were converted to temporary monitoring wells to collect groundwater. Eight soil samples were collected and analyzed for VOCs and SVOCs, and heavy metals. Soil gas was sampled from the building interior and analyzed for VOCs.

Laboratory analytical results identified detectable levels of VOCs, SVOCs, and heavy metals in nearly all borings. Soil borings 2 and 6 had concentrations of VOCs above applicable regulatory criteria, including chlorinated solvents and aromatic hydrocarbons in groundwater above regulatory criteria. Soil gas results indicated elevated levels of VOCs in all four sampling points above regulatory criteria.

5.7 Previous Studies (continued)

Based on the analytical results there was evidence of a release due to historical operations. Additional site investigation activities were recommended to define the nature and extent of subsurface impacts. It was noted that review of the Phase II by the Rockland County Department of Health and NYSDEC should be completed prior to developing an investigation plan for delineation. Once sufficient data was collected, it was noted that the need and/or methods of mitigation could be determined.

5.8 Summary of Historical Uses

Date Range	Apparent Use	Source
At least 1931 through at least 1953	Undeveloped/wooded land	Aerial photographs, topographic maps, and previous studies
1965 through present	Developed with the existing structure with an addition by 1974 and used for the manufacture (mixing/bottling) of cleaning supplies	Aerial photographs, city directories, topographic map, municipal records, previous studies, and site reconnaissance

The following conditions indicative of releases or threatened releases of hazardous substances or petroleum products were identified based on LCS' historical research:

- On-site operations have included cleaning chemical manufacturing since the 1960s. According to historical and municipal information, the subject property was previously served by a septic system and floor drains within the structure historically discharged to a swampy area southwest of the structure. The drains had been sealed by 1976 but 1977 correspondence indicated that they had not been suitably sealed at that time; it was indicated that the drains had to be sealed with concrete. Furthermore, records indicated the historical use of chlorinated solvents and other chemicals on-site and indicated that the property was identified as a potential source of odors and poor tasting water in a local waterway in the 1970s. A subsurface investigation completed by others in 2017, elevated concentrations of VOCs and SVOCs were identified in soil, groundwater, and soil gas at the subject property; based upon this, Spill No. 17-08369 was assigned to the subject property. Additional investigation was recommended to delineate the documented impacts; however, it is unknown if that work has been completed to date.

6.0 PHYSICAL AND HYDROGEOLOGIC SETTING

The subject property is included on the Park Ridge Quadrangle Topographic Map dated 1998. Regional groundwater appears to flow in an easterly direction, based on a review of this map.

Geologic mapping of the area reveals the underlying bedrock as belonging to the Newark Group; primarily the Brunswick Formation, characterized as undivided sandstone, conglomerate, sand, stone, siltstone, mudstone and arkose. Thickness ranges from 0-2,100 meters.

Mapping indicates the surficial geology of the area consists of till; described as variable textures from boulders to silt, usually poorly sorted sand-rich diamict, permeability varies with compaction, deposited beneath glacier ice. Thickness ranges from 1-50 meters.

The subject property is situated regionally in the Passaic-Newark Major Drainage Basin and locally within the Ramapo River Sub-Basin.

Open water bodies or surficial water bodies are not located on the subject property. Surface drainage appears to flow in a direction toward the lowest elevated points on the subject property and/or toward the closest storm drains on the subject property. Localized groundwater flow is influenced by utilities, subsurface structures, etc. A site-specific hydrogeologic study would be required to confirm the specific groundwater flow direction.

7.0 REGULATORY AND USER PROVIDED INFORMATION

Federal and state environmental regulatory information was provided by EDR, a commercial government record search company (included in Appendix 9.6). [While ASTM-defined radii were used where appropriate, the radii may have been modified due to the size of the subject property or the nature of the area, as permitted under the ASTM standard. Databases not required by the ASTM standard were searched to radii based on LCS' experience.] A complete list of the databases reviewed is included within the regulatory report.

Any sites unplottable by EDR were also reviewed to the extent practical, based on site name and address, to assess whether they are also present within their appropriate radii. Any listings for the subject property and adjacent properties are included in the details below.

Additional regulatory information was obtained through interviews with local municipalities and/or other knowledgeable persons, FOIA requests, and user-supplied information.

This information was reviewed in an effort to evaluate the potential for contaminant migration on the subject property or onto the subject property. [Migration is defined in ASTM E1527-13 as "the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface."] Specifically, the evaluation included a review of regulatory records, hydrologic information, distance to the subject property, and geologic information.

The following environmental records sources were reviewed:

Source	Date Contacted	Comment
EDR	Dates for the databases are provided within the regulatory database.	See 7.1 below
Town of Ramapo FOIA	January 8, 2018	See 7.6 below
NYSDEC FOIA	January 8, 2018	See 7.6 below

7.1 Subject Property Listings

The subject property was identified as the following:

- Former Large Quantity Generator of spent halogenated solvents between 1980 and 1998 (identified as a non-generator in 2006) with written violations recorded in 1986 and 2003 which have subsequently achieved compliance.
- Manifest facility
- Within the FINDS database in association with Toxic Substances Control Act and Compliance and Emissions reporting and ICIS enforcement/compliance activity; no additional details were provided.
- NY Spills site with the following releases:
    - Spill No. 9007840 involved the release of non-PCB oil due to a transformer failure and is classified as "closed." [A status of "closed" indicates the spill was remediated and the NYSDEC file closed with no further remediation required.]
    - Spill No. 1708369 involved impact discovered during a subsurface investigation, including solvent contamination which may cause vapor intrusion. As of May, 2018, it was indicated that the Division of Environmental Remediation would need to review the information. This spill is listed as "active." *See Previous Study above for additional information regarding this release.*

With the exception of the "active" spill, the above listings are not considered to be indicative of RECs at the subject property based upon their nature and/or status.

7.2 Adjacent Property Listings

Adjacent properties were identified as the following:

- A north adjacent site, Marangi Bros Recycling/Marangi Bros. Inc./Chestnut Ridge SW Transfer Station at 560 Chestnut Ridge Road and Route 45 was identified as the following:
    - Solid waste facility, listed as an active transfer station for construction and demolition debris and commingled papers and containers with an associated Financial Assurance listing.
    - SPDES permitted site
    - Registered AST/UST facility
    - NY Spill No. 9106677 which involved green toilet cleaner that spill on the ground during recycling of plastic containers; such is classified as “closed.”
- A south adjacent site (Parking Lot at 600 Chestnut Ridge Road) was identified as a NY Spill No. 0801716 which involved the release of mercury due to a broken thermometer and is classified as “inactive.”
- A west adjacent site, Creative Management at 3 Alpine Court was identified as a former RCRA Generator with no violations listed and within the FINDS, ECHO, and Manifest databases in association with the RCRA listing.
- A west proximate site, listed on Alpine Court, was identified as a NY Spill No. 9500335 which involved two 55-gallon drums of unknown petroleum noted to be leaking. The fire department was on the scene and the spill was classified as “closed.”
- A west proximate site, Alpine Sea Food at 1 Alpine Court, was identified as a NY Spill No. 9413712 which involved two drums found and classified as “inactive.”

Due to the nature/status of the above listed spills and lack of significant releases reported for the other adjacent property listings, they are not considered to be indicative of RECs at the subject property.

7.3 Additional Listings

None of the other sites listed is likely to have current or former releases of hazardous substances and/or petroleum products with the potential to migrate to the property.

7.4 Regulatory Agency File and Record Review

All regulatory listings for the subject property and adjacent property(s) were evaluated in order to determine the need for a regulatory file review. The purpose of a regulatory file review is to obtain additional information about the listings and determine whether RECs, CRECs, or de *minimis* conditions (including HRECs) exist on the subject property due to the listings.

Based on this evaluation, the following was concluded:

- Additional information regarding the subject property listings was obtained through the USEPA and NYSDEC websites and previously provided previous studies.
- Sufficient information was obtained through the database report relative adjacent property regulatory listings; no further research was warranted.

7.5 Enforcement Actions, Permitted Activities, and Institutional Controls

No records were identified indicating that enforcement actions, orders, or institutional controls have been imposed against the subject property with the exception of the above noted spills and RCRA violations.

According to obtainable information to date, the subject property has been subject to RCRA, TSCA, and Emissions permitting.

7.6 Interviews and User Provided Information

Local Regulators
As required by that municipality, a FOIA request was forwarded to the Town of Ramapo on January 8, 2018. As of the date on this report, LCS has not received a response. Any response information that would alter or affect the findings and conclusions of this report will be forwarded as an addendum to this report when it is received by LCS.

State Regulators
To augment the information provided by the regulatory database report, a FOIA request was forwarded to the NYSDEC for information concerning the subject property. To date, a complete response has not been received from this agency. Any response information that would alter or affect the findings and conclusions of this report will be forwarded as an addendum to this report when it is received by LCS.

User
LCS was informed that the User maintains no specialized knowledge of environmental concerns with respect to the subject property. As such, the User could not provide useful answers to the ASTM 1527-13 Phase I Environmental Site Assessment User Questionnaire. [As required under 40 CFR 312, only those seeking liability protection under CERCLA must provide the Environmental Professional certain information and documentation.]

Current Owner/Operators
The LCS Owner/Operator Questionnaire was forwarded to Mr. Moskowitz, the current owner/operator, on January 2, 2018, for completion. As of the date of this report, LCS has not received the completed questionnaire. If a response alters or affects the findings and conclucesions of this report, the information will be forwarded in an addendum.

Former Owner/Operators
As required by 40 CFR 312.23, LCS has attempted to contact and interview the former owners and/or operators of the subject property to discuss historic use and storage of hazardous substances. LCS has been unable to interview any relevant previous owners or operators.

7.7 Summary of Regulatory and User Provided Information

The following conditions indicative of releases or threatened releases of hazardous substances or petroleum products were identified based on LCS' review of regulatory information:

- According to the EDR report, the subject property was identified as the following:
  - Former Large Quantity Generator of spent halogenated solvents between 1980 and 1998 (identified as a non-generator in 2006) with written violations recorded in 1986 and 2003 which have subsequently achieved compliance.
  - Manifest facility
  - Within the FINDS database in association with Toxic Substances Control Act and Compliance and Emissions reporting and ICIS enforcement/compliance activity; no additional details were provided.
  - NY Spills site with the following releases:
    - Spill No. 9007840 involved the release of non-PCB oil due to a transformer failure and is classified as "closed."
    - Spill No. 1708369 involved impact discovered during a subsurface investigation, including solvent contamination which may cause vapor intrusion. As of May, 2018, it was indicated that the Division of Environmental Remediation would need to review the information. This spill is listed as "active."

8.0 ADDITIONAL NON-SCOPE ITEMS

8.1 Radon

Radon is a radioactive gas that occurs naturally from the breakdown of uranium in rock. Radon can be found in high concentrations in soils and rock containing uranium, shale, granite, phosphate and pitchblende. Radon may also be found in soils contaminated with certain types of industrial wastes such as the byproducts from uranium or phosphate mining. Radon gas can move through small fractures in soil and rock and can seep into a structure through dirt floors, cracks in the floors and walls, drains, sumps pipes and pores. Radon has been associated with increased risks of developing lung cancer.

The NYSDOH Radon Detector Distribution Program report for October 2018 suggests an average basement radon reading of 2.50 pCi/L for Ramapo. The NYSDOH recommends taking measures to reduce basement radon concentration to below 4.0 pCi/L. Based on the low average radon concentration for the area of the subject property, radon does not appear to pose a concern to the subject property.

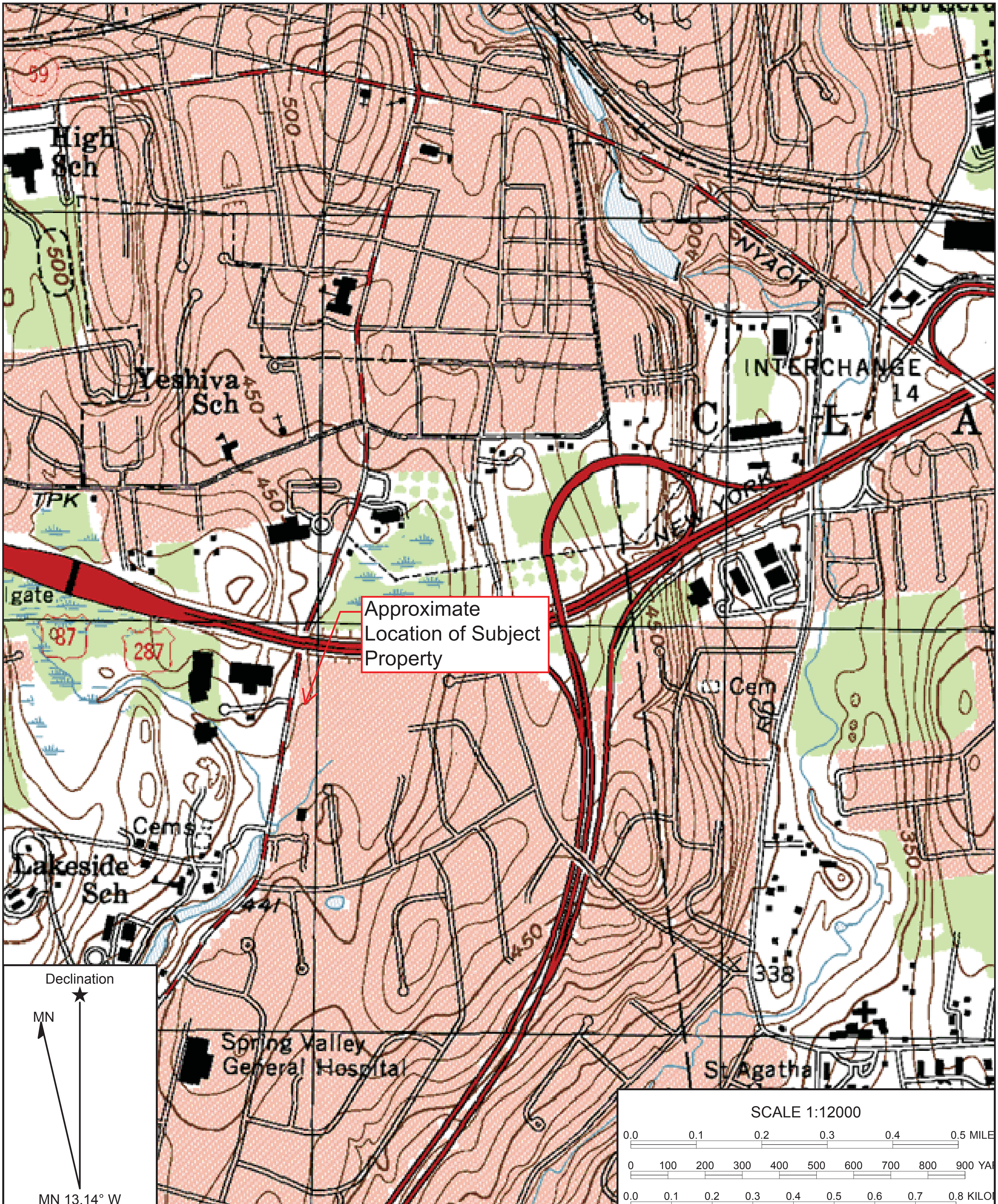
8.2 Wetlands

According to information reviewed at http://www.dec.ny.gov/imsmaps/ERM/viewer.htm, state wetlands are located on-site (PR-2). According to information reviewed at http://www.fws.gov/wetlands/, the approximate distance to the nearest federal wetland is 0.03 miles east (PF01E).

On-site wetlands may limit future development.

9.0 APPENDIX

9.1 SITE LOCATION MAP/USGS QUADRANGLE MAP

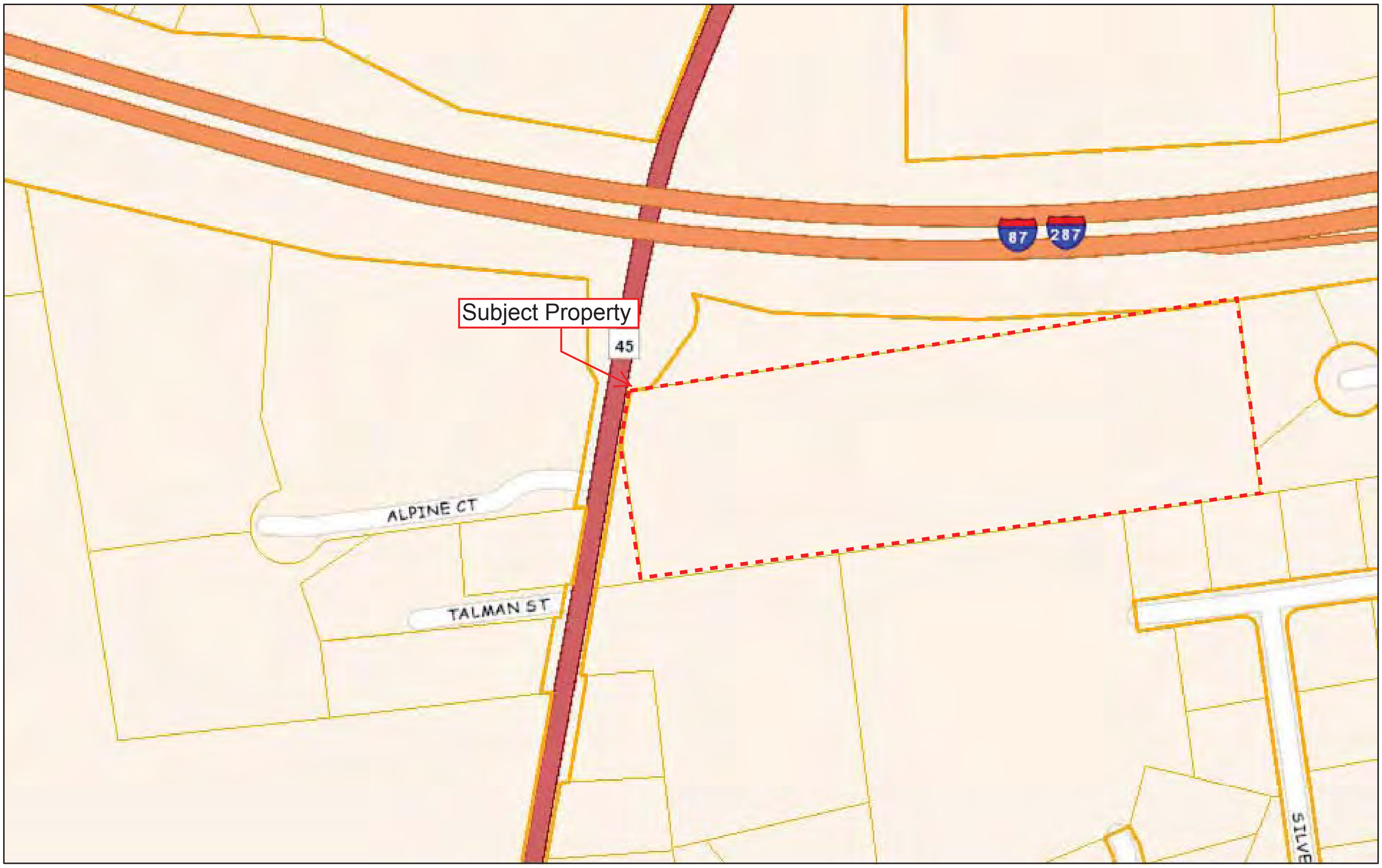


Name: PARK RIDGE
Date: 08/29/17
Scale: 1 inch = 1,000 ft.

Location: 041° 05' 51.35" N 074° 02' 33.03" W
Date Published: 1998, Unknown

9.2 SITE MAPS

Rockland Base Map



August 18, 2017

1:2,800

0 0.0225 0.045 0.09 mi

0 0.0375 0.075 0.15 km

Rockland County planning Departemnt-GIS

9.3 SITE CONDITION REPORT

LCS Project No.: RN10535.39 **LCS, INC. SITE CONDITION REPORT**

LOAN: Purchase/refinance/foreclosure: Loan new to bank portfolio? Yes / No

DATE 1/8 EMPLOYEE NAME(s) Elizabeth Breen

PRESENT: Mr/Ms Jacob Moskowitz TITLE: Owner Yrs. associated w/site 2

Mr/Ms ______ TITLE: ______ Yrs. associated w/site ______

QUESTIONNAIRE: completed on-site or given to Jacob Date 1/2

LIMITATIONS: Stored materials, parked vehicles

Roof Inspected? NO / YES Circle one: on roof / from ground

SITE INSPECTION INCLUDED (list areas inspected here or on Page 2): t/o int + ext of both tenant spaces

****DESCRIPTION OF CURRENT OPERATIONS (be specific, include tenants):** Offices + warehouse Woolzies (natural soaps, essential oils) storage + offices + US Pok chemical

General Site Information	
Name of Site	Mixed Use
Site Address	584 Chestnut Ridge Rd
Municipality, County, State	Spring Valley, Rockland, NY
Fronting Streets	Chestnut Ridge
Site Size (acres)	~7
Site Topography (circle)	Level at grade or ____% Slope (N/S/E/W)
Nearest Water Body	unk
Exterior Conditions/ Improvements (circle)	Outbuildings (#/type)____ Asphalt Parking Green areas Trees Landscaping Concrete sidewalks
Locality (circle)	Urban Suburban Rural
Area Development (circle)	Highly Moderately Lightly
Area Character (circle all that apply)	Industrial Commercial Residential Agricultural Wooded Fallow
Grounds (circle all that apply)	Fill material (type/location) ____ Dead/stressed vegetation (amt/location) ____ Debris/dumping (type/location) ____ Storm drains (location/discharge to) ____
UTILITIES	Utilities Provided (circle): Natural Gas [Supplier O&R] Electric [Supplier O&R] WATER (circle): PRIVATE: ~~well location~~____ MUNICIPAL ____ [Supplier ____] SEWER (circle): SEPTIC Date of last perc test for septic MUNICIPAL [Supplier ____] Date of connection: ____ EVIDENCE OF FORMER SEPTIC SYSTEM? NO / YES, LOCATION____

ACCORDING TO THE SITE CONTACT, PAST ON-SITE OPERATIONS INCLUDED (include current/historic structures and, **DATES**): unk

ACCORDING TO THE SITE CONTACT, HISTORIC TENANTS INCLUDED: unk

LCS Project No.: BN10530.39

STRUCTURES

NOTE: ALWAYS USE ONE SHEET PER STRUCTURE

TOTAL NO. OF BUILDINGS ON-SITE: 1

Building Information	
Building Name:	Building Construction Date 1960s
Sq. Ft. of Building:	No. Stories: 1
Building Use(s)/Operations mixed - offices, mfg, warehouse	
Heating System Location roof HVAC + ceiling mounted burners	**Heat Source: natural gas/electric/heating oil/wood/other**
EVIDENCE OF FORMER HEATING SYSTEM? NO / YES, TYPE______	
Basement (circle) Full / Partial / None	
Building Condition (circle) Excellent Good Fair Poor	
Roof (circle) Flat Peaked Flashings Mansard	
Elevator (circle) NO / YES (location)______	Pit? :______
Floor drains (circle) NO / YES (location)______	Discharge to: muni / septic / surface/ other
Grease Trap (circle) NO / YES (location)______	Maintained by:______
Oil/Water Separator (circle) NO / YES (location)______ Age:____ Serviced by:______ Discharges to: muni/holding tank/other	
Sump pit (circle) NO / YES (location)______	Discharge to: muni / septic / surface/ other
Air Emission Systems (exhaust, paint booths, etc.): NO / YES Location/purpose______	

NOTES: US Polychem → offices + mfg/bottling
totes of solvents (aromatic, chlorinated ~40 total)
drums - ethyl glycol ~50
waste drums → private hauler
Woolzies → storage of essential oils + natural soaps

LCS Project No.: 18N10530-39

WELLS (DRYWELLS/INJECTION WELLS, etc.): NOTE: monitoring wells associated with USTs should be listed in TANK section below.

LOCATIONS: ____________________ DEPTH: ____________________

USE OF WELL: ____________________ SAMPLE RESULTS: ____________________

PCBs:

Suspect PCB Container	#/Location	Owner	Evidence of Leaks	Labeled as non-PCB?
Transformer (pole-mounted)		Private / Utility	NO / YES	NO / YES
Transformer (pad-mounted)		Private / Utility	NO / YES	NO / YES
Lifts		Private	NO / YES	NA
Elevators		Private	NO / YES	NA
Fluorescent lights	+10	Private	NA	NA

BULK STORAGE TANKS: Total # USTS on-site: _____ Total # ASTs on-site: _____
Total # vents: _____ Total # fills _____ Total # monitoring wells _____

Characteristics	Tank #1	Tank #2	Tank #3
AST/UST			
Location			
Registered/Permitted (Dates)			
Date of Last Test			
Capacity			
Product			
Single/Double Walled			
Installation Date			
Type of Monitoring System			
Any releases/spills?			
Status (circle)	Active Inactive Closed	Active Inactive Closed	Active Inactive Closed
Characteristics	**Tank #4**	**Tank #5**	**Tank #6**
AST/UST			
Location			
Registered/Permitted (Dates)			
Date of Last Test			
Capacity			
Product			
Single/Double Walled			
Installation Date			
Type of Monitoring System			
Any releases/spills?			
Status (circle)	Active Inactive Closed	Active Inactive Closed	Active Inactive Closed

EVIDENCE OF ADDITIONAL USTs (VENT PIPES/FILL PORTS, ETC): NO / YES

Location: __________

WERE ANY USTs **EXCAVATED** FROM or **FILLED** IN-PLACE ON PROPERTY? NO / YES

DATE: __________ DOCUMENTATION AVAILABLE? __________

CONDITIONS IN AREA OF FORMER USTS (stained, stressed, dead vegetation/surfaces): __________

LCS Project No.: 18N10530.39

LEAD: Year Built: 1960s **(cut off date 1978)**

Material/surface	Location	Approx. Quantity of Damaged Materials
Walls	t/o	none
Ceilings	t/o	none
Pipes, soldering	n/a	

ANY PREVIOUS LBP TESTING CONDUCTED ON-SITE? X NO _____ YES (obtain copy)

ASBESTOS: __**All building materials considered suspect ACMs, no cut off date__

Materials	Sizes/ Location	Condition (good, fair, poor)	Approx. Quantity of Damaged Materials**
Ceiling Tiles	2x4 / offices	G / F / P	** none
Drywall and plaster	t/o	G / F / P	
Floor tiles	varied / t/o	G / F / P	
Roofing felts and/or materials		G / F / P	
Spray on fireproofing		G / F / P	
HVAC system insulating materials (pipe wrap, boiler wrap, building insulation)		G / F / P	

**** WATER STAINING SHOULD NOT BE INCLUDED HERE – INCLUDE IN SUSPECT MOLD SECTION**

IF UNDERGOING RENOVATION: IS O & M PLAN IN-PLACE? ____ WAS ACM SURVEY DONE? _____

ODORS: (circle)
SOLVENTS NATURAL GAS PETROLEUM OTHER
LOCATION: ____________________

SUSPECT MOLD: NO / YES

Location	Approximate Quantity

MOISTURE? NO / YES MUSTY ODORS? NO / YES
IF SO, WHERE? ____________________

LCS Project No.: 18N1053039

PERMITS (IF YES, OBTAIN COPIES): **(circle)**

NPDES/SPDES RCRA HAZ. WASTE SEWER DISCHARGE AIR EMISSIONS OTHER

HAZARDOUS MATERIALS *(INCLUDE 55-GALLON DRUMS)*:

Material	Source/ Process	Storage Container/Location	Approx. Quantity On-Site	Condition (good/fair/poor)
Cleaning/building maintenance supplies	Cleaning/ building maintenance			G / F / P
Auto fluids	Auto repair/ resale/ other			G / F / P
Manufacturing chemicals	Soaps Mfg	totes / drums | US Poly	~40 / ~50	G / F / P
Other				G / F / P
Unlabeled Containers				G / F / P

ADEQUATE STORAGE PRACTICES? (circle) NO / YES (Add comments if no.)

MSDS'S (circle) NO / YES (COPIES OR REVIEWED ON-SITE)
HAZARD COMMUNICATION PROGRAM NO / YES

WASTES: Obtain copies of disposal receipts, if available.

Material	Source/ Process	Storage Container/ Location	Approx Quantity On-Site	Condition (good/fair/poor)	Transporter
Solid	General refuse	Dumpsters/ bags/ cans	1	G / F / P	private hauler
Recycling	Cardboard/ plastic/other	Dumpsters/ other	1	G / F / P	
Waste oil	Auto repair/other	UST/ AST/ drums/ other Interior/ Exterior		G / F / P	
Waste auto fluids	Auto repair/other	UST/ AST/ drums/ other Interior/ exterior		G / F / P	
Solvent	Auto repair/other	Parts washer/ other drums Interior/ exterior	10	G / F / P	private hauler
Tires	Auto repair	Interior/ exterior		G / F / P	
Batteries	Auto repair/other	Interior/ exterior		G / F / P	
Cooking grease	Cooking	Dumpster/ drums/ other Interior/ exterior		G / F / P	
Medical waste	Medical procedures	Sharps containers/ red bags		G / F / P	
Other				G / F / P	

LCS Project No.: 18N10530.39

DRY CLEANERS: NO / YES CURRENT MACHINE TYPE? ____________

AGE OF CURRENT MACHINE? ____________

LOCATION OF MACHINE (basement, 1st floor, etc.): ____________

FORMER MACHINE TYPE? ____________

HOW LONG HAS DRY CLEANING BEEN CONDUCTED ON-SITE? ____________

FILM DEVELOPING/X-RAYS:

SILVER RECOVERY SYSTEM IN PLACE? (circle) NO/YES Discharge: ____________

LEAD LINED WALLS FOR X-RAY ROOMS? (circle) NO/YES Location: ____________

ADJACENT PROPERTIES:

List names and type of operations adjacent and next adjacent to subject property.

Direction	Current Use	Address (MUST INCLUDE)	Comments/Concerns (including past uses, if apparent)
North	Comm	560 Chestnut Ridge Rd	If dry cleaner, circle one: Drop off or DC Plant
South	↓	600	If dry cleaner, circle one: Drop off or DC Plant
East	Resi	3+4 Gail Ct	If dry cleaner, circle one: Drop off or DC Plant
West	Comm	2 Alpine Ct	If dry cleaner, circle one: Drop off or DC Plant

GENERATORS: NO/YES **Location:**____________ **Firing source: gas/diesel/natural gas/other**

COMPRESSORS: NO/YES **Location:**____________ **Releases? No/Yes**

ADDITIONAL NOTES:

LCS Project No.: 18UI0530.391

The Site Contact and the Owner (if not the same person) must be asked the following questions:

(1) Are you aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?

SITE CONTACT RESPONSE: ____________________

OWNER RESPONSE: No

(2) Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property?

SITE CONTACT RESPONSE: ____________________

OWNER RESPONSE: No

(3) Are you aware of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

SITE CONTACT RESPONSE: ____________________

OWNER RESPONSE: No

Also, ask for copies of any of the following:

- Environment site assessment *reports,*
- Environment compliance audit *reports,*
- Environmental permits (for example, solid waste disposal permits, *hazardous waste* disposal permits, *wastewater* permits, NPDES permits, *underground injection* permits),
- Registrations for underground and above-ground storage tanks,
- Registrations for *underground injection* systems,
- *Material safety data sheets,*
- Community right-to-know plan,
- Safety plans; preparedness and prevention plans; spill prevention, countermeasure, and control plans; etc.,
- *Reports* regarding hydrogeologic conditions on the *property* or surrounding area,
- Notices or other correspondence from any government agency relating to past or current violations of environmental laws with respect to the *property* or relating to *environmental liens* encumbering the *property,*
- *Hazardous waste* generator notices or *reports,*
- Geotechnical studies,
- Risk assessments, and
- Recorded activity and use limitations (AULs).

LCS INC.
Environmental and Real Estate Consultants

Project Number: 18N10530.39

Project Location: 584 Chestnut Ridge Road, Spring Valley, New York

Date: January 8, 2019

SITE SKETCH

NOTES: © Aerial Imagery Google 2016

↑ N

9.4 SITE PHOTOGRAPHS

PHOTOGRAPH VIEWS

Photo 1:

Photo 2:

Photo 3:

Photo 4:

Photo 1: North side of the subject property.

Photo 2: East side of the subject property.

Photo 3: South side of the subject property.

Photo 4: West side of the subject property.

PHOTOGRAPH VIEWS

Photo 1:

Photo 2:

Photo 3:

Photo 4:

Photo 1:	Ceiling mounter burner
Photo 2:	Ceiling mounted burner
Photo 3:	Stored totes and drums
Photo 4:	Bottling area

PHOTOGRAPH VIEWS

Photo 1:

Photo 2:

Photo 3:

Photo 4:

Photo 1: Drums

Photo 2: Drums

Photo 3: Waste drums

Photo 4: Warehouse interior

LCS, INC. 40 LA RIVIERE DRIVE, SUITE 120 BUFFALO, NEW YORK 14202 Project No. 18N10530.39 Photo Date: 1/8/2019	<u>SITE PHOTOGRAPHS</u> US Polychem/Woolzies 584 Chestnut Ridge Road Spring Valley, New York

PHOTOGRAPH VIEWS

Photo 1:

Photo 2:

Photo 3:

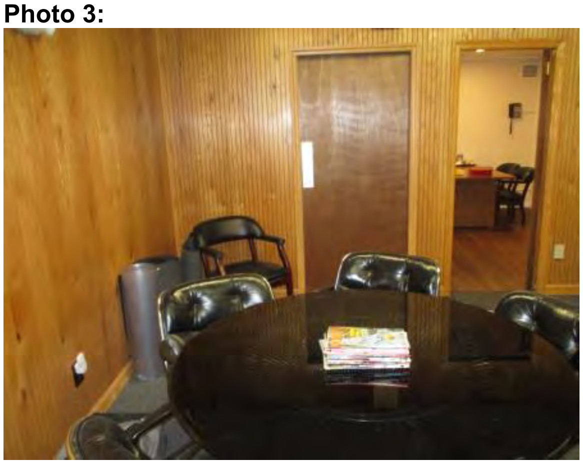


Photo 4:

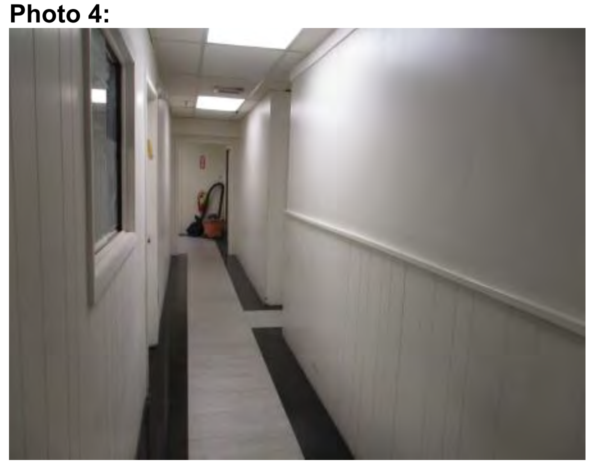


Photo 1: Warehouse interior

Photo 2: Warehouse interior

Photo 3: Office interior

Photo 4: Warehouse interior

PHOTOGRAPH VIEWS

Photo 1:

Photo 2:

Photo 3:

Photo 4:

Photo 1: North adjacent property.

Photo 2: East adjacent property.

Photo 3: South adjacent property.

Photo 4: West adjacent property.

9.5 OWNER/OPERATOR QUESTIONNAIRE

The LCS Owner/Operator Questionnaire was forwarded to Mr. Moskowitz, the current owner/operator, on January 2, 2018, for completion. As of the date of this report, LCS has not received the completed questionnaire. If a response alters or affects the findings and conclusions of this report, the information will be forwarded in an addendum.

As required by 40 CFR 312.23, LCS has attempted to contact and interview the former owners and/or operators of the subject property to discuss historic use and storage of hazardous substances. LCS has been unable to interview any relevant previous owners or operators.

9.6 REGULATORY INFORMATION

POLY CHEM
584 CHESTNUT RIDGE RD
CHESTNUT RIDGE, NY 10977

Inquiry Number:
January 16, 2019

EDR Site Report™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

The EDR-Site Report™ is a comprehensive presentation of government filings on a facility identified in a search of federal, state and local environmental databases. The report is divided into three sections:

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

SECTION 1: FACILITY SUMMARY

FACILITY AREA	**FACILITY 1** **POLY CHEM** 584 CHESTNUT RIDGE RD CHESTNUT RIDGE, NY 10977 EDR ID #1008003324 EPA #110020772831
WASTE MANAGEMENT Facility generates hazardous waste (RCRA)	NO
Facility treats, stores, or disposes of hazardous waste on-site (RCRA/TSDF)	NO
Facility has received Notices of Violations (RCRA/VIOL)	NO
Facility has been subject to RCRA administrative actions (RAATS)	NO
Facility has been subject to corrective actions (CORRACTS)	NO
Facility handles PCBs (PADS)	NO
Facility uses radioactive materials (MLTS)	NO
Facility is a FUSRAP Site	NO
Facility is a UXO Site	NO
Facility is a FUELS Site	NO
Facility is an DockHWC/ECHO Site	NO
Facility manages registered aboveground storage tanks (AST)	NO
Facility manages registered underground storage tanks (UST)	NO
Facility has reported leaking underground storage tank incidents (LUST)	NO
Facility has reported emergency releases to the soil (ERNS)	NO
Facility has reported hazardous material incidents to DOT (HMIRS)	NO
WASTE DISPOSAL Facility is a Superfund Site (NPL)	NO
Facility is a Record of Decision Site (ROD)	NO
Facility has a known or suspect abandoned, inactive or uncontrolled hazardous waste site (SEMS)	NO
Facility has a reported Superfund Lien on it (LIENS)	NO
Facility is listed as a state hazardous waste site (SHWS)	NO
Facility has disposed of solid waste on-site (SWF/LF)	NO
MULTIMEDIA Facility uses toxic chemicals and has notified EPA under SARA Title III, Section 313 (TRIS)	NO
Facility produces pesticides and has notified EPA under Section 7 of FIFRA (SSTS)	NO
Facility manufactures or imports toxic chemicals on the TSCA list (TSCA)	NO
Facility has inspections under FIFRA, TSCA or EPCRA (FTTS)	NO
Facility is listed in EPA's index system (FINDS)	**YES - p4**
Facility is listed in other database records (OTHER)	NO
POTENTIAL SUPERFUND LIABILITY Facility has a list of potentially responsible parties PRP	NO
Facility is named in a CERCLA-related Consent Decree	NO
TOTAL (YES)	1

SECTION 2: FACILITY DETAIL REPORTS

MULTIMEDIA

Facility is listed in EPA's index system

DATABASE: Facility Index System (FINDS)

POLY CHEM
584 CHESTNUT RIDGE RD
CHESTNUT RIDGE, NY 10977
EDR ID #1008003324

This site is listed in the Federal FINDS database. The FINDS database may contain references to records from government databases included elsewhere in the report.
Please note: the FINDS database may also contain references to out of date records formerly associated with the site.

Registry ID:	110020772831
Facility Name:	POLY CHEM
Facility Address:	584 CHESTNUT RIDGE RD CHESTNUT RIDGE, NY 10977
Facility URL:	http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110020772831
FIPS:	36087
Fed Facility:	Not reported
Tribal Land:	Not reported
Tribal Name:	Not reported
Congressional District:	17
Hydrologic Unit Code:	02030103
EPA Region:	02
Site Type:	STATIONARY
Date Created:	28-MAR-2005 13:13:05
Date Updated:	05-MAR-2013 09:56:39
U.S-Mexico Border:	Not reported
Latitude:	41.09596
Longitude:	-74.04809
Horizontal Collection:	ADDRESS MATCHING-HOUSE NUMBER
Horizontal Accuracy:	30
Reference Point:	CENTER OF A FACILITY OR STATION
Horizontal Datum:	NAD83
Coordinates Source:	Not reported

Environmental Interest/Information System
TSCA SUBMITTER

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

Program System ID:	7344946
Program Sys. Name:	ICIS
Env. Interest Type:	ENFORCEMENT/COMPLIANCE ACTIVITY
Env. Interest Start Dt.:	16-FEB-2005 00:00:00
Start Date Qualifier:	ACTUAL ACTIVITY DATE
Env. Interest End Dt.:	Not reported
End Date Qualifier:	Not reported
Data Source:	ICIS
Active Code:	Not reported

Program System ID:	TSCA10020503
Program Sys. Name:	TSCA
Env. Interest Type:	TSCA SUBMITTER
Env. Interest Start Dt.:	Not reported
Start Date Qualifier:	Not reported
Env. Interest End Dt.:	Not reported
End Date Qualifier:	Not reported
Data Source:	API
Active Code:	Not reported

Alternative Name: POLY CHEM

SECTION 3: DATABASES AND UPDATE DATES

To maintain currency of the following federal, state and local databases, EDR contacts the appropriate government agency on a monthly or quarterly basis as required.

Elapsed ASTM days: Provides confirmation that this report meets or exceeds the 90-day updating requirement of the ASTM standard.

DATABASES FOUND IN THIS REPORT

FINDS: Facility Index System/Facility Registry System
Source: EPA
Telephone: Not reported
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/15/2018
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/08/2019
Date of Next Scheduled Update: 03/18/2019

U.S. POLYCHEMICAL CORPORATION
584 CHESTNUT RIDGE ROAD
SPRING VALLEY, NY 10977

Inquiry Number:
January 16, 2019

EDR Site Report™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Please contact EDR at 1-800-352-0050
with any questions or comments.

SECTION 1: FACILITY SUMMARY

FACILITY AREA	FACILITY 1 **U.S. POLYCHEMICAL CORPORATION** 584 CHESTNUT RIDGE ROAD SPRING VALLEY, NY 10977 EDR ID #1024049698 EPA #110070144231
WASTE MANAGEMENT Facility generates hazardous waste (RCRA)	NO
Facility treats, stores, or disposes of hazardous waste on-site (RCRA/TSDF)	NO
Facility has received Notices of Violations (RCRA/VIOL)	NO
Facility has been subject to RCRA administrative actions (RAATS)	NO
Facility has been subject to corrective actions (CORRACTS)	NO
Facility handles PCBs (PADS)	NO
Facility uses radioactive materials (MLTS)	NO
Facility is a FUSRAP Site	NO
Facility is a UXO Site	NO
Facility is a FUELS Site	NO
Facility is an DockHWC/ECHO Site	NO
Facility manages registered aboveground storage tanks (AST)	NO
Facility manages registered underground storage tanks (UST)	NO
Facility has reported leaking underground storage tank incidents (LUST)	NO
Facility has reported emergency releases to the soil (ERNS)	NO
Facility has reported hazardous material incidents to DOT (HMIRS)	NO
WASTE DISPOSAL Facility is a Superfund Site (NPL)	NO
Facility is a Record of Decision Site (ROD)	NO
Facility has a known or suspect abandoned, inactive or uncontrolled hazardous waste site (SEMS)	NO
Facility has a reported Superfund Lien on it (LIENS)	NO
Facility is listed as a state hazardous waste site (SHWS)	NO
Facility has disposed of solid waste on-site (SWF/LF)	NO
MULTIMEDIA Facility uses toxic chemicals and has notified EPA under SARA Title III, Section 313 (TRIS)	NO
Facility produces pesticides and has notified EPA under Section 7 of FIFRA (SSTS)	NO
Facility manufactures or imports toxic chemicals on the TSCA list (TSCA)	NO
Facility has inspections under FIFRA, TSCA or EPCRA (FTTS)	NO
Facility is listed in EPA's index system (FINDS)	**YES - p4**
Facility is listed in other database records (OTHER)	NO
POTENTIAL SUPERFUND LIABILITY Facility has a list of potentially responsible parties PRP	NO
Facility is named in a CERCLA-related Consent Decree	NO
TOTAL (YES)	1

SECTION 2: FACILITY DETAIL REPORTS

MULTIMEDIA

Facility is listed in EPA's index system

DATABASE: Facility Index System (FINDS)

U.S. POLYCHEMICAL CORPORATION
584 CHESTNUT RIDGE ROAD
SPRING VALLEY, NY 10977
EDR ID #1024049698

This site is listed in the Federal FINDS database. The FINDS database may contain references to records from government databases included elsewhere in the report.
Please note: the FINDS database may also contain references to out of date records formerly associated with the site.

Registry ID:	110070144231
Facility Name:	U.S. POLYCHEMICAL CORPORATION
Facility Address:	584 CHESTNUT RIDGE ROAD SPRING VALLEY, NY 10977
Facility URL:	http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110070144231
FIPS:	Not reported
Fed Facility:	Not reported
Tribal Land:	Not reported
Tribal Name:	Not reported
Congressional District:	17
Hydrologic Unit Code:	02030103
EPA Region:	02
Site Type:	STATIONARY
Date Created:	01-DEC-2017 09:09:29
Date Updated:	Not reported
U.S-Mexico Border:	Not reported
Latitude:	41.09596
Longitude:	-74.04809
Horizontal Collection:	ADDRESS MATCHING-HOUSE NUMBER
Horizontal Accuracy:	30
Reference Point:	CENTER OF A FACILITY OR STATION
Horizontal Datum:	NAD83
Coordinates Source:	Not reported

Environmental Interest/Information System

COMPLIANCE AND EMISSIONS REPORTING

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

Program System ID:	CEDRI10020513
Program Sys. Name:	CEDRI
Env. Interest Type:	COMPLIANCE AND EMISSIONS REPORTING
Env. Interest Start Dt.:	Not reported
Start Date Qualifier:	Not reported
Env. Interest End Dt.:	Not reported
End Date Qualifier:	Not reported
Data Source:	API
Active Code:	Not reported

Program System ID:	3600794238
Program Sys. Name:	ICIS
Env. Interest Type:	ENFORCEMENT/COMPLIANCE ACTIVITY
Env. Interest Start Dt.:	14-NOV-2017 00:00:00
Start Date Qualifier:	ACTUAL ACTIVITY DATE
Env. Interest End Dt.:	Not reported
End Date Qualifier:	Not reported
Data Source:	ICIS
Active Code:	Not reported

SECTION 3: DATABASES AND UPDATE DATES

To maintain currency of the following federal, state and local databases, EDR contacts the appropriate government agency on a monthly or quarterly basis as required.

Elapsed ASTM days: Provides confirmation that this report meets or exceeds the 90-day updating requirement of the ASTM standard.

DATABASES FOUND IN THIS REPORT

FINDS: Facility Index System/Facility Registry System
Source: EPA
Telephone: Not reported
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/15/2018
Database Release Frequency: Quarterly
Date of Last EDR Contact: 01/08/2019
Date of Next Scheduled Update: 03/18/2019

U S POLYCHEMICAL CORPORATION
584 CHESTNUT RIDGE RD
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Inquiry Number:
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Thank you for your business.
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with any questions or comments.

SECTION 1: FACILITY SUMMARY

FACILITY AREA	FACILITY 1 **U S POLYCHEMICAL CORPORATION** 584 CHESTNUT RIDGE RD SPRING VALLEY, NY 10977 EDR ID #S122482320
WASTE MANAGEMENT Facility generates hazardous waste (RCRA)	NO
Facility treats, stores, or disposes of hazardous waste on-site (RCRA/TSDF)	NO
Facility has received Notices of Violations (RCRA/VIOL)	NO
Facility has been subject to RCRA administrative actions (RAATS)	NO
Facility has been subject to corrective actions (CORRACTS)	NO
Facility handles PCBs (PADS)	NO
Facility uses radioactive materials (MLTS)	NO
Facility is a FUSRAP Site	NO
Facility is a UXO Site	NO
Facility is a FUELS Site	NO
Facility is an DockHWC/ECHO Site	NO
Facility manages registered aboveground storage tanks (AST)	NO
Facility manages registered underground storage tanks (UST)	NO
Facility has reported leaking underground storage tank incidents (LUST)	NO
Facility has reported emergency releases to the soil (ERNS)	NO
Facility has reported hazardous material incidents to DOT (HMIRS)	NO
WASTE DISPOSAL Facility is a Superfund Site (NPL)	NO
Facility is a Record of Decision Site (ROD)	NO
Facility has a known or suspect abandoned, inactive or uncontrolled hazardous waste site (SEMS)	NO
Facility has a reported Superfund Lien on it (LIENS)	NO
Facility is listed as a state hazardous waste site (SHWS)	NO
Facility has disposed of solid waste on-site (SWF/LF)	NO
MULTIMEDIA Facility uses toxic chemicals and has notified EPA under SARA Title III, Section 313 (TRIS)	NO
Facility produces pesticides and has notified EPA under Section 7 of FIFRA (SSTS)	NO
Facility manufactures or imports toxic chemicals on the TSCA list (TSCA)	NO
Facility has inspections under FIFRA, TSCA or EPCRA (FTTS)	NO
Facility is listed in EPA's index system (FINDS)	NO
Facility is listed in other database records (OTHER)	**YES - p4**
POTENTIAL SUPERFUND LIABILITY Facility has a list of potentially responsible parties PRP	NO
Facility is named in a CERCLA-related Consent Decree	NO
TOTAL (YES)	1

SECTION 2: FACILITY DETAIL REPORTS

MULTIMEDIA

Facility is listed in other database records

DATABASE: Other Database Records (OTHER)

U S POLYCHEMICAL CORPORATION
584 CHESTNUT RIDGE RD
SPRING VALLEY, NY 10977
EDR ID #S122482320

NY MANIFEST:

Country:	USA
EPA ID:	NYD002016079
Facility Status:	Not reported
Location Address 1:	584 CHESTNUT RIDGE ROAD
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	SPRING VALLEY
Location State:	NY
Location Zip:	10977
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	NYD002016079
Mailing Name:	U S POLYCHEMICAL CORPORATION
Mailing Contact:	ALLEN B COOPERSMITH
Mailing Address 1:	584-586 SOUTH MAIN STREET
Mailing Address 2:	Not reported
Mailing City:	SPRING VALLEY
Mailing State:	NY
Mailing Zip:	10977
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	9143565530

NY MANIFEST:

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2018
Trans1 State ID:	NJR000064766
Trans2 State ID:	Not reported
Generator Ship Date:	06/01/2018
Trans1 Recv Date:	06/01/2018
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	06/06/2018
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	007737016FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	450
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported

Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925117FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	12
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	Not reported
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	D001
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925117FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported

Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	20
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	D002
Waste Code 1_3:	U404
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925117FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	110
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	U239
Waste Code 1_3:	U031
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925117FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N

Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	5
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925117FLE
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	2200
Units:	P - Pounds
Number of Containers:	2
Container Type:	CW - Wooden boxes
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017

Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
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TSDF ID 2:	Not reported
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MGMT Method Type Code:	H141
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	2400
Units:	P - Pounds
Number of Containers:	2
Container Type:	CW - Wooden boxes
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
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Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Trans2 EPA ID:	Not reported
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Discr Full Reject Indicator:	N
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	1800
Units:	P - Pounds
Number of Containers:	7
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
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Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
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TSDF ID 2:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	180
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	U140
Waste Code 1_3:	D021
Waste Code 1_4:	U037
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
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Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
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MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	60

Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
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Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	80
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
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Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
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TSDF ID 2:	Not reported
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Export Indicator:	N
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Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N

Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	20
Units:	P - Pounds
Number of Containers:	1
Container Type:	CF - Fiber or plastic boxes, cartons
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	D007
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	12
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported

Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
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MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	15
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
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TSDF ID 2:	Not reported
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Export Indicator:	N
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Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	90
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	D001
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
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Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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TSDF ID 2:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	5
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	D003
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	40
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.

Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Discr Residue Indicator:	N
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	30
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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TSDF ID 2:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141

Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	18
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
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Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
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TSDF ID 2:	Not reported
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Discr Residue Indicator:	N
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MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	5
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
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Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
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Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
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Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
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TSDF ID 2:	Not reported
Manifest Tracking Number:	008925117FLE

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Discr Full Reject Indicator:	N
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Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	8
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D010
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
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Export Indicator:	N
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Discr Full Reject Indicator:	N
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Alt Facility Sign Date:	Not reported
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Waste Code:	Not reported
Quantity:	80
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	F003
Waste Code 1_2:	D001
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

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Manifest Status:	Not reported
seq:	Not reported
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Trans1 State ID:	NJR986647105
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Generator Ship Date:	12/14/2017

Trans1 Recv Date:	12/14/2017
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TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	5
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	P030
Waste Code 1_2:	D008
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

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Manifest Status:	Not reported
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Year:	2017
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Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
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TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	5
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	U069
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported

Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

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Year:	2017
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Generator Ship Date:	12/14/2017
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TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	35
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	U219
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

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Year:	2017
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Generator Ship Date:	12/14/2017
Trans1 Recv Date:	12/14/2017
Trans2 Recv Date:	12/14/2017
TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Trans2 EPA ID:	Not reported
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TSDF ID 2:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
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Waste Code:	Not reported
Waste Code:	Not reported

Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	35
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	Not reported
Waste Code 1_2:	U080
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

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Manifest Status:	Not reported
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Trans2 State ID:	PAR000043026
Generator Ship Date:	12/14/2017
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TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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MGMT Method Type Code:	H141
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	12
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	U160
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

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TSD Site Recv Date:	12/19/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Trans2 EPA ID:	Not reported
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MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	15
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

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Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	11/10/2017
Trans1 Recv Date:	11/10/2017
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TSD Site Recv Date:	11/15/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Trans2 EPA ID:	Not reported
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	100
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

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Manifest Status:	Not reported
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Trans2 State ID:	PAR000043026
Generator Ship Date:	11/10/2017
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Trans2 Recv Date:	11/10/2017
TSD Site Recv Date:	11/15/2017
Part A Recv Date:	Not reported

Part B Recv Date:	Not reported
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	810
Units:	P - Pounds
Number of Containers:	2
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
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Trans2 State ID:	PAR000043026
Generator Ship Date:	11/10/2017
Trans1 Recv Date:	11/10/2017
Trans2 Recv Date:	11/10/2017
TSD Site Recv Date:	11/15/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	380
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
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Trans2 State ID:	PAR000043026
Generator Ship Date:	11/10/2017
Trans1 Recv Date:	11/10/2017
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TSD Site Recv Date:	11/15/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	800
Units:	P - Pounds
Number of Containers:	2
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
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Trans2 Recv Date:	11/10/2017
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Part B Recv Date:	Not reported
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	250
Units:	P - Pounds

Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	Not reported
Waste Code 1_2:	D002
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

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Manifest Status:	Not reported
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Generator Ship Date:	11/10/2017
Trans1 Recv Date:	11/10/2017
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TSD Site Recv Date:	11/15/2017
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	350
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	U069
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

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Year:	2017
Trans1 State ID:	NJR986647105
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Generator Ship Date:	11/10/2017
Trans1 Recv Date:	11/10/2017
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TSD Site Recv Date:	11/15/2017
Part A Recv Date:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported

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MGMT Method Type Code: H141
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Quantity: 480
Units: P - Pounds
Number of Containers: 1
Container Type: DF - Fiberboard or plastic drums (glass)
Handling Method: L Landfill.
Specific Gravity: 1
Waste Code: D002
Waste Code 1_2: Not reported
Waste Code 1_3: Not reported
Waste Code 1_4: Not reported
Waste Code 1_5: Not reported
Waste Code 1_6: Not reported

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Trans1 State ID: NJR986647105
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Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD002016079
Trans1 EPA ID: Not reported
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Discr Full Reject Indicator: N
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Alt Facility Sign Date: Not reported
MGMT Method Type Code: H141
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Quantity: 680
Units: P - Pounds
Number of Containers: 2
Container Type: DF - Fiberboard or plastic drums (glass)
Handling Method: L Landfill.
Specific Gravity: 1
Waste Code: D002
Waste Code 1_2: Not reported
Waste Code 1_3: Not reported
Waste Code 1_4: Not reported
Waste Code 1_5: Not reported
Waste Code 1_6: Not reported

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Year: 2017
Trans1 State ID: NJR986647105
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TSD Site Recv Date: 11/15/2017
Part A Recv Date: Not reported
Part B Recv Date: Not reported
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Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported

TSDF ID 1: PAD067098822
TSDF ID 2: Not reported
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Alt Facility Sign Date: Not reported
MGMT Method Type Code: H141
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Quantity: 316
Units: P - Pounds
Number of Containers: 1
Container Type: DF - Fiberboard or plastic drums (glass)
Handling Method: L Landfill.
Specific Gravity: 1
Waste Code: D002
Waste Code 1_2: Not reported
Waste Code 1_3: Not reported
Waste Code 1_4: Not reported
Waste Code 1_5: Not reported
Waste Code 1_6: Not reported

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Year: 2017
Trans1 State ID: NJR986647105
Trans2 State ID: PAR000043026
Generator Ship Date: 11/10/2017
Trans1 Recv Date: 11/10/2017
Trans2 Recv Date: 11/10/2017
TSD Site Recv Date: 11/15/2017
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD002016079
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
TSDF ID 1: PAD067098822
TSDF ID 2: Not reported
Manifest Tracking Number: 008925129FLE
Import Indicator: N
Export Indicator: N
Discr Quantity Indicator: N
Discr Type Indicator: N
Discr Residue Indicator: N
Discr Partial Reject Indicator: N
Discr Full Reject Indicator: N
Manifest Ref Number: Not reported
Alt Facility RCRA ID: Not reported
Alt Facility Sign Date: Not reported
MGMT Method Type Code: H141
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Quantity: 747
Units: P - Pounds
Number of Containers: 2
Container Type: DM - Metal drums, barrels
Handling Method: L Landfill.
Specific Gravity: 1
Waste Code: D002
Waste Code 1_2: D001
Waste Code 1_3: Not reported
Waste Code 1_4: Not reported
Waste Code 1_5: Not reported
Waste Code 1_6: Not reported

Document ID: Not reported
Manifest Status: Not reported
seq: Not reported
Year: 2017

Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	11/10/2017
Trans1 Recv Date:	11/10/2017
Trans2 Recv Date:	11/10/2017
TSD Site Recv Date:	11/15/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
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TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
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Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
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Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	510
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017
Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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TSDF ID 2:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	450
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1

Waste Code: D001
Waste Code 1_2: Not reported
Waste Code 1_3: Not reported
Waste Code 1_4: Not reported
Waste Code 1_5: Not reported
Waste Code 1_6: Not reported

Document ID: Not reported
Manifest Status: Not reported
seq: Not reported
Year: 2017
Trans1 State ID: NJR986647105
Trans2 State ID: PAR000043026
Generator Ship Date: 10/25/2017
Trans1 Recv Date: 10/25/2017
Trans2 Recv Date: 10/28/2017
TSD Site Recv Date: 10/30/2017
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD002016079
Trans1 EPA ID: Not reported
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Discr Full Reject Indicator: N
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Alt Facility RCRA ID: Not reported
Alt Facility Sign Date: Not reported
MGMT Method Type Code: H141
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Waste Code: Not reported
Quantity: 400
Units: P - Pounds
Number of Containers: 1
Container Type: DM - Metal drums, barrels
Handling Method: L Landfill.
Specific Gravity: 1
Waste Code: D001
Waste Code 1_2: Not reported
Waste Code 1_3: Not reported
Waste Code 1_4: Not reported
Waste Code 1_5: Not reported
Waste Code 1_6: Not reported

Document ID: Not reported
Manifest Status: Not reported
seq: Not reported
Year: 2017
Trans1 State ID: NJR986647105
Trans2 State ID: PAR000043026
Generator Ship Date: 10/25/2017
Trans1 Recv Date: 10/25/2017
Trans2 Recv Date: 10/28/2017
TSD Site Recv Date: 10/30/2017
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD002016079
Trans1 EPA ID: Not reported
Trans2 EPA ID: Not reported
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TSDF ID 2: Not reported
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Discr Full Reject Indicator: N
Manifest Ref Number: Not reported
Alt Facility RCRA ID: Not reported
Alt Facility Sign Date: Not reported
MGMT Method Type Code: H141
Waste Code: Not reported

Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	680
Units:	P - Pounds
Number of Containers:	2
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	Not reported
Waste Code 1_2:	D001
Waste Code 1_3:	F003
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017
Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
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TSDF ID 2:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	610
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	F001
Waste Code 1_2:	D039
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017
Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
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Export Indicator:	N
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	1200
Units:	P - Pounds
Number of Containers:	4
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
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Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017
Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	578
Units:	P - Pounds
Number of Containers:	2
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
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Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017

Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
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TSDF ID 2:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	1200
Units:	P - Pounds
Number of Containers:	3
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017
Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	200
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D002
Waste Code 1_2:	U123
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported

Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported
Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017
Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
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TSDF ID 2:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	300
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported
Document ID:	Not reported
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Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017
Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported

Waste Code:	Not reported
Quantity:	300
Units:	P - Pounds
Number of Containers:	3
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	F003
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
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Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017
Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	288
Units:	P - Pounds
Number of Containers:	1
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	D002
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017
Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
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Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	400
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
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Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017
Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	1300
Units:	P - Pounds
Number of Containers:	4
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
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Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/25/2017
Trans1 Recv Date:	10/25/2017
Trans2 Recv Date:	10/28/2017
TSD Site Recv Date:	10/30/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported

Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
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Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	290
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/06/2017
Trans1 Recv Date:	10/06/2017
Trans2 Recv Date:	10/06/2017
TSD Site Recv Date:	10/10/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
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Trans2 EPA ID:	Not reported
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TSDF ID 2:	Not reported
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Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
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Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	400
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported

Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/06/2017
Trans1 Recv Date:	10/06/2017
Trans2 Recv Date:	10/06/2017
TSD Site Recv Date:	10/10/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925145FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	3400
Units:	P - Pounds
Number of Containers:	7
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/06/2017
Trans1 Recv Date:	10/06/2017
Trans2 Recv Date:	10/06/2017
TSD Site Recv Date:	10/10/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925145FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
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Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	380
Units:	P - Pounds
Number of Containers:	1

Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	F003
Waste Code 1_2:	D001
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/06/2017
Trans1 Recv Date:	10/06/2017
Trans2 Recv Date:	10/06/2017
TSD Site Recv Date:	10/10/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
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Export Indicator:	N
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Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	400
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	F003
Waste Code 1_2:	D001
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/06/2017
Trans1 Recv Date:	10/06/2017
Trans2 Recv Date:	10/06/2017
TSD Site Recv Date:	10/10/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925145FLE
Import Indicator:	N
Export Indicator:	N
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Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported

Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	1850
Units:	P - Pounds
Number of Containers:	5
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	F003
Waste Code 1_2:	D001
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/06/2017
Trans1 Recv Date:	10/06/2017
Trans2 Recv Date:	10/06/2017
TSD Site Recv Date:	10/10/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925145FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	850
Units:	P - Pounds
Number of Containers:	2
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/06/2017
Trans1 Recv Date:	10/06/2017
Trans2 Recv Date:	10/06/2017
TSD Site Recv Date:	10/10/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822

TSDF ID 2:	Not reported
Manifest Tracking Number:	008925145FLE
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Export Indicator:	N
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Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	400
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/06/2017
Trans1 Recv Date:	10/06/2017
Trans2 Recv Date:	10/06/2017
TSD Site Recv Date:	10/10/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925145FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	400
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105

Trans2 State ID:	PAR000043026
Generator Ship Date:	10/06/2017
Trans1 Recv Date:	10/06/2017
Trans2 Recv Date:	10/06/2017
TSD Site Recv Date:	10/10/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925145FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	1200
Units:	P - Pounds
Number of Containers:	3
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJR986647105
Trans2 State ID:	PAR000043026
Generator Ship Date:	10/06/2017
Trans1 Recv Date:	10/06/2017
Trans2 Recv Date:	10/06/2017
TSD Site Recv Date:	10/10/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	PAD067098822
TSDF ID 2:	Not reported
Manifest Tracking Number:	008925145FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	400
Units:	P - Pounds
Number of Containers:	1
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	1
Waste Code:	D001

Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	Not reported
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Document ID:	SCA0504990
Manifest Status:	Not reported
seq:	01
Year:	1999
Trans1 State ID:	Not reported
Trans2 State ID:	Not reported
Generator Ship Date:	05/04/1999
Trans1 Recv Date:	05/04/1999
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	05/12/1999
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD986607380
Trans2 EPA ID:	Not reported
TSDF ID 1:	SCD036275626
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01012
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Waste Code:	F002 - HALO SOLV + STILL BOTTOMS FM REC OF SOLV
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01122
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00

Document ID:	SCA0319990
Manifest Status:	Not reported
seq:	01
Year:	1999
Trans1 State ID:	NYJA334
Trans2 State ID:	Not reported
Generator Ship Date:	03/19/1999
Trans1 Recv Date:	03/19/1999
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	03/23/1999
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD986607380
Trans2 EPA ID:	Not reported
TSDF ID 1:	SCD036275626
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported

Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00853
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00

Document ID:	SCB0226990
Manifest Status:	Not reported
seq:	01
Year:	1999
Trans1 State ID:	Not reported
Trans2 State ID:	Not reported
Generator Ship Date:	02/26/1999
Trans1 Recv Date:	02/26/1999
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	03/16/1999
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD986607380
Trans2 EPA ID:	Not reported
TSDF ID 1:	SCD036275626
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	02052
Units:	P - Pounds
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00

Document ID:	SCA0128990
Manifest Status:	Not reported
seq:	01
Year:	1999
Trans1 State ID:	Not reported
Trans2 State ID:	Not reported
Generator Ship Date:	01/28/1999
Trans1 Recv Date:	01/28/1999
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	02/02/1999
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD986607380
Trans2 EPA ID:	Not reported
TSDF ID 1:	SCD036275626
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported

Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01898
Units:	P - Pounds
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00

Document ID:	SCA1228980
Manifest Status:	Not reported
seq:	01
Year:	1998
Trans1 State ID:	Not reported
Trans2 State ID:	Not reported
Generator Ship Date:	12/28/1998
Trans1 Recv Date:	12/28/1998
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	01/07/1999
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD986607380
Trans2 EPA ID:	Not reported
TSDF ID 1:	SCD036275626
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	02024
Units:	P - Pounds
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00417
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00

Document ID:	SCA1130980
Manifest Status:	Not reported
seq:	01
Year:	1998
Trans1 State ID:	NYJA334
Trans2 State ID:	Not reported
Generator Ship Date:	11/30/1998
Trans1 Recv Date:	11/30/1998
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	12/07/1998
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD986607380
Trans2 EPA ID:	Not reported
TSDF ID 1:	SCD036275626
TSDF ID 2:	Not reported

Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	02530
Units:	P - Pounds
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00

Document ID:	SCA1028980
Manifest Status:	Not reported
seq:	01
Year:	1998
Trans1 State ID:	Not reported
Trans2 State ID:	Not reported
Generator Ship Date:	10/28/1998
Trans1 Recv Date:	10/28/1998
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	11/03/1998
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD986607380
Trans2 EPA ID:	Not reported
TSDF ID 1:	SCD036275626
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00220
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00

Document ID:	INA1205979
Manifest Status:	Not reported
seq:	01
Year:	1998
Trans1 State ID:	Not reported
Trans2 State ID:	Not reported
Generator Ship Date:	03/10/1998

Trans1 Recv Date:	03/10/1998
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	03/13/1998
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD000692061
Trans2 EPA ID:	Not reported
TSDF ID 1:	IND000646943
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00235
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	047
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00110
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	110
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00

Document ID:	NJA2751885
Manifest Status:	K
seq:	Not reported
Year:	1997
Trans1 State ID:	2809
Trans2 State ID:	Not reported
Generator Ship Date:	12/23/1997
Trans1 Recv Date:	12/23/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	12/23/1997
Part A Recv Date:	01/28/1998
Part B Recv Date:	01/21/1998
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD002454544
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002454544
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00275
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	005
Container Type:	DM - Metal drums, barrels

Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Document ID:	NJA2751707
Manifest Status:	C
seq:	Not reported
Year:	1997
Trans1 State ID:	X2809
Trans2 State ID:	Not reported
Generator Ship Date:	12/02/1997
Trans1 Recv Date:	12/02/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	12/02/1997
Part A Recv Date:	12/23/1997
Part B Recv Date:	12/18/1997
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD002454544
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002454544
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00100
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00400
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	008
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Document ID:	NJA2752175
Manifest Status:	C
seq:	Not reported
Year:	1997
Trans1 State ID:	2809
Trans2 State ID:	Not reported
Generator Ship Date:	10/01/1997
Trans1 Recv Date:	10/01/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	10/01/1997
Part A Recv Date:	12/23/1997
Part B Recv Date:	10/20/1997
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD002454544
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002454544
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported

Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00050
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00300
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	006
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NJA2108478
Manifest Status:	C
seq:	Not reported
Year:	1997
Trans1 State ID:	2809
Trans2 State ID:	Not reported
Generator Ship Date:	08/01/1997
Trans1 Recv Date:	08/01/1997
Trans2 Recv Date:	/ /
TSD Site Recv Date:	08/01/1997
Part A Recv Date:	/ /
Part B Recv Date:	08/18/1997
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD002454544
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002454544
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00200
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00150
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NJA2607103
Manifest Status:	C
seq:	Not reported
Year:	1997
Trans1 State ID:	2809
Trans2 State ID:	Not reported
Generator Ship Date:	02/11/1997
Trans1 Recv Date:	02/11/1997

Trans2 Recv Date:	/ /
TSD Site Recv Date:	02/11/1997
Part A Recv Date:	/ /
Part B Recv Date:	02/24/1997
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD002454544
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002454544
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D002 - NON-LISTED CORROSIVE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00050
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00100
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	U080 - METHYLENE CHLORIDE
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00050
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NJA2608339
Manifest Status:	C
seq:	Not reported
Year:	1996
Trans1 State ID:	2809
Trans2 State ID:	Not reported
Generator Ship Date:	12/17/1996
Trans1 Recv Date:	12/17/1996
Trans2 Recv Date:	/ /
TSD Site Recv Date:	12/17/1996
Part A Recv Date:	01/14/1997
Part B Recv Date:	01/06/1997
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD002454544
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002454544
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported

Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00275
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100

Document ID:	NJA1475181
Manifest Status:	C
seq:	Not reported
Year:	1992
Trans1 State ID:	NJDEPS815
Trans2 State ID:	Not reported
Generator Ship Date:	05/19/1992
Trans1 Recv Date:	05/19/1992
Trans2 Recv Date:	/ /
TSD Site Recv Date:	05/19/1992
Part A Recv Date:	/ /
Part B Recv Date:	06/09/1992
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD156163438
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002454544
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F002 - HALO SOLV + STILL BOTTOMS FM REC OF SOLV
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00050
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NJA0396842
Manifest Status:	C
seq:	Not reported
Year:	1988
Trans1 State ID:	NJDEPS-86
Trans2 State ID:	Not reported
Generator Ship Date:	11/14/1988
Trans1 Recv Date:	11/14/1988
Trans2 Recv Date:	/ /
TSD Site Recv Date:	11/15/1988
Part A Recv Date:	11/18/1988
Part B Recv Date:	11/29/1988
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD060803905
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002182897
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES

Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01500
Units:	P - Pounds
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100

Document ID:	NJA0290740
Manifest Status:	K
seq:	Not reported
Year:	1988
Trans1 State ID:	NJDEPS-86
Trans2 State ID:	Not reported
Generator Ship Date:	10/11/1988
Trans1 Recv Date:	10/11/1988
Trans2 Recv Date:	/ /
TSD Site Recv Date:	10/13/1988
Part A Recv Date:	11/30/1988
Part B Recv Date:	10/20/1988
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD060803905
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002182897
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	F002 - HALO SOLV + STILL BOTTOMS FM REC OF SOLV
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00165
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	F002 - HALO SOLV + STILL BOTTOMS FM REC OF SOLV
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100

Document ID:	NJA0392217
Manifest Status:	K
seq:	Not reported
Year:	1988
Trans1 State ID:	NJDEPS581
Trans2 State ID:	Not reported
Generator Ship Date:	03/24/1988
Trans1 Recv Date:	03/24/1988
Trans2 Recv Date:	/ /

TSD Site Recv Date:	04/13/1988
Part A Recv Date:	05/05/1988
Part B Recv Date:	04/27/1988
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NJD982281016
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002200046
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	X900 - NJ UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00165
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	003
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	F002 - HALO SOLV + STILL BOTTOMS FM REC OF SOLV
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00275
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00110
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100

Document ID:	NYA3813186
Manifest Status:	C
seq:	Not reported
Year:	1986
Trans1 State ID:	PLATE#
Trans2 State ID:	Not reported
Generator Ship Date:	06/04/1986
Trans1 Recv Date:	06/04/1986
Trans2 Recv Date:	/ /
TSD Site Recv Date:	06/04/1986
Part A Recv Date:	06/10/1986
Part B Recv Date:	06/18/1986
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD000824334
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN

Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00825
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	015
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100

Document ID:	NYA3809237
Manifest Status:	C
seq:	Not reported
Year:	1986
Trans1 State ID:	PLATE#
Trans2 State ID:	57745GB
Generator Ship Date:	03/20/1986
Trans1 Recv Date:	03/20/1986
Trans2 Recv Date:	/ /
TSD Site Recv Date:	03/20/1986
Part A Recv Date:	03/27/1986
Part B Recv Date:	03/31/1986
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD000824334
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00880
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	016
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100

Document ID:	NYA2143251
Manifest Status:	C
seq:	Not reported
Year:	1985
Trans1 State ID:	9082GF
Trans2 State ID:	Not reported
Generator Ship Date:	01/24/1985
Trans1 Recv Date:	01/24/1985
Trans2 Recv Date:	/ /
TSD Site Recv Date:	01/24/1985
Part A Recv Date:	01/29/1985
Part B Recv Date:	02/06/1985
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD000824334
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported

Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00825
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	015
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100

Document ID:	NYO3193785
Manifest Status:	K
seq:	Not reported
Year:	1984
Trans1 State ID:	NY2A074
Trans2 State ID:	Not reported
Generator Ship Date:	07/23/1984
Trans1 Recv Date:	07/23/1984
Trans2 Recv Date:	/ /
TSD Site Recv Date:	07/23/1984
Part A Recv Date:	08/17/1984
Part B Recv Date:	08/20/1984
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD000824334
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00330
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	006
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NYO3024693
Manifest Status:	K
seq:	Not reported
Year:	1984
Trans1 State ID:	8411PO
Trans2 State ID:	Not reported
Generator Ship Date:	02/15/1984
Trans1 Recv Date:	02/15/1984
Trans2 Recv Date:	/ /
TSD Site Recv Date:	02/15/1984
Part A Recv Date:	04/09/1984
Part B Recv Date:	03/01/1984
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD000824334
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported

Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00660
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	013
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NYO3019464
Manifest Status:	C
seq:	Not reported
Year:	1983
Trans1 State ID:	NY2A074
Trans2 State ID:	Not reported
Generator Ship Date:	06/21/1983
Trans1 Recv Date:	06/21/1983
Trans2 Recv Date:	/ /
TSD Site Recv Date:	06/21/1983
Part A Recv Date:	07/11/2003
Part B Recv Date:	07/11/2003
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD000824334
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01265
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	023
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NYO2840184
Manifest Status:	K
seq:	Not reported
Year:	1983
Trans1 State ID:	NY2A074
Trans2 State ID:	Not reported
Generator Ship Date:	03/10/1983
Trans1 Recv Date:	03/10/1983
Trans2 Recv Date:	/ /
TSD Site Recv Date:	03/10/1983
Part A Recv Date:	04/21/2003
Part B Recv Date:	04/21/2003
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD000824334
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported

Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00660
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	012
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

Document ID:	NYO1500624
Manifest Status:	K
seq:	Not reported
Year:	1982
Trans1 State ID:	2A074
Trans2 State ID:	Not reported
Generator Ship Date:	02/10/1982
Trans1 Recv Date:	02/10/1982
Trans2 Recv Date:	/ /
TSD Site Recv Date:	02/10/1982
Part A Recv Date:	/ /
Part B Recv Date:	/ /
Generator EPA ID:	NYD002016079
Trans1 EPA ID:	NYD000824334
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD000824334
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F001 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00935
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	017
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00170
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	004
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100
Waste Code:	K079 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00255
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100
Waste Code:	K079 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00030
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	Not reported
Specific Gravity:	100

SECTION 3: DATABASES AND UPDATE DATES

To maintain currency of the following federal, state and local databases, EDR contacts the appropriate government agency on a monthly or quarterly basis as required.

Elapsed ASTM days: Provides confirmation that this report meets or exceeds the 90-day updating requirement of the ASTM standard.

DATABASES FOUND IN THIS REPORT

NY MANIFEST: Facility and Manifest Data
Source: Department of Environmental Conservation
Telephone: 518-402-8651
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 10/01/2018
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/31/2018
Date of Next Scheduled Update: 02/11/2019

9.7 MUNICIPAL INFORMATION

LCS, INC.

MUNICIPAL INFORMATION

PROJECT#: 18N10530.39

SITE ADDRESS (identify all potential addresses): 584 Chestnut Ridge Rd

FILL OUT THIS FORM ONLY IF YOU VISITED A MUNICIPAL (local, county, state) OFFICE. [If you did not visit an office, the source (web address) of all municipal information should be clearly identified on printouts included in paperwork.]

MUNICIPALITY Visited (identify Village/Town/City): Ramapo - online assessment

Office: Assessment Date: ______ ***obtain copy of tax map**

SBL #/Tax Parcel #: ______

Owner: ______

Past owner(s): ______

Acres: ______ Building sq ft. ______ Year Built ______

Utilities: ______

Additional info.: ______

Office: Building/Code Enforcement Department Date: 1/8

*Review permits, complaints, violations, records of historic heating systems, etc.

FOIA

Office: RC DOH + NYS DEC Date: 1/8

*Information obtained:

FOIA

Revised 9/2017

12:09 PM - Friday, January 11th, 2019

Town of Ramapo Real Property Assessment Information

Scott Shedler IAO, *Town Assessor*

Assessment Report

Tax Year	Uniform % of Value	Roll Section	Municipality
2018 Final	11.9	1	CHESTNUT RIDGE

Assessment Details		Property Details	
Assessed Total Value	$150,000	Legal Address	584 CHESTNUT RIDGE RD
Assessed Land Value	$50,000	Type	Commercial
Market Value	$1,260,504 as of 7/1/2017	Property Class	710 - Manufacturing & Processing
Parcel ID	63.06-1-1	Acreage	7.98
SWIS	392615	Frontage	
		Depth	
		Neighborhood	61520
		School District	EAST RAMAPO CSD

Site Details			
Use Description	Distribution Warehouse	Unit Type	F03

Parcel Owner		Sale Details	
Name	584 CHESTNUT RIDGE LLC	Sale Price	
Address	584 CHESTNUT RIDGE ROAD	Sale Date	
City	SPRING VALLEY	Deed Book	
State & Zip	NY 10977	Deed Page	

Start a New Search

realRecord™

OWNERSHIP INFORMATION		PARCEL NO: 63.06-1-1	
584 CHESTNUT RIDGE LLC 584 CHESTNUT RIDGE RD CHESTNUT RIDGE NY 10977-5646		**Mail:**	584 CHESTNUT RIDGE RD SPRING VALLEY NY 10977-5646
		PHONE NUMBER:	
COUNTY:	ROCKLAND	**CENSUS TRACT:**	0125.02
PROPERTY CLASS:	710 - MANUFACTURING AND PROCESSING		

SALE INFORMATION							
		Sale Date	02/27/2018	**Price $**	1,100,000	**Deed Date**	03/14/2018
Arms Length	Y	**Libre**	2018	**Page**	7536	**# Total Parcels**	1
Seller	SPRING VALLEY INDUSTRIAL	**Buyer**	584 CHESTNUT RIDGE LLC	**Personal Property**	0		

PRIOR SALES	PRICE	DATE	ARMS LENGTH	SELLER	BUYER

No sale history in database for this parcel.

STRUCTURAL INFORMATION		LOT INFORMATION		TAX INFORMATION	
Square Feet	18,870	**Lot Size Dim.:**	0.00x0.00	**Tax ID#**	63.06-1-1
Sqft. 1st Floor		**Land SQFT**	355,014	**Assessed Value $**	150,000
Sqft. 2nd Floor		**Lot Size Acres**	7.98	**Land Assesment $**	50,000
Fin. Basement Sqft.		**Zoning**	R25	**School Tax $**	2,535
Year Built	1965	**Nbhd Code**	61520	**County/Town Tax $**	6,267
Bldg Style	UNKNOWN	**School District**	392602 - EAST RAMAPO	**City/Village Tax $**	0
# Units	1			**Total Tax $**	8,802
# Stories	0.00	**Desirability**	TYPICAL	**Full Tax Value $**	1,190,476
# Baths	0	**Water Front**	N	**Equalization Rate**	0.13
# Bedrooms	0	**Sewer**	COMMERCIAL/PUBLIC	**Prior Tax ID#**	
# Fireplaces		**Water**	COMMERCIAL/PUBLIC	**Full Land Value $**	396,825
# Kitchens		**Utilities**	GAS/ELECTRIC		
Garage Type		**Nbhd. Rating**	AVERAGE		
Garage Bays	0	**Nbhd. Type**	SUBURBAN		
Cooling Detail	NONE	**# Res. Sites**	0		
Heat Type	UNKNOWN	**# Comm. Sites**	1		
Exterior		**Swis Code**	392615		
Condition	AVERAGE				
Basement Type					

*The calculated tax amounts are not exact. No special district tax amounts or exemptions have been included. All numbers are estimated based on town values. Taxes should be verified directly from the local tax collector.

Updated:01/03/2019 4:33 pm

EXEMPTIONS:

IMPROVEMENTS:

(1) CANPY-W/SLAB, BUILT 1965, 0 SQFT, CONDITION NORMAL
(1) LD DOCK-ST/C, BUILT 1965, 0 SQFT, CONDITION NORMAL
(1) PAVNG-ASPHLT, BUILT 1965, 0 SQFT, CONDITION GOOD
(3) FLDLT-MERCRY, BUILT 1980, 4000.00 SQFT, CONDITION NORMAL

Note: Display indicates first residential site and up to four improvements.

LCS, INC.
MUNICIPAL INTERVIEW

PROJECT#: 18N10530.39 MUNICIPALITY: Ramapo
ADDRESS: 584 Chestnut Ridge Rd
(identify all potential addresses) (identify Village/Town/City)

INTERVIEWS:

Office: Building Inspector/Code Enforcement Officer
Personnel: ______________________ Date: FOIA
Title: ______________________

Are you aware of any violations, complaints or other records that would indicate recognized environmental conditions at the site? ______________________

Are you aware of any industrial use or uses likely to lead to contamination of the subject property? ______________________

When was the subject property connected to municipal sewer? ______________________
What is the history of the subject structure and/or property? ______________________

Office: Fire Department
Personnel: ______________________ Date: ______________

Are you aware of any violations, complaints or other records that would indicate recognized environmental conditions at the site? ______________________

Are you aware of any industrial use or uses likely to lead to contamination of the subject property? ______________________

Have you informed of the storage of hazardous/regulated materials on-site in regards to Records of Emergency Notification under SARA Title III? ______________________

Rev. Date 7-2004

LCS INC.
Environmental and Real Estate Consultants

CORPORATE OFFICES
WATERFRONT VILLAGE
40 LA RIVIERE DRIVE, SUITE 120
BUFFALO, NEW YORK 14202

TEL: 800.474.6802
716.845.6145
FAX: 716.845.6164
www.lenderconsulting.com

January 8, 2019

Town of Ramapo Building Department
237 Route 59
Suffern, New York 10901

RE: Records Review Request for File No. 18N10530.39
PLEASE REFERENCE THIS # WHEN RESPONDING

To Whom It May Concern:

Our firm is performing an Environmental Audit of a real property located within the Town of Ramapo. I am writing to request that a review be made of the Town of Ramapo Building Inspector's Building Permits, and Property Violation records which are relevant to the purpose of this Environmental Audit. Please review the following records which pertain to the below referenced site.

1) Building and Fire Inspector Records
2) Building Permits
3) Records or notifications of tank installations and/or removals
4) Violations/Complaint Files
5) Hazardous Materials Permits
6) Violation letters with regards to hazardous materials

Please review any additional records that may be relevant to the purpose of this Environmental Audit.

SITE:	**Industrial**
STREET ADDRESS:	**584 Chestnut Ridge Road**
MUNICIPALITY:	**Chestnut Ridge (Ramapo)**
COUNTY:	**Rockland**
CURRENT OWNER(S):	**584 Chestnut Ridge LLC**
PAST OWNER(S):	**Spring Valley Industrial**
PAST USE:	**Industrial**
PRESENT USE:	**Industrial**
SIZE:	**7.98 acres**
SBL #:	**63.06-1-1**

Please forward all written responses or documents to the attention of Stephanie LaPlaca at our Corporate Office (address above). If you have any questions regarding this request for information or to contact an individual from LCS to come in and review the file, please contact Elizabeth Bruen at 914-844-9404 or ebruen@lenderconsulting.com. The information that you provide is greatly appreciated.

Sincerely,

Elizabeth Bruen

Elizabeth Bruen
Environmental Analyst
Lender Consulting Services, Inc.
(914) 844-9404 Tel
(716) 845-6145 Fax
www.LenderConsulting.com

LCS INC.
Environmental and Real Estate Consultants

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40 LA RIVIERE DRIVE, SUITE 120
BUFFALO, NEW YORK 14202

TEL: 800.474.6802
716.845.6145
FAX: 716.845.6164
www.lenderconsulting.com

January 8, 2019

Regional Citizen Participation Specialist
NYS Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, New York 12561-1696
(845) 255-3414 - fax

RE: Records Review Request for File No. 18N10530.39
PLEASE REFERENCE THIS # WHEN RESPONDING

Dear Sir/Madam:

Our firm is performing an Environmental Assessment of a real property located within the jurisdiction of NYSDEC Region 3. Under the Freedom of Information Law (FOIL), I am writing to request that a review be made of NYSDEC Region 3 department records, which are relevant to the purpose of this Environmental Assessment. Please forward this FOIL request to the following NYSDEC departments for review of department records, if available with regards to the subject site or facility(s) (referenced below).

1) Regulatory Services - permits and registrations (active and inactive).
2) Law Enforcement/Legal Affairs/Env. Enforcement - complaint/notice of violation files, legal proceedings.
3) Solid and Hazardous Waste - site files for active and inactive sites associated with the subject address.
4) Petroleum Bulk Storage - tank closure reports, registered facilities.
5) Air/Water Division - air and water quality issues/violations.
6) NYSDEC Site Inspection Reports associated with the subject address.
7) Spills Division - record of petroleum/chemical releases.

SITE:	**Industrial**
STREET ADDRESS:	**584 Chestnut Ridge Road**
MUNICIPALITY:	**Chestnut Ridge (Ramapo)**
COUNTY:	**Rockland**
CURRENT OWNER(S):	**584 Chestnut Ridge LLC**
PAST OWNER(S):	**Spring Valley Industrial**
PAST USE:	**Industrial**
PRESENT USE:	**Industrial**
SIZE:	**7.98 acres**
SBL #:	**63.06-1-1**

Please forward all written responses or documents to LCS, Inc., in attention of Stephanie LaPlaca, at the address above. If you have any questions regarding this request for information or to contact an individual from LCS to come in and review the file, please contact me at 914-844-9404 or at ebruen@lenderconsulting.com. The information that you provide is greatly appreciated.

Sincerely,

Elizabeth Bruen

Elizabeth Bruen
Environmental Analyst
Lender Consulting Services, Inc.

9.8 AERIAL PHOTOGRAPHS

50m
300f

1938 topographical map

USGS, 5453305 RAMAPO 15 X 15 MINUTE (1938, Revised 1938)

50m
300f

1945 topographical map

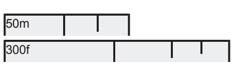
USGS, 8518735 PARK RIDGE 7.5 X 7.5 MINUTE (1945, Revised 1945)

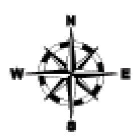
50m
300f

N
W
E
S

1947 topographical map

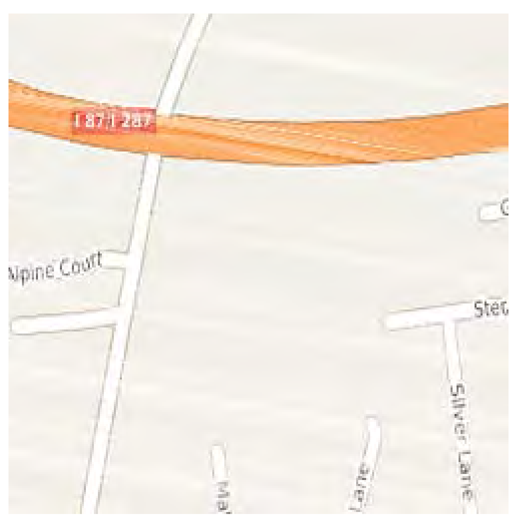
USGS, 5453307 RAMAPO 15 X 15 MINUTE (1938, Revised 1947)

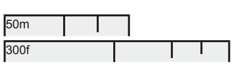


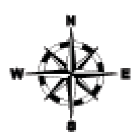


1952 aerial photograph

USGS (1952-04-17 - 1952-04-17)
USGS (1952-04-17 - 1952-04-17)

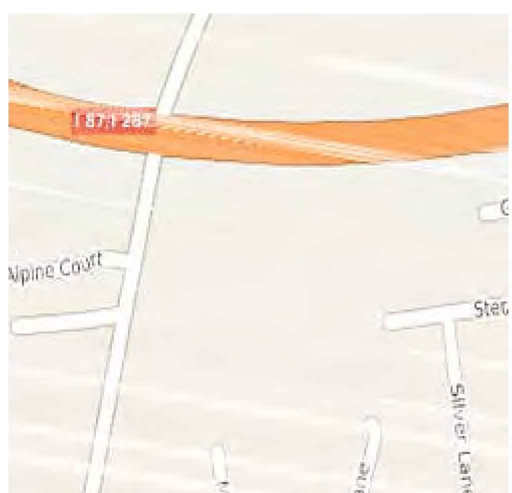






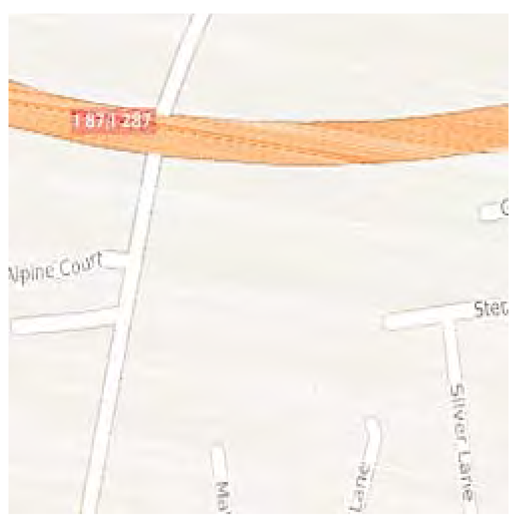
1953 aerial photograph

USGS (1953-06-03 - 1953-06-03)



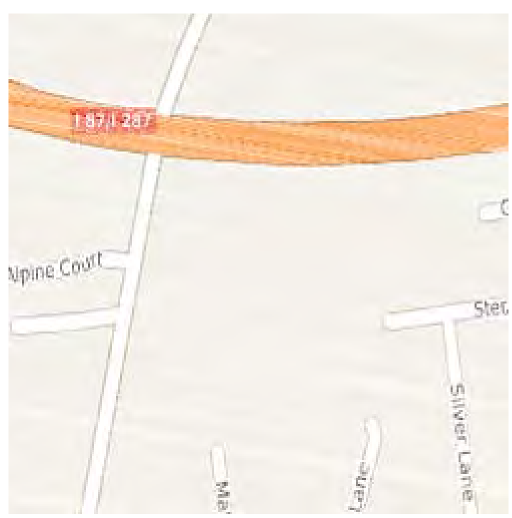
50m
300f

1965 aerial photograph
USDA (1965-10-30 - 1965-11-14)



50m
300f

N
W
E
S

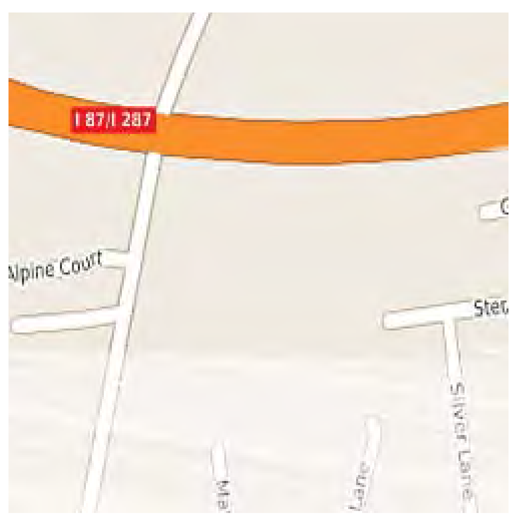


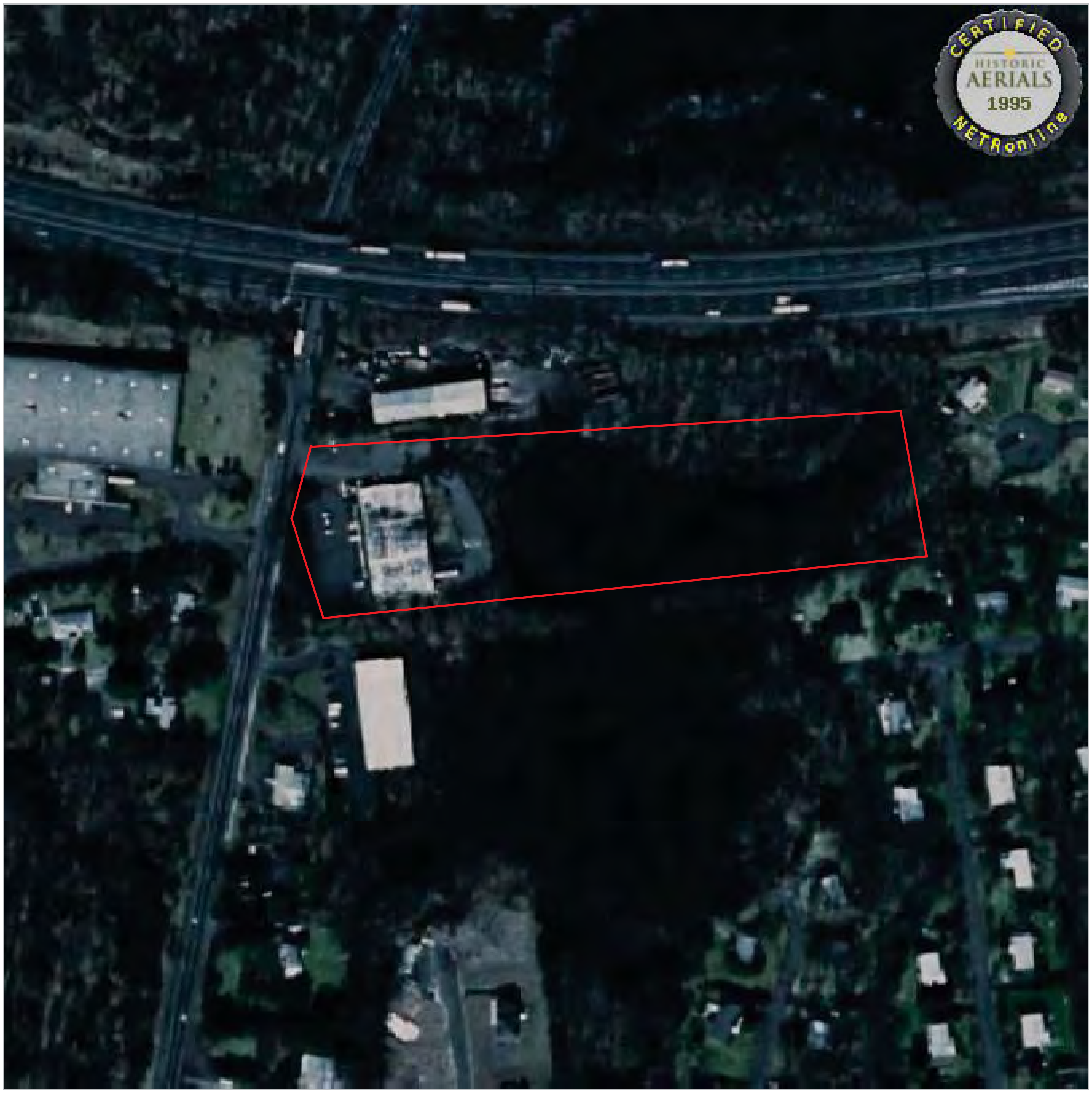
1974 aerial photograph
USDA (Unknown - 1974-10-24)

50m
300f

1987 aerial photograph

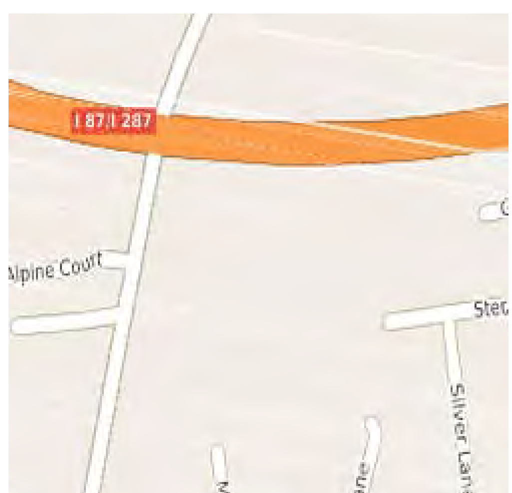
Private Contractor





50m
300f

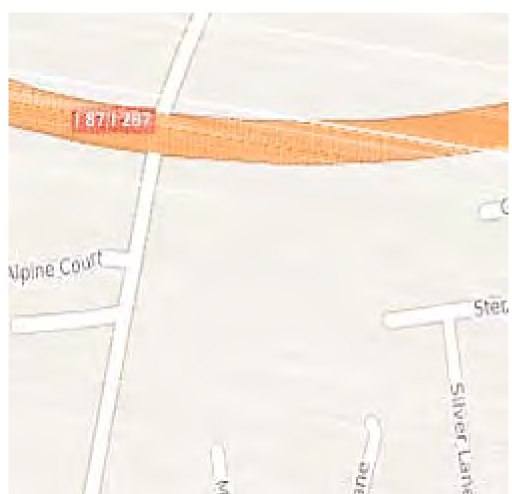
1995 aerial photograph
USGS DOQQ (1995-03-13 - 1995-04-16)
USGS DOQQ (1995-03-13 - 1995-05-14)



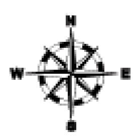
50m
300f

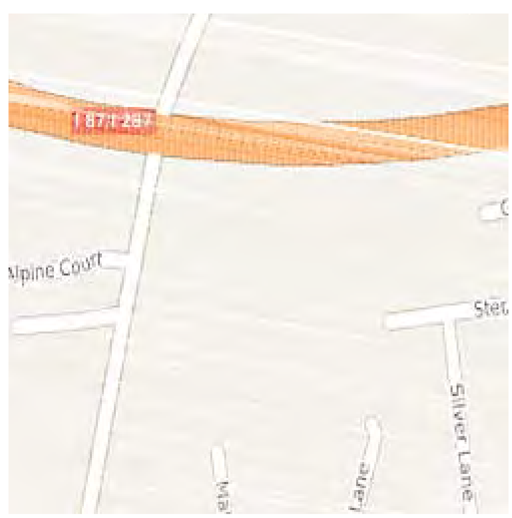
2004 aerial photograph

USGS Hi Res Orothoimagery (2004-04-01 - 2004-04-30)



50m
300f

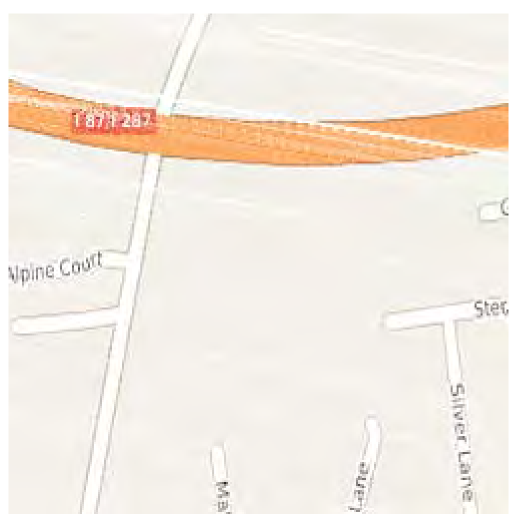




2009 aerial photograph
USDA (2009-05-04 - 2009-09-06)

50m
300f

2013 aerial photograph
USDA (2013-05-27 - 2013-09-26)
USDA (2013-07-07 - 2013-08-12)
USGS HiRes Ortho Imagery (2013-05-01 - 2013-05-31)



9.9 HISTORICAL INFORMATION

584 Chestnut Ridge Rd
584 Chestnut Ridge Rd
Spring Valley, NY 10977

Inquiry Number: 5027038.5
August 21, 2017

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.’s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR’s City Directory Report includes a search of available city directory data at 5 year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	***Target Street***	***Cross Street***	***Source***
2013	☑	☐	Cole Information Services
2008	☑	☐	Cole Information Services
2003	☑	☐	Cole Information Services
1999	☑	☐	Cole Information Services
1995	☑	☐	Cole Information Services
1992	☑	☐	Cole Information Services
1989	☑	☐	City's City Directory
1973	☐	☐	City's City Directory

RECORD SOURCES

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FINDINGS

TARGET PROPERTY STREET

584 Chestnut Ridge Rd
Spring Valley, NY 10977

Year	***CD Image***	***Source***	
CHESTNUT RIDGE RD			
2013	pg A2	Cole Information Services	
2008	pg A4	Cole Information Services	
2003	pg A6	Cole Information Services	
1999	pg A8	Cole Information Services	
1995	pg A10	Cole Information Services	
1992	pg A11	Cole Information Services	
1989	pg A12	City's City Directory	
1973	-	City's City Directory	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	Cole Information Services

CHESTNUT RIDGE RD 2013

500	ARTALE LOUIS J ATTY
	BURNS RICHARD OWEN
	SYLVAN ENTERPRISES
501	CHASE
	CHASE BANK
	DAVID LOWY
	GOLDSTEIN KARLEWICZ & GOLDSTEIN
	VOLUNTEER FIREMANS MUTUAL LIFE INSUR
510	RODERICK NARINESINGH
520	A DYKSTRA FLORIST
	A DYKSTRA FLORIST AT BLUE HIL L
540	BUCKEY DAN FORD INC
	DAN BUCKLEY FORD INC
	DIAMOND FORD
575	CENTRAL PLUMBING SPECAILTIES COMP IN
	CENTRAL PLUMBING SPECIALTIES
	CENTRAL PLUMBING SPECIALTIES CO
	JIM SMITH CHEVROLET AUTO BODY
584	U S POLYCHEMICAL CORPORATION
593	OCCUPANT UNKNOWN
600	BALLOON ARTISTRY
	BEST FRIENDZ
	RAMEH INVESTMENT INC
	SV PLUMBING SEWER & DRAIN
	TECHNO VEND INCORPORATED
	TRISTATE ROOFING & SIDING CORP
	ULTIMATE KITCHENS
601	MR LANDSCAPE INC
608	TRISTATE FOLDING PARTITIONS INC
610	CONCORD ELEVATOR INDUSTRIES INCORPOR
616	JORDAN WILLIAM
628	RESTO CORPORATION
640	UNEEDA ENTERPRISES INCORPORATED
648	MANUEL CORTEZ
664	BARR POST & ASSOC
	BEACON PARTNERS CPA
	CONWAY & KNOWABLE LLP
	DECOTIIS LAW
	FOCUS MEDIA INCORPORATED
	JOHN M SCHWARZ LAWYER
	KEVIN T CONWAY
	LAW OFFICE OF ANDREA OSBORNE ATTORNE
	RESOLUTION TITLE AGENCY
	SIMON ALAN M ATTY
681	EDWIN GOULD ACADEMYRAMPO UFSD
	EDWIN GOULD FOUNDATION
700	LECROY CORP
710	OCCUPANT UNKNOWN
	PLUS SUPPLY INTERNATIONAL INC
720	CHARLES COLLISHAW

CHESTNUT RIDGE RD 2013 (Cont'd)

747 ABBOT FLAG CO DIV
ALPHA MUSIC INC
DICHIARO MICHAEL A ATTY
EAGLE REGALIA CO INC
FEIN SUCH KAHN & SHEPPARD PC
GOLDSTEIN DAVID I
JEFFREY ORLAN
JOHN RITCHIE CO
KANTROWITZ GOLDHAMER & GRAIFMAN PC
KANTROWITZ GRAIFMA
MAHONEY ASSET MANAGEMENT
MICHEAL DICHIARO
NATIONAL ENVIRONMENTAL COVERAGE CORP
VALLEY NATIONAL GASES LLC

Target Street	Cross Street	Source
✓	-	Cole Information Services

CHESTNUT RIDGE RD 2008

500	ALLSTATE
	AMSEL GEORGE
	LAW OFFICE OF RICHARD BURNS
501	ALAN J STRAUS PC
	BANK OF NEW YORK ROCKLAND DIVISION
	JEROME KORNFELD
510	DAVID COENE
520	DYKSTRA A FLORIST
540	BUCKEY DAN FORD INC
593	OCCUPANT UNKNOWN
600	BALLOON ARTISTRY INC
	KOOLERAIRE INC
	RADIATOR PLUS INC
	THE PIANO & CLOCK SHOP CORP
	TRI STATE ROOFING & SIDING CORP
	ZYLON CORP
	ZYLON MEDICAL DEVICES
601	MISTER MASONRY OF THE HUDSON VALLEY
608	245 OLD NYACK TPKE ASSOCS LLC
610	CONCORD ELEVATOR CO INC
616	JORDAN WILLIAM
628	ALL AMERICAN BOYS MOVING LTD
	NY RESTO LLC
640	MR SANDPAPER INC
	UNEEDA ENTERPRISES INC
648	EMILY DECHELFIN
664	ALAN M SIMON ATTORNEY
	BARR HARVEY S
	BEACON PARTNERS CPA
	CLARK RORY K ATTORNEY
	HUDSON STRATEGY GROUP LLC
	KIKI ORPORATION LLC
	MADDEN COMMUNICATIONS & MARKETING
675	E G A RAMAPO U F S D
700	LECROY CORP DE
702	76 E ECKERSON ROAD CORP
	COLLISHAW & COLLISHAW INC
	DEAN CUSTOM AWNINGS
	DEAN CUSTOM AWNINGS SALES & SERVICE
710	DENNIS KOHN
	PLUS STATIONERY INC
	PLUS SUPPLY INTERNATIONAL INC
720	CHARLES COLLISHAW
747	ALPHA MUSIC INC
	BETTY LEFER
	CHOICEPOINT COMMERCIAL
	CHOICEPOINT COMMERCIAL SPECIALISTS
	DAVID GOLDSTEIN
	DICHIARO MICHAEL A
	EAGLE REGALIA CO INC

CHESTNUT RIDGE RD 2008 (Cont'd)

747 EBERLE GEOFFREY D
FAUBERT L & E & CO
FEIN SUCH KAHN & SHEPARD PC
HOLISTIC HEALING CENTER
KANTROWITZ GOLDHAMER & GRAIFMAN PC
KGG LAW
KING AGENCY INC
LONGMAN HOWARD LAW OFFICES
LUBITZ ROBERT A
MAHONEY ASSET MGMT
MASTERS COVERAGE CORP
MICHAEL DICHIARO
NATIONAL ENVIRONMENTAL COVERAGE CORP
PAUL AURAND CHT
RAJAN PATEL
REGENCY HOSPITALITY
ROBERT LUBITZ
SHEPPARD FEIN
STEVEN B ROTHSCHILD PC
SYLVIAS SECRET VITAMIN & NUTRITIONA

Target Street	Cross Street	Source
✓	-	Cole Information Services

CHESTNUT RIDGE RD 2003

500	CIS COMPUTER INFRMTN SYSTM
	DUTCHESS BUILDING RENOVATIONS
	RICHARD O BURNS
501	ALAN J STRAUS PC
	BANK OF NEW YORK
	FIRE DISTS OF NY MUTUAL INSRNC CO
	FIRE DSTRCTSF NEW YORK MTL INS
	GOLDSTEIN KARLEWICZ & GLDSTN
	VOLUNTEER FIREMANS MTL LIFE
520	A DYKSTRA FLORIST
	OCCUPANT UNKNOWN
525	JIM SMITH CHEVROLET INC
	OCCUPANT UNKNOWN
540	OCCUPANT UNKNOWN
575	JIM SMITH BODY SHOP
584	AMERICAN POLYCHEMICAL MFG
	DALCO INDUSTRIES LIMITED
	OCCUPANT UNKNOWN
	US POLYCHEMICAL CORP
593	OCCUPANT UNKNOWN
600	ARJAN ENTERPRISES INC
	BALLOON ARTISTRY
	DECENTS CORP
	ICE ART
	ITALGI USA
	OCCUPANT UNKNOWN
	ZYLON CORP
601	COMMUNICATION MRKTNG & CNSLTNG
	OCCUPANT UNKNOWN
610	OCCUPANT UNKNOWN
	SCHURR & BURNS
616	AVRILE JORDAN
628	PATRICK CONNOLY
	RESTO CORP
	W & P OF ORANGE COUNTY LLC
640	OCCUPANT UNKNOWN
648	EMILY DECHELFIN
664	BARR & HAAS LLP
	BARR & ROSEBAUM LLP
	BIEBER BRUCE W ATTY
	CARPENTER PAUL D
	FORMAN HOLT & ELIADES
	JOHN E OLIVA
	NOWICKI MICHAEL T ATTY
	POST CRAIG A
	RESNICK P DEUTSCH
	SELMAN & FREY
681	CNSLDTD GROUP PRPRTY MNGMNT
	EDWIN GOULD ACADEMY
700	LE CROY CORP

CHESTNUT RIDGE RD 2003 (Cont'd)

700	LECROY CORP
710	CROWN MILLWORK CORP
	LEON KOHN
	MILLENNIUM 2 INTERNATIONAL
	PLUS SUPPLY INTERNATIONAL
747	AA ESCROW SETTLEMENT CORP
	ABBOT FLAG CO
	ADAMS & ASSOCS PC
	AMERICAN EX TRAVEL RELTD SRVC
	BERTHA GERSHMAN
	COMMUNITY HEALTH AIDE SERVICES
	COPSTAT SECURITY
	DAVID I GOLDSTEIN ESQ
	EAGLE REGALIA CO
	ELITE REMODELING CORP
	ESQUIRE LAND SERVICES INC
	EVERGREEN FUNDING CORP
	FEIN SUCH KAHN & SHEPPARD PC
	GARY S GRAIFMAN
	GEOFFREY D EBERLE
	GROUP REGENCY INC
	HOLISTIC HEALING CTR
	JOHN RITCHIE CO
	KANTROWITZ GLDHMR & GRFMN PC
	KOPLEN MICHAEL A ATTY
	NATIONAL ENVIRONMENTAL CVRG CORP
	NATIONAL ENVMTL COVERAGE
	NORBERT RAINFORD MD PC
	PAUL AURAND
	PRODUCTION MUSIC LIBRARY ASSOC
	REGENCY HOSPITALITY
	RICHARD STERN
	ROBERT A LUBITZ
	ROBERT REDA
	ROTHSCHILD STEVEN ATTY
	SKY ABSTRACT CORP
	TRF MUSIC INC
	WELDLER ASSOCS CPAS PC

Target Street	Cross Street	Source
✓	-	Cole Information Services

CHESTNUT RIDGE RD 1999

500	ACADEMY ORTHOTICS & PROSTHETICS ASSOCIATES INCORPORATED CORP
	C I S COMPUTER INFORMATION SYSTEMS
	COMPUTER INFORMATION SYSTEMS
	DUTCHESS BUILDING RENOVATIONS
	LITTMAN & MILLER ATTORNEYS
	REESE HARRY J
	RICHARD BURNS
501	BANK OF NEW YORK ROCKLAND DIVISION THE
	FIRE DISTS OF NY MUTUAL INSURANCE COMPANY INCORPORATED
	GOLDSTEIN KARLEWICZ & GOLDSTEIN CPA'S
	STRAUS ALAN J P C ATTORNEY
	WINSTON BARRET ASSOCIATES INCORPORATED
518	ROCKLAND FLORAL WHOLESALERS INCORPORATED
520	A DYKSTRA FLRST
	DYKSTRA A FLORIST
540	BUCKEY DAN FORD INCORPORATED
	DAN BUCKEY FORD INCORPORATED
575	JIM SMITH BODY SHOP
584	US POLYCHEMICAL CORPORATION
600	BALLOON ARTISTRY
	CLOCK WISE CLOCK REPR
	ICE ART
	PIANO & CLOCK SHOP THE
601	COMMUNICATION MARKETING & CONSULTING LIMITED
	VIDEO COMPONENTS
610	BURNS RICHARD OWEN ATTORNEY
	SCHURR ALISSA RAINES ATTORNEY
628	ALL AMERICAN BOYS MOVING INCORPORATED
640	UNEEDA ENTERPRISES INCORPORATED
664	BARR & ROSENBAUM
	BARR & ROSENBAUM LLP ATTORNEYS
	BARR HARVEY S ATTORNEY
	DECAPRIO RONALD VINCENT ATTORNEY
	HAAS ELIZABETH A ATTORNEY
	KANTOR ROBIN J ATTORNEY
	KRAUSHAAR DANIEL N
	POST CRAIG A
	ROSENBAUM ARTHUR R
	ROSENBAUM ARTHUR R ATTORNEY
	SELMAN & FREY ATTORNEYS
	WEISBERG DANIEL M ATTORNEY
681	EDWIN GOULD ACADEMY
700	LECROY CORPORATION
	OCCUPANT UNKNOWN
702	ROCKLAND COUNTY SHIELDS INCORPORATED
710	WILTON CATERERS INCORPORATED
747	ABBOT FLAG COMPANY
	ALPHA MUSIC INCORPORATED
	AURAND PAUL CHT
	BARRY KANTROWITZ

CHESTNUT RIDGE RD 1999 (Cont'd)

747	BEKERMUS RON MD
	CHIROPRACTIC TAPE CENTER
	COMMUNITY HEALTH AIDE SVCES INCORPORATED
	CORNET INCORPORATED
	DICHIARO MICHAEL A ATTORNEY
	EAGLE REGALIA COMPANY INCORPORATED
	EBERLE GEOFFREY D ATTORNEY
	FAUBERT L & E & COMPANY
	FEIN SUCH KAHN & SHEPPARD PC
	GOLDHAMER PAUL B ATTORNEY
	GOLDSTEIN DAVID I ATTORNEY
	GORDON COHEN BARBARA DO
	HOWARD T LONGMAN ATTORNEY
	INSURANCE RESOURCE GROUP
	JAFFE LINDA CSW
	JOHN RITCHIE COMPANY
	KANTROWITZ WALTER L ATTORNEY
	KOPLEN MICHAEL A ATTORNEY
	LANDI ERNEST F CHIRPRCTR
	LEFER BETTY PHD
	LEVINE ELEAZER PE
	LEVY EDWIN M ATTORNEY
	LUBITZ ROBERT A ATTORNEY
	NATIONAL ENVIRONMENTAL COVERAGE CORPORATION
	RAINFORD NORBERT W MD FACC
	REDA ROBERT ATTORNEY
	ROCKLAND FOOT SPECIALISTS
	ROCKLAND HOUSING ACTION COALITION INCORPORATED
	ROSEN FRANK ASSOCIATES INCORPORATED
	ROSS WILLIAM CFP
	ROTHSCHILD STEVEN ATTORNEY
	SHAW CHESTER ATTORNEY
	SIEMENS ASSOCIATES
	STERN RICHARD A CPA
	T R F MUSIC INCORPORATED
	UNION STATE BANK
	WELDLER ASSOCIATES CPAS PC

Target Street	Cross Street	Source
✓	-	Cole Information Services

CHESTNUT RIDGE RD 1995

500	DUTCHESS BLDG RENOVATIONS
501	BELLEROSE CREDIT CORP
	HUDSON VALLEY POLITICAL ACTION COMMITTEE
	STRAUS, ALAN J
	STRAUS, ALAN J P C
	WINSTON BARRET ASSOCIATES INC, REAL ESTATE
575	JIM SMITH BODY SHOP
	JIM SMITH CHEVROLET AUTO BODY
600	BALLOON ARTISTRY
601	COMMUNICATION MARKETING & CONSULTING LTD-FAX LINE
610	BURNS, RICHARD OWEN, ATTY
	SCHURR & BURNS PC
	SCHURR, MICHAEL H, ATTY
628	ALL AMERICAN BOYS MOVING INC
640	UNEEDA ENTERPRISES INC
664	BARR & ROSENBAUM, ATTYS
	BARR, HARVEY S, ATTY
	HAAS, ELIZABETH A, ATTY
	HASIN, DAVID V, ATTY
	KANTOR, ROBIN J, ATTY
	KRAUSHAAR, DANIEL N
	POST, CRAIG A
	ROSENBAUM, ANDREW H
	ROSENBAUM, ARTHUR R
	ROSMARIN, SAM, ATTY
	SPICKLER, BETH E, ATTY
	TABAKMAN, RACHEL I, ATTY
	ZLOTOGURA, MINDY R, ATTY
681	CRYSTAL RUN ENVIRONMENTAL EDUCATION CENTER
690	MC DONALDS
700	POLANCO HILDA, CPA
747	ALPHA MUSIC INC, PBRS
	BERMEX, INC
	CHIROPRACTIC TAPE CENTER
	CONRAD, LYNN J, ATTY
	JOHN RITCHIE CO
	KOPLEN MICHAEL A, ATTY
	LANDI, ERNEST F, CHIRPRCTR
	LIPOFF, LAWRENCE M CPA PC
	PROPERTY CONSULTANTS OF ROCKLAND COUNTY
	RAINFORD, NORBERT W, MD FACC
	ROCKFORD INDUSTRIES INC
	ROSEN FRANK ASSOCIATES INC
	ROTHSCHILD, STEVEN, ATTY
	SHAW, CHESTER, ATTY
	STERN, RICHARD A, CPA
	TRF MUSIC INC
	UNION STATE BANK-CHESTNUT RIDGE OFC
	WELDER ASSOCS CPAS PC

CHESTNUT RIDGE RD 1992

601	COMMUNICATION MARKETING & CONSULTING LTD, FAX
610	SCHURR & BURNS PC
	SCHURR, MICHAEL H, ATTY
640	UNEEDA ENTERPRISES INC
664	BARR & ROSENBAUM, ATTYS
	BARR, HARVEY S, ATTY
	FAERBER, JOSEPH, ATTY
	HAAS, ELIZABETH A, ATTY
	LEWIS, JEFFERY S
	OLIVIA, JOHN E
	POST, CRAIG A
	ROSENBAUM, ARTHUR R
681	CALHOUN, CLAUDIA
	DOMINIQUE, MYRTHOU
747	ABBOT FLAG CO
	CHIROPRACTIC TAPE CENTER
	COASTAL SALES ASSOCS
	GRAIFMAN, GARY, ATTY
	J & D ULTRACARE CORP
	JOHN RITCHIE CO
	KANROWITZ, BARRY S, ATTY
	KATZ EDWARD, ATTY
	KATZ, S EDWARD
	LANDI, ERNEST F, CHIRPRCTR
	PROPERTY CONSULTANTS OF ROCKLAND COUNTY
	ROCKFORD INDUSTRIES INC
	ROSEN FRANK ASSOCIATES INC
	ROTHSCHILD, STEVEN, ATTY
	SIMPACT ASSOC
	SOUTHSIDE RESTRNT
	WELDER ASSOCS CPA'S PC

Target Street	Cross Street	Source
✓	-	City's City Directory

CHESTNUT RIDGE RD 1989

CHESTNUT PATH (Suffern NY) 10901

47 Dreher R 357-1817 86
0-BUS 1-RES 0-NEW

CHESTNUT RIDGE RD (Spring Valley NY) 10977

See also 500-1099 S Main (Spring Valley NY)

500 ★Burns International Security Services .... □356-5077 91
520 ★Dykstra A Florist 356-0112 89
540 ★Dan Buckey Ford Inc Body Shop 352-3033 78
540 ★Dan Buckey Ford Inc Parts Dept 352-3702 87
540 ★Dan Buckey Ford Inc Sales Office 352-3033 89
540 ★Dan Buckey Ford Inc Service Dept 352-3704 87
601 ★Communication Mrktng & Consulting Ltd tax 352-8181 88
608 ★O'Connell Terrance attorney .... +425-2428 91
610 ★Schurr & Burns PC .... □356-0024 91
610 ★Shurr Michael H atty .... □356-0024 91
640 ★Uneeda Enterprises 426-2800 89
700 ★Lecroy Corp 425-2000 90
741 ★Goldhamer Paul B atty 356-2570 90
741 ★Property Consultants Of Rockland County 356-2570 90
747 ★Adelson Law Ofcs .... +352-5400 91
747 ★Airflow 2000-Rainbow ...... +426-2830 91
747 ★Boardwalk Financial Services Inc .... +425-3600 91
747 ★Chiropractic Tape Center .... □352-5664 91
747 ★Coastal Sales Assocs ...... □425-5000 91
747 ★Fresh Ideas Software 352-5521 89
747 ★Graifman Gary S .... +356-2570 91
747 ★KMR Systems Corp .... +425-7375 91
747 ★Kantrowitz & Goldhamer PC attys ..... □356-2570 91
747 ★Kantrowitz Walter L attorney 356-2570 90
747 ★Landi Ernest F chiro .... □356-4848 91
747 ★Mesnick Properties .... +352-8500 91
747 ★Northeast Fin Svcs .... +425-0091 91
747 ★Property Consultants Of Rockland County 352-9199 90
747 ★RDP Video Productions Inc .... +426-1014 91
747 ★Reel Constrn Corp .... +356-4701 91
747 ★Rockford Industries .... +425-8933 91
747 ★Rockland Housing Action Coalition Inc ..... +352-3819 91
747 ★Rothchild Steven atty 426-3117 90
747 ★Siemens Assoc .... +352-6099 91
747 ★Southside Restrnt .... +352-9109 91
747 ★Stern Richard A CPA ...... □425-9292 91
747 ★Systech Corp .... +426-0922 91
747 ★Ultracare Nursing Registry .... □425-0100 91
747 ★Weleda Inc wholesale & accounting ofc .... □356-4134 91
750 ★Intergraphic Technlgy 352-8000 76
787 ★B & B Pool & Spa Cntr 356-0778 89
806 Roffino Peter .... +578-5611 91

811 THE BARN SHOPPING CENTER
(See also 811 S Main)

★Balloon Artistry 352-2828 88
★East Coast Martial Arts .... +425-0416 91
★Naughty Nails 356-0360 89
★Ollech B L DMD 352-7545 90
★Party Post 352-2828 88
★Plasker Jordan E chiropractor 356-9355 90

584 Chestnut Ridge Rd

584 Chestnut Ridge Rd

Spring Valley, NY 10977

Inquiry Number: 5027038.3

August 18, 2017

Certified Sanborn® Map Report

EDR®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

08/18/17

Site Name:	Client Name:
584 Chestnut Ridge Rd	LCS, Inc
584 Chestnut Ridge Rd	40 La Riviere Dr Ste 100
Spring Valley, NY 10977	Buffalo, NY 14202
EDR Inquiry # 5027038.3	Contact: Ashley Stegmaier

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by LCS, Inc were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

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Certification # B2AA-4DD8-9681

PO # 17N6017

Project 17N6017

UNMAPPED PROPERTY

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Sanborn® Library search results

Certification #: B2AA-4DD8-9681

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- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

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9.10 HYDROLOGIC/HYDROGEOLOGIC INFORMATION

LCS, INC.
QUAD/WETLANDS/SOILS/GEOLOGY

PROJECT #: 18N10530.39
SITE ADDRESS: 584 Chestnut Ridge Rd
OFFICE REVIEWED AT:
DATE REVIEWED:

USGS QUAD: Park Ridge ELEV.: ~440 DATE: 1998
Anticipated groundwater flow: E
Nearest water body: Pine Brook Dist.: 160ft Dir.: W

www.dec.ny.gov/imsmaps/ERM/viewer.htm
NYSDEC: # OF N/A DATE: N/A
(indicate if none within 2 miles)
NEAREAST WETLAND: MI: 0.0 NSEW CLASS PR-2

USFWS: www.fws.gov/wetlands/Data/Mapper.html DATE: N/A
(indicate if none within 2 miles)
NEAREST WETLAND: MI: 0.03 NSEW CLASS PFO1E

GEOLOGY: SHEET: http://www.nysm.nysed.gov/gis/ DATE: N/A

CLASS: Upper Triassic

SUBCLASS: Brunswick Formation

SURFICIAL GEOLOGY: SHEET: http://www.nysm.nysed.gov/gis/ DATE: N/A

CLASS: till

SOILS: SOIL SURVEY (CO.): http://websoilsurvey.nrcs.usda.gov SHEET #: N/A DATE: N/A

CLASS: Ca - Carlisle Muck	HYDRIC yes
CLASS: WeB - Wethersfield gravelly silt loam	HYDRIC no
CLASS:	HYDRIC
CLASS:	HYDRIC
CLASS:	HYDRIC
CLASS:	HYDRIC

RADON: COUNTY NAME: Rockland VALUE: 2.55
TOWN NAME: Ramapo VALUE: 2.52

DRAINAGE BASIN: Major: Passaic-Newark Minor: Ramapo River

LEAD IN DRINKING WATER: Water authority name: SUEZ
90th percentile: 2.8 ppb
Year of testing: 2017

Rev. Date 6-2014

9.11 USER PROVIDED INFORMATION

LCS was informed that the User maintains no specialized knowledge of environmental concerns at the subject property. As such, the User could not provide useful answers to the ASTM 1527-13 Phase I Environmental Site Assessment User Questionnaire. [As required under 40 CFR 312, only those seeking liability protection under CERCLA must provide the environmental professional certain information and documentation.]

LCS, INC.
PREVIOUS OWNER INFORMATION
(FOR USE WHEN CONDUCTING AN ASTM 1527-05 PHASE I)

PROJECT#: 18N105030.39

PREVIOUS OWNERS IDENTIFIED (circle): **NO** **YES**

Previous Owner/Occupant/Operator	Source of Information (circle)
See attached	Municipal records / site contact / previous study / other

****

ACCORDING TO THE STANDARD, WE NEED TO ATTEMPT TO CONTACT PREVIOUS OWNERS, DOCUMENT ATTEMPTS BELOW:

DATE OF INTERVIEW: ________PERSON INTERVIEWED:________________

CIRCLE ONE: past owner past occupant past operator

Historical uses of the subject property (including **dates**): ____________________

____

Environmental concerns identified: ____________________

____

____

9.12 LIMITATIONS OF THE REPORT

This **ENVIRONMENTAL SITE ASSESSMENT PHASE I, IN ACCORDANCE WITH ASTM E1527-13,** is based on the SCOPE OF SERVICES contained within this report. This report is not to be considered as an environmental audit of the subject property or a complete environmental investigation of the subject property.

We have prepared this report for the exclusive use of our client. LCS' liability is limited to use by this client for a period of six months. Use by any other party is strictly prohibited except by authorization in writing from this consultant. LCS has no liability for others' use of this report.

The purpose of this assessment is not to proclaim a property is devoid of environmental impact but rather to identify recognized environmental conditions as defined in Section 2.0.

To the best of LCS' knowledge, the information contained in this report is true and accurate. LCS' personnel exercised due diligence when gathering the information and used practices common to environmental professionals engaged in similar environmental investigations. LCS makes no guarantees regarding the accuracy of information gained from other sources.

This assessment (as defined by ASTM) is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with the subject property. No sampling or analyses of materials, including soil, water, air, building materials, etc., were obtained as part of this assessment unless otherwise noted. LCS neither accepts, assumes nor warrants responsibility for the nature or toxicity of such substances. LCS was not requested to complete surveys for mold, asbestos, or lead-based paint; as such, materials identified through the cursory inspection should be considered a partial list of materials which may exist.

This practice does not address requirements of any state or local laws or of any federal laws other than the all appropriate inquiry provisions. Further, this report does not intend to address all of the safety concerns, if any, associated with the subject property. Environmental concerns, which are beyond the scope of a Phase I ESA as defined by ASTM include the following: ACMs, LBP, radon, and lead in drinking water. These issues may affect environmental risk at the subject property and may warrant discussion and/or assessment; however, are considered non-scope issues.

LCS neither implies, warrants, guarantees nor accepts liability relative to the environmental conditions at the subject property regarding the following:

1) Site specific practices and/or disposal methods of the past or future owners.
2) The presence of lead-containing materials, asbestos, radon and/or environmental impact of such substances on the subject property or building(s) and structure(s) on the subject property other than those observed during the site reconnaissance and documented within the report.
3) Adjacent property owners, their environmental practices and/or impact of such properties and practices on the subject property those identified within the database reports and/or observed by those performing the site inspection of the subject property.
4) Unreported spills.
5) Practices, waste disposal, environmental concerns and/or modifications to waste site indexes after the date on this report.
6) Groundwater or soil quality on the subject property.
7) Accuracy or completeness of information supplied to LCS by others.
8) Environmental conditions in areas that were not accessible or not otherwise shown to LCS (locked rooms, behind walls or ceilings, etc.).
9) Accuracy of previous studies provided to LCS.

This report is also subject to any and all limitations defined within ASTM E1527-13. This includes, but is not limited to, the limitation that this report is intended to identify environmental conditions at a specific time and the report is only valid for a period of six months from the date of issuance.

9.12 LIMITATIONS OF THE REPORT (continued)

The principles defined within ASTM E1527-13, and followed within this study, include the following:

1) This practice is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with a property.
2) All appropriate inquiry does not mean an exhaustive assessment of a clean property. One of the purposes of this practice is to identify a balance between limiting costs/time and the reduction of uncertainty about unknown conditions.
3) The level of inquiry is variable and depends on the type of property, risk level of the User and information developed in the course of the inquiry.
4) Subsequent environmental assessments should not be used as standards to evaluate the appropriateness of prior inquiries based on hindsight, new information or new techniques.

LCS was not requested to complete surveys for mold, ACMs, or LBP. As such, materials identified through the cursory inspection should be considered a partial list of materials which may exist. It should be understood that asbestos can be found in several types of building materials regardless of the age of the subject structure(s). In addition, the cursory lead-based paint review did not include identification of suspect lead-based paint dust associated with windows, doors, etc. In any event, caution is recommended in the event building materials are to be disturbed; state and federal regulations may require a survey and/or notifications prior to disturbance, as well as proper handling and disposal of confirmed ACMs and LBP. Worker safety should be considered during any future site renovations or demolition. Furthermore, mold can grow in hidden areas not observed during LCS' site reconnaissance. Areas that experience water damage and areas of high humidity are of particular concern. Caution should be taken following any future water releases within the subject structure(s). Such water releases should be addressed immediately to help prevent the formation of the mold spores. Visual evidence of mold should be addressed immediately. LCS recommends that professional remediation contractors be hired to properly address mold issues.

This report was prepared using data, information, and references available from federal, state, and local governmental agencies and information supplied by knowledgeable parties, relying in large part on owner or occupant interviews. LCS neither assumes nor accepts any liability for the completeness or accuracy of information gained from these sources or for any misstatements or misrepresentation of facts from parties interviewed during this process.

Observations made at the time of the site reconnaissance are contained herein. LCS cannot be held responsible for omissions as a result of any changes made to the subject property after the date of the site investigation.

Discussions regarding adjacent and/or nearby properties is based on information supplied to LCS and LCS' observations of nearby properties at the time of the site reconnaissance. Any property can be affected by various sources of point and non-point source pollution. The number of reported spills and complaints in the vicinity of the subject property may be an indicator of point source pollution in the area. Non-point sources are common in rural areas (such as runoff from agricultural fields). Further study would be required to positively confirm whether the subject property has been impacted by nearby properties.

Areas of the subject property where access was limited, obstructed, or denied are mentioned herein and LCS renders no opinion as to the presence or absence of potential concerns, hazardous materials, or potential environmental liability due to these limitations. According to ASTM, asphalt pavement is considered a limitation.

9.13 USER RESPONSIBILITIES

The following information is the responsibility of the user and not of the environmental professional. This information may be provided by the user to the environmental professional for use in the final opinion of the all appropriate inquiry. If the information is not provided by the user, the environmental professional's ability to render such an opinion may be hindered and identified as a data gap.

- Searches for environmental cleanup liens and activity and use limitations against the subject property that are filed or recorded under any federal, tribal, state or local law, as required by 40 CFR section 312.25 and 312.26.
- Assessments of any specialized knowledge or experience on the part of the landowner, as required by 40 CFR section 312.28.
- An assessment of the relationship of the purchase price to the fair market value of the subject property, if the property was not contaminated, as required by 40 CFR 312.29.
- An assessment of commonly known or reasonably ascertainable information about the subject property, as required by 40 CFR section 312.30.
- The degree of obviousness of the presence or likely presence of releases or threatened releases at the property, and the ability to detect the releases by appropriate investigations, as required by 40 CFR section 312.31.

In addition, there are other requirements within 40 CFR 312 of the user post-purchase regarding maintaining use limitations, providing access for studies from off-site sources and other matters. The user should review these requirements, which depend on the specific liability protection that may apply to the use.

9.14 USER PROTECTIONS

Persons claiming the liability protections under CERCLA must meet the statutory requirements of one of the following landowner liability protections. [It should be noted that the user must also satisfy certain continuing obligations outside the scope of this Phase I Environmental Assessment, as required by CERCLA].

- The innocent landowner defense pursuant to CERCLA Sections 9601(35) and 9607(b)(3).
- The bona fide prospective purchaser liability protection pursuant to CERCLA Sections 101(40) and 9607(r).
- The contiguous property owner liability protection pursuant to CERCLA Section 9607(q).

10.0 PERSONNEL QUALIFICATIONS

Name:	**Thomas Duffy**
Title:	Chief Executive Officer
Years with firm:	Twenty
Education:	Bachelors of Arts, St. Bonaventure University, Olean, New York

Certifications:

Lead Inspector
New York State Department of Labor Asbestos Project Monitor, Inspector and Air Sampling Technician
Steel Structures Painting Council (SSPC) QP-1 Certified for removal of lead paint on complex steel structures
ASTM Conference on Environmental Site Assessments for Property Transfer

Experience:

Mr. Duffy is currently the Chief Executive Officer of operations and is responsible for the oversight of all systems and operations, including research, development and implementation of such systems company-wide, as well as marketing and client retention in the Albany/Hudson Valley/NYC regions. Mr. Duffy's previous positions within LCS include Buffalo General Manager, Syracuse General Manager and Regional Manager for Albany, Hudson Valley and New York City.

Mr. Duffy is a graduate of St. Bonaventure University with a Bachelors of Arts in Communications. Over the past eight years, Mr. Duffy has been involved in all aspects of environmental field projects throughout New York State.

He has provided services to clients including the closure of gasoline stations, closure of past industrial dumping grounds, Sewer System Evaluation Surveys, demolition and remediation projects and soil and water sampling.

While with LCS, Mr. Duffy has conducted nearly 800 Phase I and Transaction Screen Environmental Site Assessments, and has participated as a team leader on asbestos inspections and lead-based paint surveys. In addition, he is knowledgeable in environmental laws.

Name:	**Benjamin F. Bremer**
Title:	President
Years with Firm:	Nineteen
Education:	Bachelors of Science degree in Environmental Studies, State University of New York at Buffalo, Buffalo, New York
Certifications:	Environmental Professional ASTM Conference on Environmental Site Assessments for Property Transfer HAZWOPER Risk Management Association Board Member

Experience:

Mr. Bremer is currently President of LCS. As President, duties include the maintenance and development of both new and existing clients nationwide, as well as oversight of the overall operations of LCS. Mr. Bremer is also highly involved in developing new products and programs.

While with LCS, Mr. Bremer has conducted or been involved in thousands of Environmental Site Assessments, valuation and construction projects. This includes site reconnaissance, data review and report preparation. Mr. Bremer has completed field studies nationwide. The field investigations Mr. Bremer has been involved in include small gasoline stations to large scale industrial facilities. Mr. Bremer specializes in finding creative and practical solutions when risk is identified.

While an Environmental Scientist with LCS, Mr. Bremer's has also been involved in hundreds of intrusive investigations and remediation projects. Such investigations have included gasoline stations, dry cleaning facilities, motor repair facilities and industrial facilities. Mr. Bremer's hands-on experience has included soil sampling, groundwater monitoring well preparation and sampling, environmental drilling, underground storage tank removals, remediation projects, project management, data review and report preparation.

While studying at SUNY at Buffalo, Mr. Bremer interned at Wastestream Technology, Inc. where he was involved in testing soil and water extractions for potential pollutants. His experience in the lab primarily dealt with metal extractions, while also being introduced to volatile organic compounds, semi-volatile organic compounds, pesticides and herbicides analysis.

Name:	**Margaret Mary Battin**
Title:	Chief Operating Officer
Years with Firm:	Sixteen
Education:	Bachelor of Science Degree in Biology, Cornell University, Ithaca, New York
Certifications:	Environmental Professional Instructor, Environmental Health and Safety Issues, BOMI International ASTM Conference on Environmental Site Assessments for Property Transfer Underground Storage Tank Removal Technician HAZWOPER

Experience:

Ms. Battin is currently the Chief Operating Officer of LCS, Inc. Her current role involves overall business management, business development, supervision of Regional General Managers and Sr. Vice Presidents, and assessment of various environmental due diligence requirements and environmental risk for various financial institutions. Ms. Battin's previous positions within LCS include General Manager of the Mid- Atlantic Region and Senior Vice President of Operations.

Ms. Battin has over twenty-six years of experience in various aspects of the environmental field including environmental management, compliance, research and site investigation. Ms. Battin has acted as a liaison between property owners, and governmental and financial agencies. She was previously a partner and President of an environmental consulting firm in the Chesapeake Bay Region.

Ms. Battin has conducted and reviewed over 7000 Phase I and Transaction Screen Environmental Site Assessments, environmental compliance and research projects, as well as conducted and managed numerous Phase II and Phase III projects including hydrogeologic investigations, storage tank management and underground storage tank (UST) removal and closure projects, Resource Conservation and Recovery Act (RCRA) monitoring, assessment and reporting, groundwater monitoring well installation and monitoring, landfill delineation projects, and site characterization and remedial design projects.

Name:	**David Crandall**
Title:	Vice President, Environmental and Due Diligence Services
Years with Firm:	Eight
Total years:	13
Years with Education:	Bachelor of Science, Environmental Studies, Concentration in Policy and Management, Cum Laude, State University of New York College of Environmental Science and Forestry, Syracuse, New York
Certifications:	ASTM Conference on Environmental Site Assessments for Property Transfer OSHA HAZWOPER 40-Hour Course/8-Hour Refresher OSHA 8-Hour HAZWOPER Supervisor Environmental Professional New York State Professional Geologist

Experience:

Mr. Crandall is currently Vice President, Environmental and Due Diligence Services at LCS. He is responsible for the review and issuance of Phase I, Transaction Screen, and EA Quick reports and Phase II Investigation, Remedial Action, and Brownfield/Voluntary Cleanup Program scoping, costing, performance, and reporting. As part of his role in the review of LCS reports, Mr. Crandall provides senior review services for previous studies and environmental reports completed by others in order to verify whether such previous reports have addressed on-site concerns. In addition, Mr. Crandall performs various functions in association with the review of environmental reports prepared by other environmental firms. This includes the evaluation of previous Phase I reports and subsurface investigation and remediation reports, with a focus on the applicability of such work in accordance with clients' needs. To date, Mr. Crandall has been involved in several hundred such reviews, ranging from undeveloped land and small commercial properties to large-scale industrial sites of varying complexity and levels of completed investigation and remediation work.

Mr. Crandall has over 13 years of experience in environmental consulting. During his time with LCS, he has been involved in thousands of EA Quicks, Transaction Screens, and Phase I Environmental Site Assessments. Mr. Crandall has also been involved in numerous Phase II Investigations and remedial projects including soil excavations, *in-situ* remediation activities, and UST and in-ground hydraulic lift closures.

In five-plus years with an international environmental consulting firm, Mr. Crandall was responsible for Remedial Investigations, Feasibility Studies, and Remedial Actions for Federal, State, and commercial clients. He was responsible for developing scopes of work and costing for projects, performing soil and groundwater sampling, groundwater monitoring well installations, soil vapor and vapor intrusion assessments, and for the preparation of summary reports along with developing recommendations for future work. Mr. Crandall was also responsible for performing contractor oversight during remedial actions and developing post remedial action Site Management Plans.

While studying at SUNY-ESF, Mr. Crandall focused on environmental law, policy, and sciences, developing a strong wealth of knowledge in the environmental field.

Name:	**Ryan Ward**
Title:	Regional Manager- Tri-State Region
Years with Firm:	Six
Education:	Bachelors of Arts, Environmental Studies, State University of New York at Stony Brook, Stony Brook, New York
Certifications:	Environmental Professional

Experience:

Mr. Ward is a Regional Manager serving the LCS Tri-State Region. Mr. Ward's responsibilities include performance of environmental site assessments for EAQuick, Transaction Screens, Phase I reports, including site surveillance, data collection and data review. Additional responsibilities include business management and development, marketing, project budgeting, management of environmental analysts. Mr. Ward also performs construction-related services including, draw inspections, Physical Condition Reports and Property Inspection Reports.

While with LCS, Mr. Ward has conducted over 1,200 Transaction Screen and Phase I Environmental Site Assessments as well as conducted and managed numerous Phase II subsurface studies, including soil and groundwater investigations, data collection and report preparation.

Prior to joining LCS, Mr. Ward studied at Stony Brook University where his studies concentrated on the marine environment. During his time there, Mr. Ward became proficient in the proper techniques for sampling, surveying and analyzing potential environmental issues.

Name:	**Elizabeth Bruen**
Title:	Environmental Analyst and Construction Inspector – NYC/Hudson Valley
Years with Firm:	Two
Education:	Bachelors of Science/ Masters of Science in Environmental Science; Rochester Institute of Technology, Rochester, NY (2015)
Certifications:	40-Hour Hazwoper Training Session (2017)

Experience:

Ms. Bruen is an Environmental Analyst in the New York City region of LCS, including the Hudson Valley, NYC, Connecticut, and northern New Jersey. Her responsibilities include conducting EAQuick, Transaction Screen and Phase I Environmental Assessments, as well as Phase II subsurface investigations. Ms. Bruen is also involved in completing peer reviews of Environmental Site Assessments. In addition, Ms. Bruen performs construction related services including Construction Draw inspections, Property Inspection Reports, and Property Condition Assessments.

While attending RIT, Ms. Bruen was involved in graduate level research on wetland mitigation and creation, and has experience with wetland delineation and restoration as a result. This research included collecting and analyzing soil and water samples, habitat assessments, and other methods of characterizing wetlands. She also interned with Monroe County Stormwater Coalition, and worked as an extraction technician at ALS Environmental.

Name:	**Lauren Gilday**
Title:	Environmental Analyst
Years with Firm:	One
Education:	Bachelors of Science degree in Environmental Geoscience, State University of New York at Buffalo, New York.
Experience:	Currently, Ms. Gilday is an Environmental Analyst working in the corporate office of LCS, primarily assigned as technical report preparation/writer of EA Quick, Transaction Screen, and Phase I Environmental Site Assessments. While studying at SUNY University at Buffalo, Ms. Gilday was involved with various report preparations including an assessment of the Cattaraugus Creek Watershed, which involved site visits, research, and a presentation to address erosion problems in the area to local stakeholders. Ms. Gilday also worked on a comparative data analysis on the effects of historic hurricanes on coastline erosion.

11.0 REFERENCES

EDR, The EDR-Radius Map Report, Inquiry #5529703.2s. Report dated January 9, 2019.

EDR, Certified Sanborn Map Report, Inquiry #5027038.3. Report dated August 18, 2017.

EDR, City Directory Image Report Inquiry #5027038.5. Report dated August 21, 2017.

www.google.com/earth/

www.real-info.com

http://www.sca-corp.com

www.historicaerials.com

http://www.fws.gov/wetlands/

http://www.health.state.ny.us/environmental/radiological/radon/towns.htm

http://www.nysm.nysed.gov/gis/

www.dec.ny.gov/

http://www.epa.gov/enviro/facts/qmr.html

2013 Rockland County Water Quality Report

12.0 ACRONYMS/ABBREVIATIONS

ACM	Asbestos-Containing Materials
AIRS	Aerometric Information Retrieval System
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
CBS	Chemical Bulk Storage
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CESQG	Conditionally Exempt Small Quantity Generator
CORRACTS	Corrective Action
ECHO	Enforcement and Compliance History Online
EDR	Environmental Data Resources
ERNS	Emergency Response and Notification System
FINDS	Facility Index System
FIS	Facility Information System
FOIA	Freedom of Information Act
FOIL	Freedom of Information Law
FWM	Freshwater Wetlands Map
ICIS	Integrated Compliance Information System
LCS	Lender Consulting Services, Inc.
LQG	Large Quantity Generator
LST	Leaking Storage Tank
LTANK	Leaking Tank
LUST	Leaking Underground Storage Tank
MOSF	Major Oil Storage Facility
MSDS	Material Data Safety Sheets
mVOC	Microbial Volatile Organic Compound
N/A	Not Available, Not Applicable
NFRAP	No Further Remedial Action Planned
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List (“Superfund”)
NRCS	Natural Resource Conservation Service (by County)
NWI	National Wetlands Inventory
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PBS	Petroleum Bulk Storage
PCB	Polychlorinated Biphenyl
PCi/L	Pico Curies per Liter
PEC	Potential Environmental Concern
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
SEMS	Superfund Enterprise Management System
SPDES	State Pollution Discharge Elimination System
SQG	Small Quantity Generator
TSDF	Treatment, Storage and Disposal Facility
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tanks
VCP	Voluntary Cleanup Program

PHASE II ENVIRONMENTAL SITE ASSESSMENT

584 Chestnut Ridge Road
Spring Valley, Rockland County, New York

NYSDEC Spill No. 17-08369

December 29, 2017

DT CONSULTING SERVICES, INC.
1291 Old Post Road
Ulster Park, NY 12487
(845) 658-3484(phone)
dtconsulting@hvc.rr.com

December 29, 2017

Greater Hudson Bank
Attn: Mr. Jonathan Bender
360 Route 17M
Monroe, New York 10950

RE: PHASE II ENVIRONMENTAL SITE ASSESSMENT
US Polychemical Corporation
584 Chestnut Ridge Road
Spring Valley, Rockland County, New York

NYSDEC Spill No. 17-08369

Mr. Bender:

Attached please find the Phase II Environmental Site Assessment (ESA) as generated for the above referenced Site. Based upon the findings of this investigation, a copy of this report will be forwarded to the Rockland County Department of Health (RCDOH) and the New York State Department of Environmental Conservation (NYSDEC) for their review and comment. The necessity for further action is at the discretion of the RCDOH/NYSDEC.

If you should have any questions or require additional information please feel free to contact me at (845) 658-3484. DT Consulting Services, Inc. (DTCS) thanks you for the opportunity to work with you on this project.

Sincerely,
DT CONSULTING SERVICES, INC.

Deborah J. Thompson
Deborah J. Thompson
Senior Geologist / Project Manager

Cc: RCDOH/NYSDEC Region III

DT CONSULTING SERVICES, INC.

PHASE II ENVIRONMENTAL SITE ASSESSMENT

Pertaining to:

US Polychemical Corporation
584 Chestnut Ridge Road
Spring Valley, Rockland County, New York

Prepared for:

Mr. Jonathan Bender
Greater Hudson Bank
360 Route 17M
Monroe, New York 10950

Prepared by:

Ms. Deborah J. Thompson
Senior Geologist/Project Manager
DT CONSULTING SERVICES, INC.
1291 Old Post Road
Ulster Park, New York 12487

Date: December 29, 2017

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ATTACHMENTS

1.0 INTRODUCTION/SITE INFORMATION

DT Consulting Services, Inc. (DTCS) has been contracted by Greater Hudson Bank to perform a Phase II Environmental Site Assessment (ESA) on the property known as US Polychemical Corporation (PolyChem), 584 Chestnut Ridge Road, Spring Valley, Town of Ramapo, Rockland County, New York (heretofore referenced as the Site or Subject Property). A Site location map and Site (base) plan (Figures 1 & 2) are included for your reference.

The regularly shaped +/- 7.98-acre property is improved with a single story, concrete block commercial structure that was constructed in 1965 with two additions thereafter. According to documentation reviewed, the structure has a gross floor area of approximately 18,870-ft² that includes office space, a warehouse section and operational areas. The PolyChem facility is also improved with asphalt parking areas, concrete walkways and green space. The building has been occupied by PolyChem since its construction in the mid-1960s. Based upon interviews with Site personnel, operations conducted at the facility have included the mixing of solvents to generate general industrial products and cleaning chemicals along with bowling lane care products. According to municipal records dated from 1977, PolyChem indicated that chemicals utilized on-Site included chlorinated solvents, glycol ethers, aromatic solvents, surface active agents and aliphatic napthas. At present, PolyChem is concentrating its production on a line of environmentally friendly technology that is specifically designed as a solvent replacement.

The Site is situated within a moderately developed commercial or mixed use area. Surrounding property uses include commercial facilities to the north and south, residential Sites to the east, and a warehouse to the west. The Subject Property is accessed from Chestnut Ridge Road located to the west. Site topography is generally level and at grade with surrounding roadway. At present the Town of Ramapo provides potable water and sanitary sewer service to the Subject Property and surrounding parcels. Note however, that based on interviews with Site representatives, a production well is present along the northern section of the lot and a historical septic system has been located within the western portion of the Site (see Figure 2 for locations). The production well was never utilized for drinking water, only to service the needs of the manufacturing facility (according to Site representatives). Neither utility has reportedly been utilized in many years.

2.0 SITE BACKGROUND/PREVIOUS ENVIRONMENTAL REPORTING

LCS, Inc. Environmental and Real Estate Consultants (LES) of Buffalo, New York performed a Phase I Environmental Assessment (ESA) on the Subject Property dated September 1, 2017 for Ulster Savings Bank. Based on the findings of LCS's Phase I ESA, the following issues of potential environmental concern and/or recognized environmental conditions (RECs) associated with the Subject Property were identified:

- Potential residual subsurface contamination issues associated with on-Site operations including mixing of solvents to generate general industrial products and cleaning chemicals along with bowling lane care products;
- Historical employment of a floor drains and septic system. The floor drains reportedly discharged to the ground surface prior to being sealed;
- The property was identified as a potential source of odors and poor tasting water in a local waterway in the 1970s; and
- Adjacent properties of potential environmental concern.

.

3.0 PHASE II ESA FIELD ACTIVITIES

The performance of a Phase II ESA was recommended due to the identified RECs. The purpose of the investigation is to provide information on current subsurface conditions at the facility to determine if impacted materials are present (to the extent possible) due to historic Site use.

To complete a Phase II ESA, DTCS recommended that tasks associated with this effort should include performance of a Geophysical Survey (e.g., ground-penetrating radar) and a follow-up Subsurface Sampling Investigation. DTCS was subsequently retained by Greater Hudson Bank to perform a due diligence survey to supply information on subsurface conditions at the facility prior to the potential purchase of the Subject Property. The investigation was concentrated in locations surrounding the warehouse/operational areas, identified floor drain and septic system(s) so as to quantify subsurface conditions within the area(s) of study. To complete this task, DTCS's Scope of Work included:

- Obtained appropriate work permits from the Rockland County Department of Health (RCDOH) to perform the subsurface investigation;

- Contacting Dig Safely New York 811 (UFPO) to obtain subsurface utility mark-outs prior to performing the field sampling investigation;

- Performance of a Geophysical Survey utilizing a magnetometer, void detector and ground penetrating radar (GPR) equipment. The purpose of this survey was to collect information on the construction of the concrete slab and closed floor drain system, identify buried anomalies of potential concern (e.g., out-of-service tanks, production wells and septic systems), and to "clear" proposed soil sampling locations (i.e., identify underground utility infrastructure to ensure services were not impacted/damaged during the installation of soil borings);

- Provide quantitative data on targeted volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and heavy metals if detected within subsurface materials at the facility;

- Provide quantitative data on targeted VOCs within soil gas located beneath the slab of the operational/warehouse portion of the Site structure; and

- Prepare a Phase II ESA report summarizing the findings of the field investigation and/or to address any identified subsurface contamination.

The identified six boring (SB-1 - SB-6) and four sub slab soil gas (SG-1 – SG-4) monitoring locations documented for the Site can be reviewed in Figure 2, attached.

3.1 Geophysical Survey/Private Underground Utility Mark-out

On December 4, 2017 DTCS and Underground Survey Corporation (USC) of Washingtonville, New York performed the Geophysical Survey utilizing a Noggin Ground Penetrating Radar (GPR) Cart system unit, ferromagnetic metal detectors and electro-magnetic/Radio Frequency Pipe/Cable Locators.

DTCS/USC conducted the Geophysical Investigation by scanning accessible portions of the property; concentrating in the areas surrounding the closed floor drains, chemical mixing operations, and suspect septic areas. Upon completing the investigation of known Site artifacts, DTCS/USC cleared the six proposed soil boring and four proposed soil gas sampling locations in preparation of performing the subsurface investigation.

Findings

1. Out of Service Floor Drains

While performing the Phase II ESA, DTCS documented several floor drains throughout the operational and warehouse areas. As noted in previous reports, all of the floor drains had been permanently closed/sealed with concrete; although the closure date is unknown. DTCS/USC were able to trace the floor drain in an easterly direction for a short distance, but due to inventory stored in the work areas a definite discharge location could not be identified.

Geophysical scans performed along the eastern exterior wall of the Site structure revealed the presence of a discharge line originating from the mid-section of the facility, travelling in an easterly direction towards a wooded, undeveloped area (see Figure 2 for location). Additional scans confirmed that the piping traversed into the wooded area, but due to brush and debris additional information regarding this anomaly could not be gathered. A soil boring was cleared along the piping run for Site investigative purposes.

2. Historical Septic System

According to documentation reviewed, the Subject Facility presently employs the municipal sewer system for wastewater disposal, however a septic system was suspected to be utilized on Site. Preceding the Site inspection, DTCS/USC scanned the western parking area to identify the presence of the historic system. With the use of GPR and electro-magnetic/Radio Frequency Pipe/Cable Locators, the lid to the septic system was discovered approximately 1.3 – 1.7' bgs and associated piping at 2.5' bgs. A soil boring location was cleared in the center of the anomaly for Site investigative purposes.

3. Utility Clearance

To obtain quantitative data on subsurface conditions, DTCS and USC scanned and cleared a total of six soil boring locations and four soil gas monitoring points across the Site.

3.2 Soil Sampling Procedures

Prior to initiating the field work, DTCS obtained a permit from the RCDOH to conduct the proposed drilling on-Site. A copy of the permit has been placed in Attachment A for your review.

DTCS mobilized to the Site with Core Down Drilling (drilling services contractor) of Pawling, New York on December 5, 2017 to perform the subsurface investigation. Employing a Geoprobe trac-mounted drill rig, soil samples were collected from six borehole locations continuously from grade to a maximum depth of eight feet below grade surface or bgs (see Figure 2 for sampling locations). Soil borings were shallow in nature due to the detection of the groundwater table at approximately six feet bgs. Each sample was obtained by advancing a forty-eight inch long, two inch outer diameter, stainless hollow spoon sampler equipped with a disposable acetate liner into undisturbed soils. To prevent the potential for cross-contamination, all sampling equipment was decontaminated between each soil boring location.

An on-site DTCS Geologist performed screening and classification immediately following collection of subsurface materials. The screening was conducted using a field calibrated MiniRae Photoionization Detector or PID. As most petroleum products contain VOCs, PID screening can indicate the presence of volatile organics in a soil sample. Additionally, soil samples were screened by visual and olfactory means for staining and/or unusual odors.

3.3 Subsurface Soil Characterization

As detected during this investigation, the lithology of overburden materials encountered at the facility can be characterized as mixed fill (sandy loam), underlain by organics and sand. Refer to Attachment B for soil boring logs which detail subsurface materials encountered during this investigation. While performing this field survey, all soil cores were screened with a PID for VOCs upon removal from the subsurface. This screening was performed by placing the selected soil sample in a Ziploc® style freezer bag, sealing the bag, and after a short pause, yielding stabilized readings with a PID calibrated to 100 parts-per-million (ppm) isobutylene standard. The headspace screening yielded the following positive responses within each soil core on the day of the survey:

Soil Boring	*PID Reading (ppm) Soil Core 0-4' bgs*	*PID Reading (ppm) Soil Core 4-8' bgs*
SB-1	20 - 98.7	2.3
SB-2	280 – 1200	1 - 515
SB-3	0.2 – 2	0.0
SB-4	0.0	0.0
SB-5	0.0	0.0
SB-6	280	0 – 29

Refer to Soil Boring Logs in Attachment B for specific field analytical readings as they relate to each soil core. Saturated soils (typically an indicator of groundwater) were documented at approximately six feet bgs across the Site. To provide data on the local aquifer, two of the six soil borings (namely Soil Boring SB-2 & SB-6) were converted into temporary groundwater monitoring wells. Each temporary well was constructed of five feet of one-inch 0.10-slot well screen and five feet of solid riser casing. Prior to groundwater sampling, fluid levels in the monitoring wells were gauged using a sonic interface probe to determine the depth of free phase product (DTP) if any, depth to water (DTW) and depth to bottom (DTB) of each well. These measurements were recorded in a field log along with details of the sampling procedures. A summary of collected monitoring data is as follows:

MW ID	Depth To Product (ft.)	Depth To Water (ft.)	Depth To Bottom (ft.)	Color	Appearance	Odor	Sheen
SB-2 GW	--	4.50	7.50	Grey	Cloudy	Yes	Yes
SB-6 GW	--	4.78	7.50	Grey	Cloudy	Yes	Yes

3.4 Subsurface Sampling and Laboratory Analysis

During investigative procedures, soil samples were collected from approximately one foot above through one foot below the detected groundwater table or from the area of obvious impacts as recorded by field analysis (note that soil collection depths within each borehole are documented in Attachment B). Groundwater samples were also obtained to provide a more comprehensive analysis of subsurface conditions from with Soil Borings SB-2 and SB-6. Said borings were chosen for well conversion due to the obvious soil impacts encountered during this investigation. All subsurface materials submitted for laboratory testing was identified as follows:

York Laboratory Number: 17L0152

Sample No. 001 = Soil Boring SB-1

Sample No. 002 = Soil Boring SB-2

Sample No. 003 = Soil Boring SB-2/GW

Sample No. 004 = Soil Boring SB-3

Sample No. 005 = Soil Boring SB-4

Sample No. 006 = Soil Boring SB-5

Sample No. 007 = Soil Boring SB-6

Sample No. 008 = Soil Boring SB-6/GW

All soil and groundwater samples collected during the investigation were packed on ice and prepared for transport to York upon collection and were carried under standard chain of custody protocol. Each sample was analyzed for the full list of VOCs and SVOCs via EPA test methods 8260 and 8270 B/N, respectively. In addition to the above referenced analysis, collected soil samples were also tested for heavy metals via EPA method 3015A/7473. The complete laboratory package may be found in Attachment C for your review.

3.5 Soil Gas Sampling

Based upon the historical Site use, sub-slab soil vapor samples were also collected to characterize the soil gas quality beneath the slab of the Site structure. A total of four soil gas samples were collected during the Phase II ESA field study (see Figure 2 for locations). Soil vapor cores were extended as follows:

Soil Gas Sampling Number	Location/Depth Below Grade (in.)
Soil Gas SG-1	Chemical Storage/15"
Soil Gas SG-2	Chemical Storage/5"
Soil Gas SG-3	Chemical Storage/9"
Soil Gas SG-4	Warehouse/12"

The vapor implants were installed through the concrete slab with the employment of rotary hammer drill equipped with a ½" drill bit. Once the bit pierced through the slab (note that the observed thickness of the concrete slab varied from 5 – 15 inches pending the section of the structure investigated), a temporary soil gas implant equipped with ¼" polyethylene tubing and a disposable soil vapor tip were installed in the bottom of the borehole. A filter pack of No. 2 sand was poured around the vapor implant, the surface of the borehole backfilled and sealed using hydrated bentonite and modeling clay to prevent surface air infiltration. Following the vapor probe construction, a MiniRae (which registers airflow below 0.2 liters per minute) was attached to the Teflon tubing and a minimum of three sample volumes were purged. Soil vapor sampling was collected for analysis employing a six liter SUMMA canister equipped with a laboratory-calibrated flow control device to facilitate the collection of the samples for a 2-hour sample duration time. During both purging and sampling, the flow rate was restricted to less than (<) 0.2 liters per minute and connected directly to the dedicated tubing. As a quality assurance/quality control measure, an inert tracer gas (helium) test was completed before and after sampling to document that the soil vapor sampling points were properly sealed preventing subsurface infiltration of ambient air into the sample chain. Following sampling, the pressure of the SUMMA canister was recorded and the temporary well point backfilled with cement slurry.

A sample log sheet was maintained summarizing sample identification, date and time of sample collection, sampling depth, identity of samplers, sampling methods and devices, soil vapor purge volumes, volume of the soil vapor extracted, vacuum of canisters before and after the samples are collected, and chain of custody protocols.

3.6 Soil Gas Laboratory Analysis

Samples collected in Summa canisters were transported to York by a laboratory-provided courier and analyzed for VOCs via USEPA Method TO-15. Each sample submitted for laboratory testing was identified as follows:

<u>York Laboratory Number: 17L0145</u>

Sample No. 001 = Sub slab SS-1

Sample No. 002 = Sub slab SS-2

Sample No. 003 = Sub slab SS-3

Sample No. 004 = Sub slab SS-4

The complete laboratory package may be found in Attachment C for your review.

4.0 FINDINGS

Based upon the field and laboratory results of this investigation, DTCS presents the following findings concerning subsurface soil, groundwater and soil gas quality:

4.1 Subsurface Soil Quality

To provide data on current subsurface conditions, a total of six soil borings were advanced on the 584 Chestnut Ridge Road, Spring Valley, New York property. Upon review of analytical testing, DTCS concludes that most all soil boring locations were returned with detectable concentrations of VOCs, SVOCs and heavy metals. An obvious source of subsurface contamination was encountered within Soil Boring SB-2 as reported VOCs were above both unrestricted and commercial standards. Soil boring SB-6 also displayed VOCs above unrestricted, but below commercial soil cleanup objectives (SCOs). All other soil analysis performed met unrestricted Use SCOs for VOCs, SVOCs and RCRA Metals. Attached as Table 1 is a soil quality chart of laboratory documented compounds in comparison to their respective SCOs as defined in NYSDEC Part 375-6.8(a) Unrestricted Use and 375-6.8(b) Commercial Use SCOs, December 14, 2006.

4.2 Groundwater Quality

Analysis of two temporary site wells installed during this investigation revealed concentrations of laboratory detectable dissolved phase VOCs and SVOCs. When compared to guidance, numerous chlorinated solvents and aromatic hydrocarbons were found to exceed their respective regulatory standard. Attached as Table 2 is a chart of Site monitoring well analytical reporting in comparison to the NYSDEC groundwater quality guidance values as described in Technical & Operations Guidance Series (TOGS) 1.1.1, June 1998.

4.3 Soil Vapor/Gas Quality

The results of soil vapor sampling indicate that thirty-three VOCs are present within the four soil gas samples collected on-Site. A summary table of data for all chemical analytical work is included in Table 3. The major on-Site vapor concentrations range from 4 microgram per cubic meter ($\mu g/m^3$) to 740,000 $\mu g/m^3$ in soil gas samples SG-1 - SG-4. VOCs including, but not limited to Carbon Tetrachloride, Methylene Chloride, Tetrachloroethylene (PCE) and Trichloroethylene (TCE) reported within each soil gas sample collected on-Site. Volatiles in air collected at each sub-slab vapor point were all found to contain contaminant concentrations above New York State Department of Health (NYSDOH) Final Guidance on Soil Vapor Intrusion, October 2006 for PCE and TCE. In addition, sub-slab soil gas sample SG-2 was also reported to contain elevated levels of Carbon Tetrachloride and Methylene Chloride above NYSDOH soil vapor intrusion guidance.

5.0 CONCLUSIONS

After completing the review of all available Site data, DTCS has documented that the Subject Facility has been utilized for the mixing of solvents to generate general industrial products and cleaning chemicals along with bowling lane care products since the mid-1960s. The use of the Site for such activities has been identified as RECs during Phase I ESA reporting. Solvent mixing operations appear to have caused soil, groundwater as well as sub slab soil gas impacts across the Site. Based upon the Phase II Subsurface Investigation performed, there is evidence of a release of chlorinated solvents and aromatic hydrocarbons, likely from historical operations.

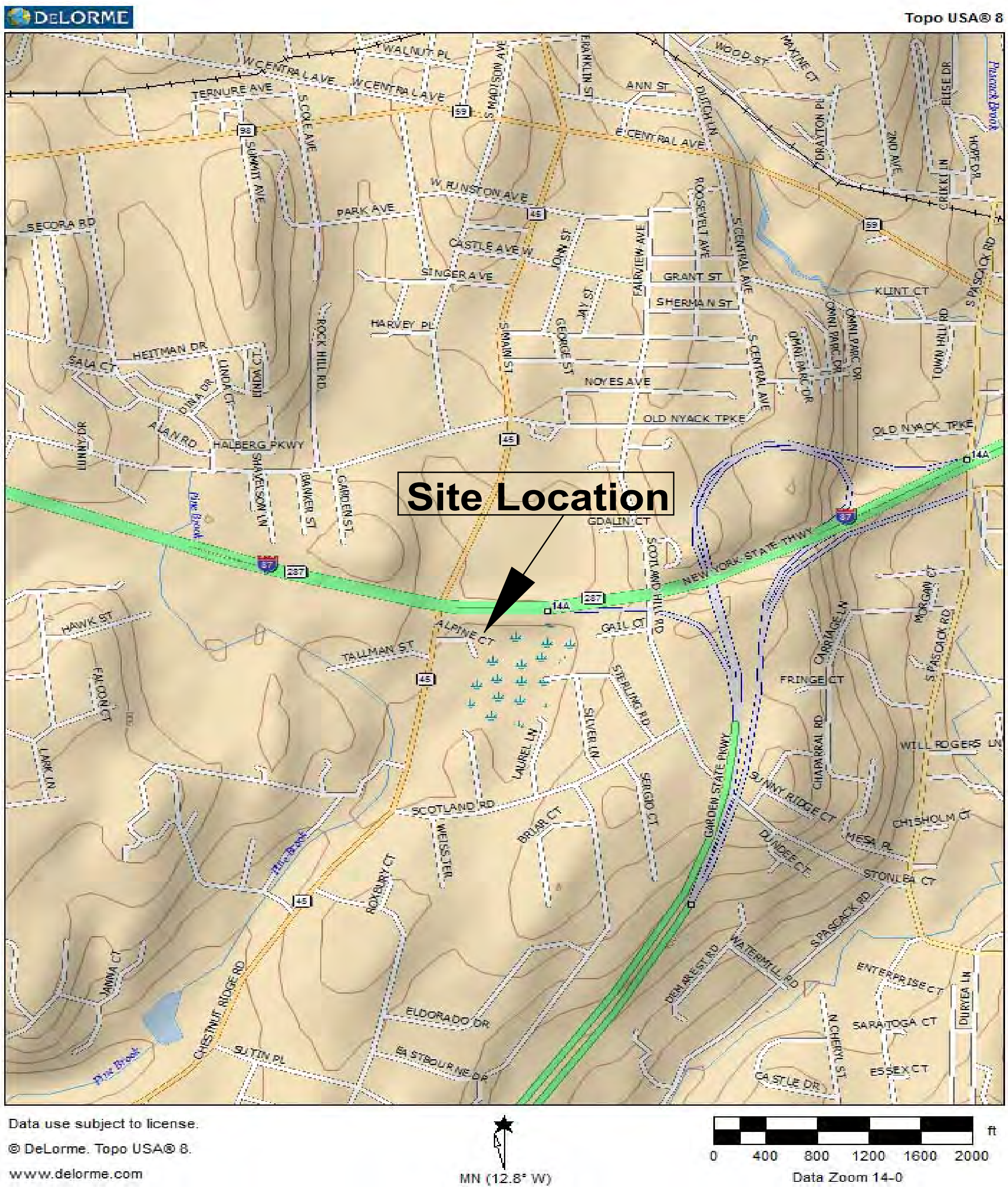
6.0 RECOMMENDATIONS

Due to the elevated VOCs and SVOCs encountered in soil, groundwater and soil gas, DTCS recommends that additional Site investigative activities be performed to define the complete nature and extent of subsurface impacts. Once this Phase II ESA document is reviewed by the RCDOH and NYSDEC an all appropriate work plan should be developed describing field activities proposed to delineate the contamination identified. Once additional data is collected, the need and/or methods of mitigation can be determined.

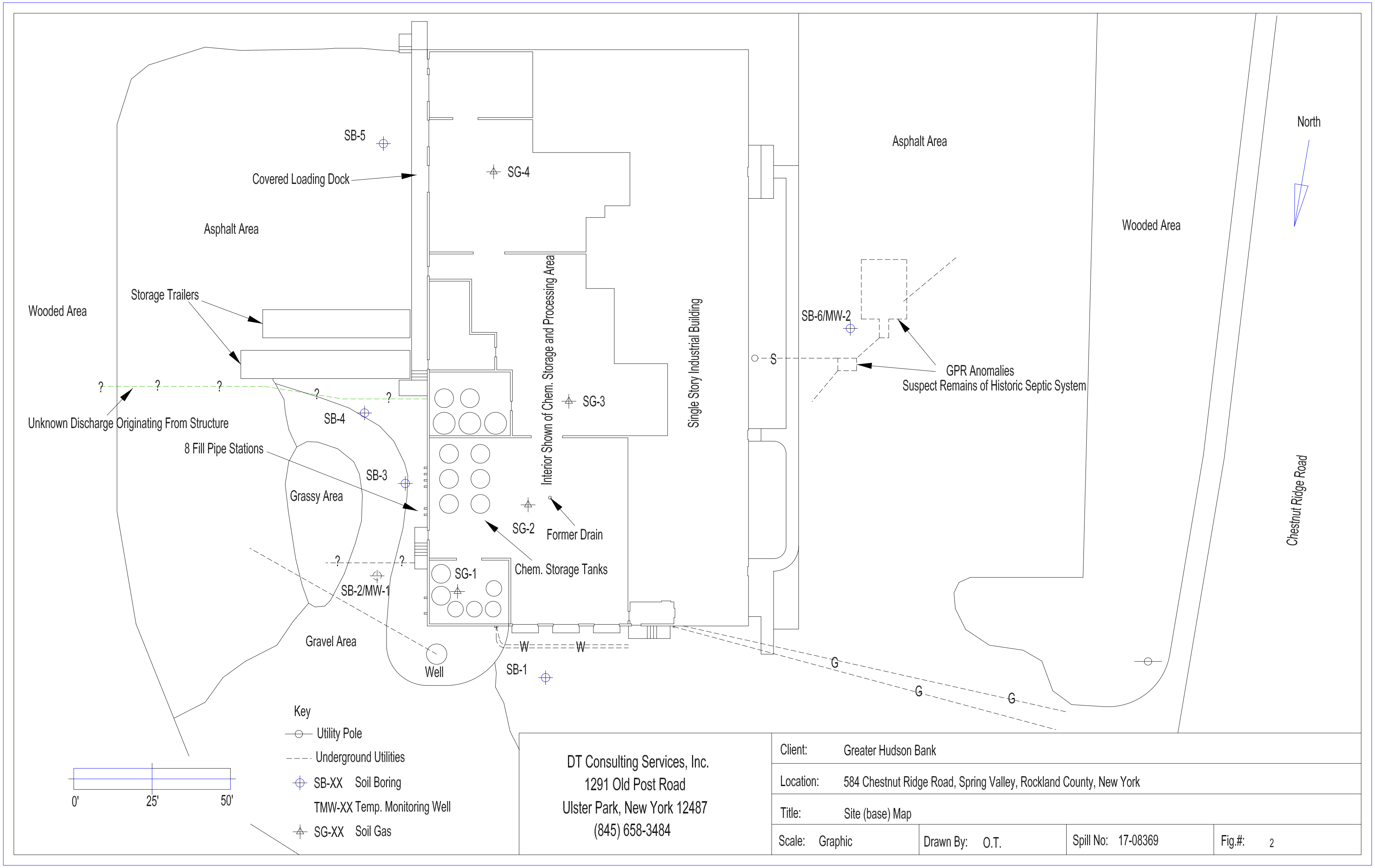
7.0 LIMITATIONS

DTCS has prepared this report using reasonable efforts in each phase of its work to determine the extent of subsurface contamination (if any) within the locations of potential environmental concern. This report is not definitive, and should not be assumed to be a complete or specific definition of all conditions above or below grade. The conclusions/recommendations set forth herein are applicable only to the facts and conditions described at the time of this report.

FIGURES



Client: Greater Hudson Bank			**Site Location Plan**
Site: 584 Chestnut Ridge Road, Spring Valley, NY			
Spill #: 17-08369	**Drawn by:** DJT	**Scale:** Graphic	**Figure No:** 1


North
Asphalt Area
SB-5
Covered Loading Dock
SG-4
Asphalt Area
Wooded Area
Wooded Area
Storage Trailers
Interior Shown of Chem. Storage and Processing Area
Single Story Industrial Building
SB-6/MW-2
S
GPR Anomalies
Suspect Remains of Historic Septic System
?
?
?
?
?
Unknown Discharge Originating From Structure
SB-4
SG-3
8 Fill Pipe Stations
SB-3
Grassy Area
SG-2
Former Drain
Chestnut Ridge Road
?
?
SG-1
Chem. Storage Tanks
SB-2/MW-1
Gravel Area
W
W
Well
SB-1
G
G
G
Key
Utility Pole
Underground Utilities
SB-XX Soil Boring
TMW-XX Temp. Monitoring Well
SG-XX Soil Gas
0'
25'
50'
DT Consulting Services, Inc.
1291 Old Post Road
Ulster Park, New York 12487
(845) 658-3484
Client: Greater Hudson Bank
Location: 584 Chestnut Ridge Road, Spring Valley, Rockland County, New York
Title: Site (base) Map
Scale: Graphic
Drawn By: O.T.
Spill No: 17-08369
Fig.#: 2

TABLES

Table 1:

Summary of Soil Laboratory Analysis - VOCs, SVOCs & RCRA Metals **Page 1 of 1**

Site: PolyChem
584 Chestnut Ridge Road
Spring Valley, Rockland County, New York

Client: Greater Hudson Bank
360 Route 17M
Monroe, New York 10950
Contact Name: Mr. Jonathan Bender

NYSDEC Spill No. 17-08369

Sample Location			**SB-1**	**SB-2**	**SB-3**	**SB-4**	**SB-5**	**SB-6**
Sample Number			**1**	**2**	**3**	**4**	**5**	**6**
Date Collected			12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017
Matrix			Soil	Soil	Soil	Soil	Soil	Soil
Analytical Methods			8260/8270	8260/8270	8260/8270	8260/8270	8260/8270	8260/8270
	Soils	**Soils**	3050B/7473	3050B/7473	3050B/7473	3050B/7473	3050B/7473	3050B/7473
Compound	**Guidance[1]**	**Guidance[2]**	**Sample Con**	**Sample Con**	**Sample Con**	**Sample Con**	**Sample Con**	**Sample Con**
VOCs								
1,1,1-Trichloroethane	680	500,000	ND	**130,000**	ND	ND	ND	ND
1,2,4-Trimethylbenzene	3,600	190,000	ND	**100,000**	ND	ND	ND	1,400
1,3,5-Trimethylbenzene	8,400	190,000	ND	**37,000**	ND	ND	ND	500
2-Butanone	NS	NS	ND	ND	ND	24	11	ND
Acetone	50	500,000	ND	ND	44	68	37	ND
Chloroethane	NS	NS	ND	ND	ND	ND	14	ND
cis-1,2-Dichloroethylene	250	500,000	ND	**73,000**	16	ND	ND	ND
Ethyl Benzene	1,000	390,000	ND	**180,000**	ND	ND	ND	950
Isopropylbenzene	NS	NS	ND	11,000J	ND	ND	ND	ND
Napththalene	12,000	500,000	ND	12,000J	ND	ND	ND	ND
n-Butylbenzene	NS	NS	2,400	ND	ND	ND	ND	310
n-Propylbenzene	3,900	500,000	ND	**24,000**	ND	ND	ND	260
o-Xylene	260	500,000	ND	**210,000**	ND	ND	ND	**570**
p- & m- Xylenes	260	500,000	ND	**540,000**	ND	ND	ND	**2700**
p-Isopropyltoluene	NS	NS	1,100	ND	ND	ND	ND	ND
Tetrachloroethylene	1,300	150,000	ND	**1,400,000**	ND	ND	ND	ND
Toluene	700	500,000	ND	**68,000**	ND	ND	ND	ND
Trichloroethylene	470	200,000	ND	**22,000**	7	ND	ND	ND
SVOCs								
Anthracene	100,000	500,000	ND	72.4J	ND	ND	ND	ND
Benzo(a)anthracene	1,000	5,600	ND	226	ND	ND	ND	ND
Benzo(a)pyrene	1,000	1,000	ND	203	ND	ND	ND	ND
Benzo(b)fluoranthene	1,000	5,600	ND	189	ND	ND	ND	ND
Benzo(g,h,i)perylene	100,000	500,000	ND	135	ND	ND	ND	ND
Benzo(k)fluoranthene	800	56,000	ND	182	ND	ND	ND	ND
Chrysene	1,000	56,000	ND	245	ND	ND	ND	ND
Dibenzo(a,h)anthracene	330	560	ND	49J	ND	ND	ND	ND
Di-n-butyl phthalate	NS	NS	ND	ND	ND	ND	ND	113
Fluoranthene	100,000	500,000	ND	472	ND	ND	ND	ND
Fluorene	30,000	500,000	ND	56.3J	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	5,600	ND	117	ND	ND	ND	ND
Naphthalene	12,000	500,000	ND	171	ND	ND	ND	62.9
Phenanthrene	100,000	500,000	ND	363	ND	ND	ND	ND
Pyrene	100,000	500,000	ND	377	ND	ND	ND	ND
RCRA8								
Arsenic	13	16	ND	1.99	2.23	2.95	1.88	1.37
Barium	350	400	22.3	40.1	52.5	42.7	39.7	39.6
Cadmium	2.5	9.3	ND	ND	ND	ND	ND	ND
Chromium	30	400	6.82	12.2	13.7	11.7	10.7	11.5
Lead	63	1,000	4.64	8.07	9.45	7.73	14.8	6.34
Selenium	3.9	1,500	2.86	3.47	3.06	3.35	1.63	2.5
Silver	2	1,500	ND	ND	ND	ND	ND	ND
Mercury	0.18	2.8	ND	ND	ND	ND	ND	ND

Notes:

1. VOC and SVOC soil results are recorded in micrograms-per-kilogram (µg/Kg) or ppb. RCRA8 metal soil results are recorded in milligrams-per-kilogram (mg/kg) or ppm.
2. ND = Undetected. NS = No standard.
3. Soil Guidance[1] was adopted from the NYSDEC 6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs, December 14, 2006.
4. Soil Guidance[2] was adopted from the NYSDEC 6 NYCRR Part 375-6.8(b) Commercial Use SCOs, December 14, 2006.
5. Sample concentrations exceeding Unrestricted SCOs are printed in bold and underlined; those exceeding commercial SCOs are printed in bold, underlined and highlighted.
6. Only laboratory reported compounds are presented in this table.

TABLE 2

Groundwater Volatile Organic Compound Analysis vs. NYSDEC Guidance Values

Sampling Performed: December 5, 2017

Site:
PolyChem
584 Chestnut Ridge Road
Spring Valley, Rockland County, New York

Client Name: Greater Hudson Bank
Address: 360 Route 17M
Monroe, New York 10950
Contact Name: Mr. Jonathan Bender

NYSDEC Spill No. 17-08369

Consultant: DT Consulting Services, Inc.

Compound	Guidance Value		SB-2/GW	SB-6/GW	
Units	ug/L		ug/L	ug/L	
1,1,1-Trichloroethane	5		**400**	**53**	
1,1-Dichloroethane	5		**100**	**160**	
1,1-Dichloroethylene	5		**16**	**18**	
1,2,4,5-Tetramethylbenzene	5		14	41	
1,2,4-Trimethylbenzene	5		**140**	**780**	
1,2-Dichloroethane	0.6		**1.3**	0.53	
1,3,5-Trimethylbenzene	5		**49**	**210**	
1,4-Dichlorobenzene	5			1.3	
4-Methyl-2-pentanone	NS		16	1	
Acetone	50		**120**	3.1	
Benzene	1		**1.2**	0.91	
Carbon Disulfide	NS		0.78	0.20J	
Chlorobenzene	5		0.22J	0.82	
Chloroethane	5		**74**		
Chloroform	7			2.1	
cis-1,2-Dichloroethylene	5		**900**	**1800**	
Ethyl Benzene	5		**400**	**1900**	
Isopropylbenzene	5		**19**	**65**	
Methylene chloride	5		**9.6**		
Naphthalene	10		**21**	**87**	
n-Butylbenzene	5		**8.8**	**16**	
n-Propylbenzene	5		**29**	**110**	
o-Xylene	5		**560**	**1600**	
p-&m- Xylenes	5		**1300**	**4300**	
p-Diethylbenzene	NS		20	45	
p-Ethyltoluene	NS		49	210	
p-Isopropyltoluene			5.2	14	
sec-Butylbenzene	5		**6**	**14**	
tert-Butylbenzene	5		0.98	3.4	
Tetrachloroethene	5		**1900**	**13**	
Toluene	5		**230**	**130**	
trans-1,2-Dichloroethylene	5		**26**	**110**	
Trichloroethylene	5		**110**	**60**	
Vinyl Chloride	2		**18**	**650**	

Notes:
1. All measurements recorded in micrograms per liter (ug/L) or parts per billion (ppb).
2. Samples analyzed in accordance with EPA Test Method 8260.
3. ND = Undetected (Detection limits may vary). NS = Not specified.
4. J = Detected below reporting limit but greater than or equal to MDL; therefore, the result is an estimated concentration.
5. The presented guidance values were adopted from NYSDEC Division of Water TOGS 1.1.1, June 1998.
6. Those compounds with laboratory detectable concentrations are shown on this Table.

TABLE 2

Groundwater Semi-Volatile Organic Compound Analysis vs. NYSDEC Guidance Values

Sampling Performed: December 5, 2017

Site:
PolyChem
584 Chestnut Ridge Road
Spring Valley, Rockland County, New York

Client Name: Greater Hudson Bank
Address: 360 Route 17M
Monroe, New York 10950
Contact Name: Mr. Jonathan Bender

NYSDEC Spill No. 17-08369

Consultant: DT Consulting Services, Inc.

Compound Units	**Guidance Value** (ug/L)		**SB-2/GW** ug/L	**SB-6/GW** ug/L	
2,4-Dimethylphenol	50		3.20J	5.11	
2-Methylnaphthalene	4.7		ND	3.28J	
Acenaphthlene	20		0.545	0.18	
Acenaphthylene	NS		ND	ND	
Anthracene	50		0.194	0.6	
Benzo(a)anthracene	0.002		**0.0727**	ND	
Chrysene	0.002		**0.0727**	ND	
Di-n-butyl phthalate	NS		ND	3.96J	
Fluoranthene	50		0.63	0.50J	
Fluorene	50		0.824	0.24	
Naphthalene	10		8.5	**137**	
Phenanthrene	50		1.75	0.3	
Pyrene	50		0.327	ND	

Notes:

1. All measurements recorded in micrograms per liter (ug/L) or parts per billion (ppb).
2. Samples analyzed in accordance with EPA Test Method 8270 B/N.
3. ND = Undetected (Detection limits may vary). NS = Not specified.
4. J = Detected below reporting limit but greater than or equal to MDL; therefore, the result is an estimated concentration.
5. The presented guidance values were adopted from NYSDEC Division of Water TOGS 1.1.1, June 1998.
6. Those compounds with laboratory detectable concentrations are shown on this Table.

TABLE 3:

SUMMARY OF TO-15 VOLATILE DETECTIONS IN AIR SUMMARY

Client Name: Greater Hudson Bank
Address: 360 Route 17M
Monroe, New York 10950
Contact Name: Mr. Jonathan Bender

Address: PolyChem, 584 Chestnut Ridge Road, Spring Valley, New York
NYSDEC Spill Number: 17-08369

Contractor: DT Consulting Services, Inc.
Laboratory: York Analytical Laboratories, Inc.
Stratford, CT 06615

Sample ID:	**NYSDOH Vapor Decision Matrices**	**Sub-slab SS-1**	**Sub-slab SS-2**	**Sub-slab SS-3**	**Subslab SS-4**
Location:					
Depth (ft.):		Sub-slab	Sub-slab	Sub-slab	Sub-slab
Date:		12/5/2017	12/5/2017	12/5/2017	12/5/2017
Lab Sample ID:		17L0145-01	17L0145-02	17L0145-03	17L0145-04
Units:	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Analysis: EPA Method TO-15 Volatiles in Air					
1,1,1,2-Tetrachloroethane	NS	ND	330	ND	ND
1,1,1-Trichloroethane	NS	4,100	65,000	150	13
1,1,2-Trichloro-1,2,2-trifluoroethane	NS	ND	11	ND	ND
1,1,2-Trichloroethane	NS	ND	91	ND	ND
1,1-Dichloroethane	NS	9,100	23,000	7.9	ND
1,1-Dichloroethylene	NS	120	2,600	ND	ND
1,2,4-Trimethylbenzene	NS	53	ND	12	23
1,3,5-Trimethylbenzene	NS	21	ND	ND	ND
2-Butanone	NS	51	19	ND	11
2-Hexanone	NS	25	ND	ND	ND
4-Methyl-2-pentanone	NS	18	ND	ND	ND
Acetone	NS	1,200	130	15	39
Benzene	NS	10	35	ND	5.1
Chloroethane	NS	34	140	ND	ND
Carbon Tetrachloride	6	ND	**6**	ND	ND
Chloroform	NS	94	2,000	ND	ND
Chloromethane	NS	ND	4	ND	ND
cis-1,2-Dichloroethylene	NS	10,000	42,000	14	ND
Cyclohexane	NS	12	91	ND	ND
Ethyl Benzene	NS	24	17	11	15
Isopropanol	NS	820	48	8.3	ND
Methylene chloride	100	ND	**370**	ND	ND
n-Heptane	NS	9.3	39	ND	ND
n-Hexane	NS	15	60	ND	ND
o-Xylene	NS	31	9.5	8.5	15
p-&m- Xylenes	NS	60	24	24	39.0
p-Ethyltoluene	NS	46	ND	10	19
Propylene	NS	100	15	ND	4
Tetrachloroethylene	100	**17,000**	**740,000**	**850**	**6,800**
Toluene	NS	53	130	27	40
trans-1,2-Dichloroethylene	NS	92	130	ND	ND
Trichloroethylene	6	**13,000**	**59,000**	**23**	**84**
Trichlorofluoromethane	NS	ND	10	ND	ND
Vinyl Chloride	NS	ND	350	ND	ND

Notes:
1. Soil vapor sample analytical results are compared to the values listed in Matrices A, B, and C of the New York State Department of Health (NYSDOH)Departme Guidance for Evaluating Soil Vapor Intrusion in the State of New York. The criteria is the lowest soil vapor concentration at which monitoring to mitigation is recommended.
2. ND = Non-detect
3. NS = No Matrix Standard has been established for this compound.
4. Only compounds with detections are shown on this table.

ATTACHMENTS

ATTACHMENT A

Rockland County
HEALTH

PERMIT TO CONSTRUCT A RESOURCE EVALUATION WELL

Phone (845) 364-3682 Fax (845) 364-2025

RE-17-042			
Permit #:	Actual Drilling Date:	Actual Drilling Time:	RCDOH Notification Confirmation #:

Location of Well

63.06-1-1	584 CHESTNUT RIDGE RD	CHESTNUT RIDG	RAMAPO
Section/Block/Lot:	Well Address:	Well Village/City:	Well Town:

US Polychemical Corp.
Subdivision Name:

Lot Number:

Wells Installed:

Drilling Contractor

Core Down Drilling, LLC		RCDOH Registration	RWC-0075	NYSDEC Registration	NYRD 10960
Phone:	845-625-3401	RCDOH Expiration Date	11/30/2018	NYSDEC Expiration Date	3/31/2018

Property Owner

Spring Valley Industrial Park	584 Chestnut Ridge Rd	Chestnut Ridge	NY	10977
Name:	Mailing Address:			
Bruce Gebhardt	(845) 356-5530			
Authorized Representative:	Phone:	Fax:		

Conditions of Permit

General Conditions (apply to all parties named on the application)

- Permit is automatically rendered null and void if the application is not true and accurate.
- All work shall be conducted in compliance with applicable federal, state and local laws, rules and regulations.
- There shall be no deviations from the plans submitted on and with the application without prior approval by the Commissioner (or his/her designee).

Drilling Contractor

- **Minimum two (2) business days notice required prior to drilling well.** Call (845) 364-2604; give date, time of maintenance; record the notification confirmation number provided by RCDOH. No subsequent deviation in date and time allowed without prior notification
- Install, develop and secure the well(s) in accordance with the plans submitted with the application or in accordance with any conditions listed below.
- Submit a signed copy of the boring log(s) and well completion report(s), to RCDOH within 60 days of drillings the well(s).

Property Owner

- Submit documentation of appropriate waste disposal pursuant to all federal, state, local laws and regulations to RCDOH within 30 days of drilling.

Other Conditions

- All boreholes must be decommissioned within 48 hours (see Paragraph 2.8.4.10.1 of the Rockland County Sanitary Code). Only boreholes less than 25 ft. that do not intercept groundwater may be decommissioned by backfilling with uncontaminated cuttings and tamping. Otherwise, grout used to seal the borings shall be mixed pursuant to Paragraph 2.8.3.5.1. Ensure that all wastes generated during the drilling operations are properly managed and disposed of in accordance with federal, state and local laws and regulations.
- All monitoring wells must be protected from damage during any construction activities, and must be decommissioned upon completion of the investigation pursuant to Article II of the Rockland County Sanitary Code. Such decommissioning will require removal of the casing and filter pack prior to pressure grouting from the base to ground surface. In the event these wells are damaged or covered prior to being properly decommissioned, the owner will be responsible for any action required to expose the entire depth of the borehole to allow decommissioning.

11/30/2017	5 /30/2018	Jeremy Erlich	
Issuance Date:	Expiration Date:	Permit Issuing Official	

ATTACHMENT B

DT Consulting Services, Inc.
1291 Old Post Road
Ulster Park, New York 12487
(845) 658-3484

Soil Boring Log
SB-1

Hole No: SB-1

Sheet 1 of 1

Date Started: 12/5/17

Date Finished: 12/5/17

Client: Greater Hudson Bank

Method of investigation: 2" Hollow Stem Samplers

Location: 584 Chestnut Ridge Road, Spring Valley, Rockland County, New York

Spill Number: 17-08369

Drilling Co: Core Down Drilling

Driller: J. Bellucci

Weather:

P. Manager:

D. Helper: O. Tanner

Cloudy

Deborah Thompson

Geologist: Deborah Thompson

Drill Rig: Geoprobe

50° F @ 0800

Depth (ft.)	Sample No.	Sample Depth (ft.)	Sample Blows per 6"	Sample "N"	Sample Recovery (in.)	Sample Description	Field Analytical Readings	Boring Details	Groundwater and Other Observations
		1				Asphalt/stone.	PID (ppm)		
		2				Light brown, mixed fill/sandy loam, damp, slight odor.	20.0		Sampled subsurface soils
		3							(4 - 6' bgs, SB-1)
4					18"		98.7		
		5				Brown, sand, saturated at 5' bgs, slight odor.	2.3		
		6							Groundwater
		7							encountered at 5' bgs.
8					48"				
		9							
		10							
		11							
12									
		13							
		14							
		15							
16									
		17							
		18							
		19							
20									

Sample Types:

S=Hollow Spoon: X

R= Rock Core:

N = ASTM D1586 BGS = Below Grade Surface

Backfill Well Key

Cement

Native Fill

Borehole

Bentonite

DT Consulting Services, Inc.
1291 Old Post Road
Ulster Park, New York 12487
(845) 658-3484

Soil Boring Log
SB-2

Hole No: SB-2

Sheet 1 of 1

Date Started: 12/5/17

Date Finished: 12/5/17

Client: Greater Hudson Bank

Method of investigation: 2" Hollow Stem Samplers

Location: 584 Chestnut Ridge Road, Spring Valley, Rockland County, New York

Spill Number: 17-08369

P. Manager: Deborah Thompson

Drilling Co: Core Down Drilling

Geologist: Deborah Thompson

Driller: J. Bellucci

D. Helper: O. Tanner

Drill Rig: Geoprobe

Weather: Cloudy 50° F @ 0800

Depth (ft.)	Sample No.	Sample Depth (ft.)	Blows per 6"	"N"	Recovery (in.)	Sample Description	Field Analytical Readings	Boring Details	Groundwater and Other Observations
		1				Asphalt/stone.	PID (ppm)		
		2				Light brown, mixed fill/sandy loam, damp, solvent odor.	280.0		Sampled subsurface soils
		3							(4 - 6' bgs, SB-2)
4					25"	Light brown, silty clay, damp, film of product surrounding s	1200.0		
		5				core, solvent odor.	515.0		
		6				5.5 - 6' bgs Black organics, damp, solvent odor.	284.0		Groundwater
		7				Grey, sand, saturated at 6' bgs, no odor.	1.0		encountered at 6.0' bgs.
8					48"				Temporary well set at 10' bgs.
		9							GW sample obtained SB-2/GW
		10							
		11							
12									
		13							
		14							
		15							
16									
		17							
		18							
		19							
20									

Sample Types:

S=Hollow Spoon: X

R= Rock Core: ______

N = ASTM D1586 BGS = Below Grade Surface

Backfill Well Key

Cement

Native Fill

Borehole

Bentonite

DT Consulting Services, Inc.
1291 Old Post Road
Ulster Park, New York 12487
(845) 658-3484

Soil Boring Log
SB-3

Hole No: SB-3
Sheet 1 of 1

Date Started: 12/5/17
Date Finished: 12/5/17

Client: Greater Hudson Bank

Method of investigation: 2" Hollow Stem Samplers

Location: 584 Chestnut Ridge Road, Spring Valley, Rockland County, New York

Spill Number: 17-08369

P. Manager:

Deborah Thompson

Drilling Co: Core Down Drilling

Geologist: Deborah Thompson

Driller: J. Bellucci

D. Helper: O. Tanner

Drill Rig: Geoprobe

Weather:

Cloudy

50° F @ 0800

Depth (ft.)	Sample No.	Sample Depth (ft.)	Sample Blows per 6"	Sample "N"	Sample Recovery (in.)	Sample Description	Field Analytical Readings	Boring Details	Groundwater and Other Observations
		1				Stone, mixed fill.	PID (ppm)		
		2				Light brown, mixed fill/sandy loam, damp, slight odor.	2.2		Sampled subsurface soils
		3							(3 - 5' bgs, SB-3)
4					24"	Brown, sand, saturated at 4' bgs, no odor.	0.2		
		5				5.5 - 6' bgs Black organics, damp, no odor.	0.0		
		6				Grey, sand, saturated at 6' bgs, no odor.	0.0		Groundwater
		7							encountered at 4' bgs.
8					38"				
		9							
		10							
		11							
12									
		13							
		14							
		15							
16									
		17							
		18							
		19							
20									

Sample Types:

S=Hollow Spoon: X

R= Rock Core:

N = ASTM D1586 BGS = Below Grade Surface

Backfill Well Key

Cement

Native Fill

Borehole

Bentonite

DT Consulting Services, Inc.
1291 Old Post Road
Ulster Park, New York 12487
(845) 658-3484

Soil Boring Log
SB-4

Hole No: SB-4

Sheet 1 of 1

Date Started: 12/5/17

Date Finished: 12/5/17

Client: Greater Hudson Bank

Method of investigation: 2" Hollow Stem Samplers

Location: 584 Chestnut Ridge Road, Spring Valley, Rockland County, New York

Spill Number: 17-08369	Drilling Co: Core Down Drilling	Driller: J. Bellucci	Weather:
P. Manager:		D. Helper: O. Tanner	Cloudy
Deborah Thompson	Geologist: Deborah Thompson	Drill Rig: Geoprobe	50° F @ 0800

Depth (ft.)	Sample No.	Sample Depth (ft.)	Blows per 6"	"N"	Recovery (in.)	Sample Description	Field Analytical Readings	Boring Details	Groundwater and Other Observations
		1				Stone, mixed fill.	PID (ppm)		
		2				Light brown, mixed fill/sandy loam, damp, no odor.	0.0		Sampled subsurface soils
		3							(5 - 7' bgs, SB-4)
4					36"				
		5				5.5 - 6' bgs Black organics, damp, no odor.	0.0		
		6				Grey, sand, saturated at 6' bgs, no odor.	0.0		Groundwater
		7							encountered at 6' bgs.
8					40"				
		9							
		10							
		11							
12									
		13							
		14							
		15							
16									
		17							
		18							
		19							
20									

Sample Types:

S=Hollow Spoon: X

R= Rock Core:

N = ASTM D1586 BGS = Below Grade Surface

Backfill Well Key

Cement

Native Fill

Borehole

Bentonite

DT Consulting Services, Inc.
1291 Old Post Road
Ulster Park, New York 12487
(845) 658-3484

Soil Boring Log
SB-5

Hole No: SB-5

Sheet 1 of 1

Date Started: 12/5/17

Date Finished: 12/5/17

Client: Greater Hudson Bank

Method of investigation: 2" Hollow Stem Samplers

Location: 584 Chestnut Ridge Road, Spring Valley, Rockland County, New York

Spill Number: 17-08369

Drilling Co: Core Down Drilling

Driller: J. Bellucci

Weather: Cloudy 50° F @ 0800

P. Manager: Deborah Thompson

D. Helper: O. Tanner

Geologist: Deborah Thompson

Drill Rig: Geoprobe

Depth (ft.)	Sample No.	Sample Depth (ft.)	Blows per 6"	"N"	Recovery (in.)	Sample Description	Field Analytical Readings	Boring Details	Groundwater and Other Observations
		1				Stone, mixed fill.	PID (ppm)		
		2				Light brown, mixed fill/sandy loam, damp, no odor.	0.0		Sampled subsurface soils
		3							(5 - 7' bgs, SB-5)
4					28"				
		5				5.5 - 6' bgs Black organics, damp, no odor.	0.0		
		6				Grey, sand, saturated at 6' bgs, no odor.	0.0		Groundwater
		7							encountered at 6' bgs.
8					40"				
		9							
		10							
		11							
12									
		13							
		14							
		15							
16									
		17							
		18							
		19							
20									

Sample Types:

S=Hollow Spoon: X

R= Rock Core: ______

N = ASTM D1586 BGS = Below Grade Surface

Backfill Well Key

Cement

Native Fill

Borehole

Bentonite

DT Consulting Services, Inc.
1291 Old Post Road
Ulster Park, New York 12487
(845) 658-3484

Soil Boring Log
SB-6

Hole No: SB-6

Sheet 1 of 1

Date Started: 12/5/17

Date Finished: 12/5/17

Client: Greater Hudson Bank

Method of investigation: 2" Hollow Stem Samplers

Location: 584 Chestnut Ridge Road, Spring Valley, Rockland County, New York

Spill Number: 17-08369	Drilling Co: Core Down Drilling	Driller: J. Bellucci	Weather:
P. Manager:		D. Helper: O. Tanner	Cloudy
Deborah Thompson	Geologist: Deborah Thompson	Drill Rig: Geoprobe	50° F @ 0800

Depth (ft.)	Sample No.	Sample Depth (ft.)	Sample Blows per 6"	Sample "N"	Sample Recovery (in.)	Sample Description	Field Analytical Readings	Boring Details	Groundwater and Other Observations
		1				Asphalt/stone.	PID (ppm)		
		2				Light brown, mixed fill/sandy loam, damp, solvent odor.	280.0		Sampled subsurface soils
		3							(4 - 6' bgs, SB-6)
4					12"				
		5				Same. Saturated soils encountered at 5' bgs.	29.0		
		6							Groundwater
		7							encountered at 5.0' bgs.
8					26"		0.0		Temporary well set at 10' bgs.
		9							GW sample obtained SB-6/GW
		10							
		11							
12									
		13							
		14							
		15							
16									
		17							
		18							
		19							
20									

Sample Types:

S=Hollow Spoon: X

R= Rock Core: ______

N = ASTM D1586 BGS = Below Grade Surface

Backfill Well Key

Cement | Native Fill | Borehole | Bentonite

ATTACHMENT C

Soil & Groundwater

Technical Report

prepared for:

DT Consulting Services
1291 Old Post Road
Ulster Park NY, 12487
Attention: Deborah Thompson

Report Date: 12/14/2017
Client Project ID: 584 Chestnut Ridge Rd Spring Valley, NY
York Project (SDG) No.: 17L0152

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

120 RESEARCH DRIVE STRATFORD, CT 06615 ■ 132-02 89th AVENUE RICHMOND HILL, NY 11418
www.YORKLAB.com (203) 325-1371 FAX (203) 357-0166 ClientServices@yorklab.com

Report Date: 12/14/2017
Client Project ID: 584 Chestnut Ridge Rd Spring Valley, NY
York Project (SDG) No.: 17L0152

DT Consulting Services
1291 Old Post Road
Ulster Park NY, 12487
Attention: Deborah Thompson

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 06, 2017 and listed below. The project was identified as your project: **584 Chestnut Ridge Rd Spring Valley, NY**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
17L0152-01	Soil boring SB-1	Soil	12/05/2017	12/06/2017
17L0152-02	Soil boring SB-2	Soil	12/05/2017	12/06/2017
17L0152-03	Soil boring SB-2/GW	Water	12/05/2017	12/06/2017
17L0152-04	Soil boring SB-3	Soil	12/05/2017	12/06/2017
17L0152-05	Soil boring SB-4	Soil	12/05/2017	12/06/2017
17L0152-06	Soil boring SB-5	Soil	12/05/2017	12/06/2017
17L0152-07	Soil boring SB-6	Soil	12/05/2017	12/06/2017
17L0152-08	Soil boring SB-6/GW	Water	12/05/2017	12/06/2017

General Notes for York Project (SDG) No.: 17L0152

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By: **Date:** 12/14/2017

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: Soil boring SB-1 | **York Sample ID:** 17L0152-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058		
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: **Soil boring SB-1** **York Sample ID:** **17L0152-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
123-91-1	1,4-Dioxane	ND		ug/kg dry	4800	9500	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058		
78-93-3	2-Butanone	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-49-8	2-Chlorotoluene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-43-4	4-Chlorotoluene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
67-64-1	Acetone	ND		ug/kg dry	480	950	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
71-43-2	Benzene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-86-1	Bromobenzene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-97-5	Bromochloromethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-27-4	Bromodichloromethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-25-2	Bromoform	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-83-9	Bromomethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
56-23-5	Carbon tetrachloride	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-90-7	Chlorobenzene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-00-3	Chloroethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
67-66-3	Chloroform	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-87-3	Chloromethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
124-48-1	Dibromochloromethane	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: Soil boring SB-1

York Sample ID: 17L0152-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-95-3	Dibromomethane	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
100-41-4	Ethyl Benzene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
98-82-8	Isopropylbenzene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
75-09-2	Methylene chloride	ND		ug/kg dry	480	950	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
91-20-3	Naphthalene	ND		ug/kg dry	240	950	100	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
104-51-8	**n-Butylbenzene**	**2400**		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
103-65-1	n-Propylbenzene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
95-47-6	o-Xylene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	480	950	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
99-87-6	**p-Isopropyltoluene**	**1100**		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
135-98-8	sec-Butylbenzene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
100-42-5	Styrene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
98-06-6	tert-Butylbenzene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
127-18-4	Tetrachloroethylene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
108-88-3	Toluene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
79-01-6	Trichloroethylene	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	240	480	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 07:52	SR

Sample Information

Client Sample ID: **Soil boring SB-1** | **York Sample ID:** **17L0152-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-05-4	Vinyl acetate	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-01-4	Vinyl Chloride	ND		ug/kg dry	240	480	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
1330-20-7	Xylenes, Total	ND		ug/kg dry	710	1400	100	EPA 8260C	12/11/2017 13:24	12/12/2017 07:52	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*94.9 %*	*77-125*
2037-26-5	*Surrogate: Toluene-d8*	*109 %*	*85-120*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*84.4 %*	*76-130*

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	NELAC-NY10854,PADEP		
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	NELAC-NY10854,PADEP		
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	NELAC-NY10854,PADEP		
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	87.0	174	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
95-57-8	2-Chlorophenol	ND		ug/kg dry	43.6	87.0	2	EPA 8270D	12/12/2017 07:10	12/12/2017 19:44	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Sample Information

Client Sample ID: Soil boring SB-1 | **York Sample ID:** 17L0152-01

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	87.0	174	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
91-94-1	3,3-Dichlorobenzidine	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	87.0	174	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	87.0	174	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	87.0	174	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	87.0	174	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
83-32-9	Acenaphthene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
62-53-3	Aniline	ND		ug/kg dry	174	348	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
120-12-7	Anthracene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR

Sample Information

Client Sample ID: **Soil boring SB-1** **York Sample ID:** **17L0152-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
218-01-9	Chrysene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
206-44-0	Fluoranthene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
86-73-7	Fluorene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR

Sample Information

Client Sample ID: **Soil boring SB-1** **York Sample ID:** **17L0152-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
78-59-1	Isophorone	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
91-20-3	Naphthalene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
85-01-8	Phenanthrene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
108-95-2	Phenol	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
129-00-0	Pyrene	ND		ug/kg dry	43.6	87.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR
110-86-1	Pyridine	ND		ug/kg dry	174	348	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 19:44	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*86.0 %*	*20-108*
4165-62-2	*Surrogate: Phenol-d5*	*92.1 %*	*23-114*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*99.3 %*	*22-108*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*77.3 %*	*21-113*
118-79-6	*Surrogate: 2,4,6-Tribromophenol*	*89.8 %*	*19-110*
1718-51-0	*Surrogate: Terphenyl-d14*	*59.3 %*	*24-116*

Metals, RCRA

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	Arsenic	ND		mg/kg dry	1.07	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 19:54	BML
7440-39-3	**Barium**	**22.3**		mg/kg dry	1.07	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 19:54	BML
7440-43-9	Cadmium	ND		mg/kg dry	0.321	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 19:54	BML

Sample Information

Client Sample ID: **Soil boring SB-1** **York Sample ID:** **17L0152-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Metals, RCRA

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-47-3	**Chromium**	**6.82**		mg/kg dry	0.535	1	EPA 6010C	12/11/2017 10:16	12/11/2017 19:54	BML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-92-1	**Lead**	**4.64**		mg/kg dry	0.535	1	EPA 6010C	12/11/2017 10:16	12/11/2017 19:54	BML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7782-49-2	**Selenium**	**2.86**		mg/kg dry	1.07	1	EPA 6010C	12/11/2017 10:16	12/11/2017 19:54	BML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-22-4	Silver	ND		mg/kg dry	0.535	1	EPA 6010C	12/11/2017 10:16	12/11/2017 19:54	BML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0321	1	EPA 7473	12/13/2017 09:17	12/13/2017 10:12	SY
							Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP			

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**93.4**		%	0.100	1	SM 2540G	12/07/2017 14:41	12/07/2017 17:35	TJM
							Certifications: CTDOH			

Sample Information

Client Sample ID: **Soil boring SB-2** **York Sample ID:** **17L0152-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP			
71-55-6	**1,1,1-Trichloroethane**	**130000**		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP			
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP			

Sample Information

Client Sample ID: Soil boring SB-2 **York Sample ID:** 17L0152-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 13:40	12/13/2017 08:46	SR
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 13:40	12/13/2017 08:46	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
95-63-6	**1,2,4-Trimethylbenzene**	**100000**		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
108-67-8	**1,3,5-Trimethylbenzene**	**37000**		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
123-91-1	1,4-Dioxane	ND		ug/kg dry	210000	430000	5000	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 13:40	12/13/2017 08:46	SR
78-93-3	2-Butanone	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
95-49-8	2-Chlorotoluene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR

Sample Information

Client Sample ID: **Soil boring SB-2** | **York Sample ID:** **17L0152-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-43-4	4-Chlorotoluene	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
67-64-1	Acetone	ND		ug/kg dry	21000	43000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
71-43-2	Benzene	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-86-1	Bromobenzene	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-97-5	Bromochloromethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-27-4	Bromodichloromethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-25-2	Bromoform	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-83-9	Bromomethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
56-23-5	Carbon tetrachloride	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-90-7	Chlorobenzene	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-00-3	Chloroethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
67-66-3	Chloroform	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-87-3	Chloromethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
156-59-2	**cis-1,2-Dichloroethylene**	**73000**		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
124-48-1	Dibromochloromethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-95-3	Dibromomethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
100-41-4	**Ethyl Benzene**	**180000**		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
98-82-8	**Isopropylbenzene**	**11000**	J	ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	11000	21000	5000	EPA 8260C	12/12/2017 13:40	12/13/2017 08:46	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: **Soil boring SB-2** | **York Sample ID:** **17L0152-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-09-2	Methylene chloride	ND		ug/kg dry	21000	43000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
91-20-3	**Naphthalene**	**12000**	J	ug/kg dry	11000	43000	5000	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
104-51-8	n-Butylbenzene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
103-65-1	**n-Propylbenzene**	**24000**		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
95-47-6	**o-Xylene**	**210000**		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
179601-23-1	**p- & m- Xylenes**	**540000**		ug/kg dry	21000	43000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
135-98-8	sec-Butylbenzene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
100-42-5	Styrene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
98-06-6	tert-Butylbenzene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
127-18-4	**Tetrachloroethylene**	**1400000**		ug/kg dry	21000	43000	10000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 10:21	SR
108-88-3	**Toluene**	**68000**		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
79-01-6	**Trichloroethylene**	**22000**		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
108-05-4	Vinyl acetate	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
75-01-4	Vinyl Chloride	ND		ug/kg dry	11000	21000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:46	SR
1330-20-7	**Xylenes, Total**	**740000**		ug/kg dry	32000	64000	5000	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 13:40	12/13/2017 08:46	SR

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*94.8 %*	*77-125*
2037-26-5	*Surrogate: Toluene-d8*	*112 %*	*85-120*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*94.2 %*	*76-130*

Sample Information

Client Sample ID: **Soil boring SB-2** **York Sample ID:** **17L0152-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	91.5	183	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	91.5	183	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
91-94-1	3,3-Dichlorobenzidine	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	91.5	183	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	91.5	183	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR

Sample Information

Client Sample ID: **Soil boring SB-2** | **York Sample ID:** **17L0152-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	91.5	183	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	91.5	183	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
83-32-9	Acenaphthene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
62-53-3	Aniline	ND		ug/kg dry	183	366	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
120-12-7	**Anthracene**	**72.4**	J	ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
56-55-3	**Benzo(a)anthracene**	**226**		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
50-32-8	**Benzo(a)pyrene**	**203**		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
205-99-2	**Benzo(b)fluoranthene**	**189**		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
191-24-2	**Benzo(g,h,i)perylene**	**135**		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
207-08-9	**Benzo(k)fluoranthene**	**182**		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
218-01-9	**Chrysene**	**245**		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR

Sample Information

Client Sample ID: Soil boring SB-2 **York Sample ID:** 17L0152-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
53-70-3	**Dibenzo(a,h)anthracene**	**49.0**	J	ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
206-44-0	**Fluoranthene**	**472**		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
86-73-7	**Fluorene**	**56.3**	J	ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
193-39-5	**Indeno(1,2,3-cd)pyrene**	**117**		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
78-59-1	Isophorone	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
91-20-3	**Naphthalene**	**171**		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
85-01-8	**Phenanthrene**	**363**		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
108-95-2	Phenol	ND		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR

Sample Information

Client Sample ID: **Soil boring SB-2** **York Sample ID:** **17L0152-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
129-00-0	**Pyrene**	**377**		ug/kg dry	45.8	91.5	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR
110-86-1	Pyridine	ND		ug/kg dry	183	366	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:14	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*79.3 %*	*20-108*
4165-62-2	*Surrogate: Phenol-d5*	*66.7 %*	*23-114*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*71.1 %*	*22-108*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*70.7 %*	*21-113*
118-79-6	*Surrogate: 2,4,6-Tribromophenol*	*81.7 %*	*19-110*
1718-51-0	*Surrogate: Terphenyl-d14*	*55.7 %*	*24-116*

Metals, RCRA

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	**Arsenic**	**1.99**		mg/kg dry	1.12	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 19:59	BML
7440-39-3	**Barium**	**40.1**		mg/kg dry	1.12	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 19:59	BML
7440-43-9	Cadmium	ND		mg/kg dry	0.337	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 19:59	BML
7440-47-3	**Chromium**	**12.2**		mg/kg dry	0.561	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 19:59	BML
7439-92-1	**Lead**	**8.07**		mg/kg dry	0.561	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 19:59	BML
7782-49-2	**Selenium**	**3.47**		mg/kg dry	1.12	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 19:59	BML
7440-22-4	Silver	ND		mg/kg dry	0.561	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 19:59	BML

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0337	1	EPA 7473 Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP	12/13/2017 09:17	12/13/2017 12:05	SY

Sample Information

Client Sample ID: **Soil boring SB-2** | **York Sample ID:** **17L0152-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Total Solids | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**89.1**		%	0.100	1	SM 2540G Certifications: CTDOH	12/07/2017 14:41	12/07/2017 17:35	TJM

Sample Information

Client Sample ID: **Soil boring SB-2/GW** | **York Sample ID:** **17L0152-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List - Low Level | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
71-55-6	**1,1,1-Trichloroethane**	**400**		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/13/2017 07:30	12/13/2017 16:07	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
75-34-3	**1,1-Dichloroethane**	**100**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
75-35-4	**1,1-Dichloroethylene**	**16**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
563-58-6	1,1-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 12:12	12/13/2017 09:44	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
95-93-2	*** 1,2,4,5-Tetramethylbenzene**	**14**	CCV-E	ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/12/2017 12:12	12/13/2017 09:44	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
95-63-6	**1,2,4-Trimethylbenzene**	**140**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS

YORK ANALYTICAL LABORATORIES INC

Sample Information

Client Sample ID: **Soil boring SB-2/GW** | **York Sample ID:** **17L0152-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List - Low Level | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
107-06-2	**1,2-Dichloroethane**	**1.3**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-67-8	**1,3,5-Trimethylbenzene**	**49**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
142-28-9	1,3-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-46-7	1,4-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
594-20-7	2,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-49-8	2-Chlorotoluene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-43-4	4-Chlorotoluene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-10-1	**4-Methyl-2-pentanone**	**16**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
67-64-1	**Acetone**	**120**	CCV-E	ug/L	1.0	2.0	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
71-43-2	**Benzene**	**1.2**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-86-1	Bromobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 09:44	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: **Soil boring SB-2/GW** **York Sample ID:** **17L0152-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List - Low Level **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-15-0	**Carbon disulfide**	**0.78**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
108-90-7	**Chlorobenzene**	**0.22**	J	ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
75-00-3	**Chloroethane**	**74**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
67-66-3	Chloroform	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
156-59-2	**cis-1,2-Dichloroethylene**	**900**		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/13/2017 07:30	12/13/2017 16:07	SS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
100-41-4	**Ethyl Benzene**	**400**		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/13/2017 07:30	12/13/2017 16:07	SS
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
98-82-8	**Isopropylbenzene**	**19**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
75-09-2	**Methylene chloride**	**9.6**		ug/L	1.0	2.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
91-20-3	**Naphthalene**	**21**	CCV-E	ug/L	1.0	2.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
104-51-8	**n-Butylbenzene**	**8.8**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
103-65-1	**n-Propylbenzene**	**29**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
95-47-6	**o-Xylene**	**560**		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP	12/13/2017 07:30	12/13/2017 16:07	SS
179601-23-1	**p- & m- Xylenes**	**1300**		ug/L	10	20	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP	12/13/2017 07:30	12/13/2017 16:07	SS
105-05-5	*** p-Diethylbenzene**	**20**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/12/2017 12:12	12/13/2017 09:44	SS

Sample Information

Client Sample ID: Soil boring SB-2/GW

York Sample ID: 17L0152-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List - Low Level

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
622-96-8	*** p-Ethyltoluene**	**49**		ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/12/2017 12:12	12/13/2017 09:44	SS
99-87-6	**p-Isopropyltoluene**	**5.2**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
135-98-8	**sec-Butylbenzene**	**6.0**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
98-06-6	**tert-Butylbenzene**	**0.98**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
127-18-4	**Tetrachloroethylene**	**1900**		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/13/2017 07:30	12/13/2017 16:07	SS
108-88-3	**Toluene**	**230**		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/13/2017 07:30	12/13/2017 16:07	SS
156-60-5	**trans-1,2-Dichloroethylene**	**26**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
79-01-6	**Trichloroethylene**	**110**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
75-01-4	**Vinyl Chloride**	**18**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 09:44	SS
1330-20-7	**Xylenes, Total**	**1900**		ug/L	12	30	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058	12/13/2017 07:30	12/13/2017 16:07	SS

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*94.3 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*94.3 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*94.4 %*	*79-122*

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes: EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
95-50-1	1,2-Dichlorobenzene	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
541-73-1	1,3-Dichlorobenzene	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
106-46-7	1,4-Dichlorobenzene	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: NELAC-NY10854,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH

Sample Information

Client Sample ID: Soil boring SB-2/GW **York Sample ID:** 17L0152-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:** EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-95-4	2,4,5-Trichlorophenol	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
88-06-2	2,4,6-Trichlorophenol	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
120-83-2	2,4-Dichlorophenol	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
105-67-9	**2,4-Dimethylphenol**	**3.20**	J	ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
51-28-5	2,4-Dinitrophenol	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
121-14-2	2,4-Dinitrotoluene	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
606-20-2	2,6-Dinitrotoluene	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
91-58-7	2-Chloronaphthalene	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
95-57-8	2-Chlorophenol	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
91-57-6	2-Methylnaphthalene	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
95-48-7	2-Methylphenol	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
88-74-4	2-Nitroaniline	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
88-75-5	2-Nitrophenol	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
65794-96-9	3- & 4-Methylphenols	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
91-94-1	3,3-Dichlorobenzidine	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
99-09-2	3-Nitroaniline	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
101-55-3	4-Bromophenyl phenyl ether	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
59-50-7	4-Chloro-3-methylphenol	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
106-47-8	4-Chloroaniline	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH

Sample Information

Client Sample ID: Soil boring SB-2/GW **York Sample ID:** 17L0152-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:** EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-01-6	4-Nitroaniline	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
100-02-7	4-Nitrophenol	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
83-32-9	**Acenaphthene**	**0.545**		ug/L	0.0606	0.0606	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:04	SR
208-96-8	Acenaphthylene	ND		ug/L	0.0606	0.0606	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:04	SR
62-53-3	Aniline	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
120-12-7	**Anthracene**	**0.194**		ug/L	0.0606	0.0606	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:04	SR
56-55-3	**Benzo(a)anthracene**	**0.0727**		ug/L	0.0606	0.0606	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:04	SR
50-32-8	Benzo(a)pyrene	ND		ug/L	0.0606	0.0606	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:04	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/L	0.0606	0.0606	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:04	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/L	0.0606	0.0606	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:04	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/L	0.0606	0.0606	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:04	SR
100-51-6	Benzyl alcohol	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
85-68-7	Benzyl butyl phthalate	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
111-44-4	Bis(2-chloroethyl)ether	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/L	0.606	0.606	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:04	SR
218-01-9	**Chrysene**	**0.0727**		ug/L	0.0606	0.0606	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:04	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/L	0.0606	0.0606	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:04	SR
132-64-9	Dibenzofuran	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
84-66-2	Diethyl phthalate	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH
131-11-3	Dimethyl phthalate	ND		ug/L	3.03	6.06	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:28	KH

Sample Information

Client Sample ID: **Soil boring SB-2/GW** | **York Sample ID:** **17L0152-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List | **Log-in Notes:** | **Sample Notes:** **EXT-EM**

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
84-74-2	Di-n-butyl phthalate	ND		ug/L	3.03	6.06	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:28	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
117-84-0	Di-n-octyl phthalate	ND		ug/L	3.03	6.06	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:28	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
206-44-0	**Fluoranthene**	**0.630**		ug/L	0.0606	0.0606	1	EPA 8270D	12/07/2017 08:06	12/08/2017 14:04	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
86-73-7	**Fluorene**	**0.824**		ug/L	0.0606	0.0606	1	EPA 8270D	12/07/2017 08:06	12/08/2017 14:04	SR
								Certifications:	NELAC-NY10854,NJDEP,PADEP		
118-74-1	Hexachlorobenzene	ND		ug/L	0.0242	0.0242	1	EPA 8270D	12/07/2017 08:06	12/08/2017 14:04	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
87-68-3	Hexachlorobutadiene	ND		ug/L	0.606	0.606	1	EPA 8270D	12/07/2017 08:06	12/08/2017 14:04	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
77-47-4	Hexachlorocyclopentadiene	ND		ug/L	3.03	6.06	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:28	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
67-72-1	Hexachloroethane	ND		ug/L	0.606	0.606	1	EPA 8270D	12/07/2017 08:06	12/08/2017 14:04	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/L	0.0606	0.0606	1	EPA 8270D	12/07/2017 08:06	12/08/2017 14:04	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
78-59-1	Isophorone	ND		ug/L	3.03	6.06	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:28	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
91-20-3	**Naphthalene**	**8.50**		ug/L	3.03	6.06	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:28	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
98-95-3	Nitrobenzene	ND		ug/L	0.303	0.303	1	EPA 8270D	12/07/2017 08:06	12/08/2017 14:04	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
62-75-9	N-Nitrosodimethylamine	ND		ug/L	0.606	0.606	1	EPA 8270D	12/07/2017 08:06	12/08/2017 14:04	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
621-64-7	N-nitroso-di-n-propylamine	ND		ug/L	3.03	6.06	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:28	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
86-30-6	N-Nitrosodiphenylamine	ND		ug/L	3.03	6.06	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:28	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
87-86-5	Pentachlorophenol	ND		ug/L	0.303	0.303	1	EPA 8270D	12/07/2017 08:06	12/08/2017 14:04	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
85-01-8	**Phenanthrene**	**1.75**		ug/L	0.0606	0.0606	1	EPA 8270D	12/07/2017 08:06	12/08/2017 14:04	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
108-95-2	Phenol	ND		ug/L	3.03	6.06	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:28	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
129-00-0	**Pyrene**	**0.327**		ug/L	0.0606	0.0606	1	EPA 8270D	12/07/2017 08:06	12/08/2017 14:04	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
110-86-1	Pyridine	ND		ug/L	3.03	6.06	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:28	KH
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*33.4 %*	*19.7-63.1*
4165-62-2	*Surrogate: Phenol-d5*	*24.5 %*	*10.1-41.7*

Sample Information

Client Sample ID: Soil boring SB-2/GW **York Sample ID:** 17L0152-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:** EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
4165-60-0	*Surrogate: Nitrobenzene-d5*	*77.3 %*			*50.2-113*						
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*59.0 %*			*39.9-105*						
118-79-6	*Surrogate: 2,4,6-Tribromophenol*	*100 %*			*39.3-151*						
1718-51-0	*Surrogate: Terphenyl-d14*	*56.8 %*			*30.7-106*						

Sample Information

Client Sample ID: Soil boring SB-3 **York Sample ID:** 17L0152-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:12	SR
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:12	SR
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:12	SR
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 13:40	12/13/2017 07:12	SR
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:12	SR
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:12	SR
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:12	SR
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:12	SR
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:12	SR
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 13:40	12/13/2017 07:12	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:12	SR
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:12	SR

Sample Information

Client Sample ID: **Soil boring SB-3** | **York Sample ID:** **17L0152-04**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
123-91-1	1,4-Dioxane	ND		ug/kg dry	50	99	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058		
78-93-3	2-Butanone	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-49-8	2-Chlorotoluene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-43-4	4-Chlorotoluene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
67-64-1	**Acetone**	**44**		ug/kg dry	5.0	9.9	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
71-43-2	Benzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-86-1	Bromobenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-97-5	Bromochloromethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-27-4	Bromodichloromethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-25-2	Bromoform	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-83-9	Bromomethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: Soil boring SB-3 **York Sample ID:** 17L0152-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-90-7	Chlorobenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-00-3	Chloroethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
67-66-3	Chloroform	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-87-3	Chloromethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
156-59-2	**cis-1,2-Dichloroethylene**	**16**		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
124-48-1	Dibromochloromethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-95-3	Dibromomethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
98-82-8	Isopropylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-09-2	Methylene chloride	ND		ug/kg dry	5.0	9.9	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
91-20-3	Naphthalene	ND		ug/kg dry	2.5	9.9	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-47-6	o-Xylene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	5.0	9.9	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: **Soil boring SB-3** | **York Sample ID:** **17L0152-04**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
100-42-5	Styrene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-88-3	Toluene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
79-01-6	**Trichloroethylene**	**7.0**		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-05-4	Vinyl acetate	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.5	5.0	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
1330-20-7	Xylenes, Total	ND		ug/kg dry	7.4	15	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:12	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*99.5 %*	*77-125*
2037-26-5	*Surrogate: Toluene-d8*	*102 %*	*85-120*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*93.0 %*	*76-130*

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications:	NELAC-NY10854,PADEP		
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications:	NELAC-NY10854,PADEP		
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications:	NELAC-NY10854,PADEP		

Sample Information

Client Sample ID: **Soil boring SB-3** | **York Sample ID:** **17L0152-04**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	93.2	186	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
95-57-8	2-Chlorophenol	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
95-48-7	2-Methylphenol	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
88-74-4	2-Nitroaniline	ND		ug/kg dry	93.2	186	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
88-75-5	2-Nitrophenol	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
91-94-1	3,3-Dichlorobenzidine	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: NELAC-NY10854,NJDEP,PADEP			
99-09-2	3-Nitroaniline	ND		ug/kg dry	93.2	186	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	93.2	186	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
106-47-8	4-Chloroaniline	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	46.7	93.2	2	EPA 8270D	12/12/2017 07:10	12/12/2017 20:44	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: Soil boring SB-3 **York Sample ID:** 17L0152-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-01-6	4-Nitroaniline	ND		ug/kg dry	93.2	186	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	93.2	186	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
83-32-9	Acenaphthene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
62-53-3	Aniline	ND		ug/kg dry	187	373	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
120-12-7	Anthracene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
218-01-9	Chrysene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR

Sample Information

Client Sample ID: Soil boring SB-3 **York Sample ID:** 17L0152-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
131-11-3	Dimethyl phthalate	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
206-44-0	Fluoranthene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
86-73-7	Fluorene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
78-59-1	Isophorone	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
91-20-3	Naphthalene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
85-01-8	Phenanthrene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
108-95-2	Phenol	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
129-00-0	Pyrene	ND		ug/kg dry	46.7	93.2	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR
110-86-1	Pyridine	ND		ug/kg dry	187	373	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 20:44	SR

Surrogate Recoveries	Result	Acceptance Range

Sample Information

Client Sample ID: **Soil boring SB-3** **York Sample ID:** **17L0152-04**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
367-12-4	*Surrogate: 2-Fluorophenol*	*73.3 %*			*20-108*						
4165-62-2	*Surrogate: Phenol-d5*	*79.9 %*			*23-114*						
4165-60-0	*Surrogate: Nitrobenzene-d5*	*63.8 %*			*22-108*						
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*70.4 %*			*21-113*						
118-79-6	*Surrogate: 2,4,6-Tribromophenol*	*83.8 %*			*19-110*						
1718-51-0	*Surrogate: Terphenyl-d14*	*56.5 %*			*24-116*						

Metals, RCRA

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	**Arsenic**	**2.23**		mg/kg dry	1.13	1	EPA 6010C	12/11/2017 10:16	12/11/2017 20:04	BML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-39-3	**Barium**	**52.5**		mg/kg dry	1.13	1	EPA 6010C	12/11/2017 10:16	12/11/2017 20:04	BML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-43-9	Cadmium	ND		mg/kg dry	0.338	1	EPA 6010C	12/11/2017 10:16	12/11/2017 20:04	BML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-47-3	**Chromium**	**13.7**		mg/kg dry	0.563	1	EPA 6010C	12/11/2017 10:16	12/11/2017 20:04	BML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7439-92-1	**Lead**	**9.45**		mg/kg dry	0.563	1	EPA 6010C	12/11/2017 10:16	12/11/2017 20:04	BML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7782-49-2	**Selenium**	**3.06**		mg/kg dry	1.13	1	EPA 6010C	12/11/2017 10:16	12/11/2017 20:04	BML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7440-22-4	Silver	ND		mg/kg dry	0.563	1	EPA 6010C	12/11/2017 10:16	12/11/2017 20:04	BML
							Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0338	1	EPA 7473	12/13/2017 09:17	12/13/2017 12:12	SY
							Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP			

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**88.9**		%	0.100	1	SM 2540G	12/07/2017 14:41	12/07/2017 17:35	TJM
							Certifications: CTDOH			

Sample Information

Client Sample ID: **Soil boring SB-4** **York Sample ID:** **17L0152-05**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 13:40	12/13/2017 07:43	SR
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 13:40	12/13/2017 07:43	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR

Sample Information

Client Sample ID: Soil boring SB-4 **York Sample ID:** 17L0152-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
123-91-1	1,4-Dioxane	ND		ug/kg dry	45	91	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 13:40	12/13/2017 07:43	SR
78-93-3	**2-Butanone**	**24**		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
95-49-8	2-Chlorotoluene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
106-43-4	4-Chlorotoluene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
67-64-1	**Acetone**	**68**		ug/kg dry	4.5	9.1	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
71-43-2	Benzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
108-86-1	Bromobenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
74-97-5	Bromochloromethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
75-27-4	Bromodichloromethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
75-25-2	Bromoform	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
74-83-9	Bromomethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
108-90-7	Chlorobenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
75-00-3	Chloroethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
67-66-3	Chloroform	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
74-87-3	Chloromethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
124-48-1	Dibromochloromethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
74-95-3	Dibromomethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 07:43	SR

Sample Information

Client Sample ID: **Soil boring SB-4** | **York Sample ID:** **17L0152-05**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
98-82-8	Isopropylbenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-09-2	Methylene chloride	ND		ug/kg dry	4.5	9.1	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
91-20-3	Naphthalene	ND		ug/kg dry	2.3	9.1	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-47-6	o-Xylene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	4.5	9.1	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
100-42-5	Styrene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-88-3	Toluene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
79-01-6	Trichloroethylene	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-05-4	Vinyl acetate	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: **Soil boring SB-4** **York Sample ID:** **17L0152-05**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.3	4.5	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
1330-20-7	Xylenes, Total	ND		ug/kg dry	6.8	14	1	EPA 8260C	12/12/2017 13:40	12/13/2017 07:43	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*102 %*	*77-125*
2037-26-5	*Surrogate: Toluene-d8*	*117 %*	*85-120*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*112 %*	*76-130*

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	NELAC-NY10854,PADEP		
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	NELAC-NY10854,PADEP		
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	NELAC-NY10854,PADEP		
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	93.6	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
95-57-8	2-Chlorophenol	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Sample Information

Client Sample ID: Soil boring SB-4 **York Sample ID:** 17L0152-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
95-48-7	2-Methylphenol	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
88-74-4	2-Nitroaniline	ND		ug/kg dry	93.6	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
88-75-5	2-Nitrophenol	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
91-94-1	3,3-Dichlorobenzidine	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: NELAC-NY10854,NJDEP,PADEP			
99-09-2	3-Nitroaniline	ND		ug/kg dry	93.6	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	93.6	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
106-47-8	4-Chloroaniline	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
100-01-6	4-Nitroaniline	ND		ug/kg dry	93.6	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
100-02-7	4-Nitrophenol	ND		ug/kg dry	93.6	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
83-32-9	Acenaphthene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
208-96-8	Acenaphthylene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
62-53-3	Aniline	ND		ug/kg dry	187	375	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: NELAC-NY10854,NJDEP,PADEP			
120-12-7	Anthracene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D	12/12/2017 07:10	12/12/2017 21:14	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: **Soil boring SB-4** **York Sample ID:** **17L0152-05**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
218-01-9	Chrysene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
206-44-0	Fluoranthene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
86-73-7	Fluorene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR

Sample Information

Client Sample ID: Soil boring SB-4 **York Sample ID:** 17L0152-05

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
78-59-1	Isophorone	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
91-20-3	Naphthalene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
85-01-8	Phenanthrene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
108-95-2	Phenol	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
129-00-0	Pyrene	ND		ug/kg dry	46.9	93.6	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR
110-86-1	Pyridine	ND		ug/kg dry	187	375	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:14	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*60.6 %*	*20-108*
4165-62-2	*Surrogate: Phenol-d5*	*64.5 %*	*23-114*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*58.1 %*	*22-108*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*62.7 %*	*21-113*
118-79-6	*Surrogate: 2,4,6-Tribromophenol*	*79.8 %*	*19-110*
1718-51-0	*Surrogate: Terphenyl-d14*	*56.8 %*	*24-116*

Metals, RCRA

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	**Arsenic**	**2.95**		mg/kg dry	1.12	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:08	BML
7440-39-3	**Barium**	**42.7**		mg/kg dry	1.12	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:08	BML
7440-43-9	Cadmium	ND		mg/kg dry	0.337	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:08	BML
7440-47-3	**Chromium**	**11.7**		mg/kg dry	0.561	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:08	BML

Sample Information

Client Sample ID: **Soil boring SB-4** **York Sample ID:** **17L0152-05**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Metals, RCRA

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-92-1	**Lead**	**7.73**		mg/kg dry	0.561	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:08	BML
7782-49-2	**Selenium**	**3.35**		mg/kg dry	1.12	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:08	BML
7440-22-4	Silver	ND		mg/kg dry	0.561	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:08	BML

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0337	1	EPA 7473 Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP	12/13/2017 09:17	12/13/2017 12:20	SY

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**89.1**		%	0.100	1	SM 2540G Certifications: CTDOH	12/07/2017 14:41	12/07/2017 17:35	TJM

Sample Information

Client Sample ID: **Soil boring SB-5** **York Sample ID:** **17L0152-06**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 13:40	12/13/2017 08:15	SR

Sample Information

Client Sample ID: **Soil boring SB-5** | **York Sample ID:** **17L0152-06**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058		
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-63-6	1,2,4-Trimethylbenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-67-8	1,3,5-Trimethylbenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
123-91-1	1,4-Dioxane	ND		ug/kg dry	48	96	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058		
78-93-3	**2-Butanone**	**11**		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-49-8	2-Chlorotoluene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: Soil boring SB-5 **York Sample ID:** 17L0152-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-43-4	4-Chlorotoluene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
67-64-1	**Acetone**	**37**		ug/kg dry	4.8	9.6	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
71-43-2	Benzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
108-86-1	Bromobenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
74-97-5	Bromochloromethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
75-27-4	Bromodichloromethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
75-25-2	Bromoform	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
74-83-9	Bromomethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
56-23-5	Carbon tetrachloride	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
108-90-7	Chlorobenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
75-00-3	**Chloroethane**	**14**		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
67-66-3	Chloroform	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
74-87-3	Chloromethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
124-48-1	Dibromochloromethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
74-95-3	Dibromomethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
100-41-4	Ethyl Benzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
98-82-8	Isopropylbenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	2.4	4.8	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 13:40	12/13/2017 08:15	SR

Sample Information

Client Sample ID: **Soil boring SB-5** | **York Sample ID:** **17L0152-06**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-09-2	Methylene chloride	ND		ug/kg dry	4.8	9.6	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
91-20-3	Naphthalene	ND		ug/kg dry	2.4	9.6	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
104-51-8	n-Butylbenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
103-65-1	n-Propylbenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-47-6	o-Xylene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
179601-23-1	p- & m- Xylenes	ND		ug/kg dry	4.8	9.6	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
135-98-8	sec-Butylbenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
100-42-5	Styrene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
98-06-6	tert-Butylbenzene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
127-18-4	Tetrachloroethylene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-88-3	Toluene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
79-01-6	Trichloroethylene	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-05-4	Vinyl acetate	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-01-4	Vinyl Chloride	ND		ug/kg dry	2.4	4.8	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
1330-20-7	Xylenes, Total	ND		ug/kg dry	7.2	14	1	EPA 8260C	12/12/2017 13:40	12/13/2017 08:15	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058		

	Surrogate Recoveries	Result	Flag	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*106 %*		*77-125*
2037-26-5	*Surrogate: Toluene-d8*	*121 %*	S-08	*85-120*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*113 %*		*76-130*

Sample Information

Client Sample ID: Soil boring SB-5 | **York Sample ID:** 17L0152-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: NELAC-NY10854,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	98.0	196	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
95-57-8	2-Chlorophenol	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
95-48-7	2-Methylphenol	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
88-74-4	2-Nitroaniline	ND		ug/kg dry	98.0	196	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
88-75-5	2-Nitrophenol	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
91-94-1	3,3-Dichlorobenzidine	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
99-09-2	3-Nitroaniline	ND		ug/kg dry	98.0	196	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	98.0	196	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR

Sample Information

Client Sample ID: **Soil boring SB-5** **York Sample ID:** **17L0152-06**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
106-47-8	4-Chloroaniline	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
100-01-6	4-Nitroaniline	ND		ug/kg dry	98.0	196	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
100-02-7	4-Nitrophenol	ND		ug/kg dry	98.0	196	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
83-32-9	Acenaphthene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
62-53-3	Aniline	ND		ug/kg dry	196	392	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
120-12-7	Anthracene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR

Sample Information

Client Sample ID: Soil boring SB-5 **York Sample ID:** 17L0152-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
218-01-9	Chrysene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
84-74-2	Di-n-butyl phthalate	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
206-44-0	Fluoranthene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
86-73-7	Fluorene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
118-74-1	Hexachlorobenzene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
67-72-1	Hexachloroethane	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
78-59-1	Isophorone	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
91-20-3	Naphthalene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
98-95-3	Nitrobenzene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
87-86-5	Pentachlorophenol	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR

Sample Information

Client Sample ID: Soil boring SB-5 **York Sample ID:** 17L0152-06

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
85-01-8	Phenanthrene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
108-95-2	Phenol	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
129-00-0	Pyrene	ND		ug/kg dry	49.1	98.0	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR
110-86-1	Pyridine	ND		ug/kg dry	196	392	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 21:46	SR

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*91.0 %*	*20-108*
4165-62-2	*Surrogate: Phenol-d5*	*97.5 %*	*23-114*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*83.3 %*	*22-108*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*81.2 %*	*21-113*
118-79-6	*Surrogate: 2,4,6-Tribromophenol*	*95.1 %*	*19-110*
1718-51-0	*Surrogate: Terphenyl-d14*	*61.8 %*	*24-116*

Metals, RCRA

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	**Arsenic**	**1.88**		mg/kg dry	1.17	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:13	BML
7440-39-3	**Barium**	**39.7**		mg/kg dry	1.17	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:13	BML
7440-43-9	Cadmium	ND		mg/kg dry	0.352	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:13	BML
7440-47-3	**Chromium**	**10.7**		mg/kg dry	0.587	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:13	BML
7439-92-1	**Lead**	**14.8**		mg/kg dry	0.587	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:13	BML
7782-49-2	**Selenium**	**1.63**		mg/kg dry	1.17	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:13	BML
7440-22-4	Silver	ND		mg/kg dry	0.587	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:13	BML

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0352	1	EPA 7473 Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP	12/13/2017 09:17	12/13/2017 12:29	SY

Sample Information

Client Sample ID: **Soil boring SB-5** | **York Sample ID:** **17L0152-06**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Total Solids | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**85.1**		%	0.100	1	SM 2540G Certifications: CTDOH	12/07/2017 14:41	12/07/2017 17:35	TJM

Sample Information

Client Sample ID: **Soil boring SB-6** | **York Sample ID:** **17L0152-07**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 10:27	SR
71-55-6	1,1,1-Trichloroethane	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 10:27	SR
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 10:27	SR
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058	12/11/2017 13:24	12/12/2017 10:27	SR
79-00-5	1,1,2-Trichloroethane	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 10:27	SR
75-34-3	1,1-Dichloroethane	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 10:27	SR
75-35-4	1,1-Dichloroethylene	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 10:27	SR
563-58-6	1,1-Dichloropropylene	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 10:27	SR
87-61-6	1,2,3-Trichlorobenzene	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 10:27	SR
96-18-4	1,2,3-Trichloropropane	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058	12/11/2017 13:24	12/12/2017 10:27	SR
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 10:27	SR
95-63-6	**1,2,4-Trimethylbenzene**	**1400**		ug/kg dry	210	420	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 10:27	SR
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/kg dry	210	420	100	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/11/2017 13:24	12/12/2017 10:27	SR

Sample Information

Client Sample ID: **Soil boring SB-6** | **York Sample ID:** **17L0152-07**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-93-4	1,2-Dibromoethane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
107-06-2	1,2-Dichloroethane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
78-87-5	1,2-Dichloropropane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-67-8	**1,3,5-Trimethylbenzene**	**500**		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
142-28-9	1,3-Dichloropropane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
123-91-1	1,4-Dioxane	ND		ug/kg dry	4200	8300	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
594-20-7	2,2-Dichloropropane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058		
78-93-3	2-Butanone	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-49-8	2-Chlorotoluene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-43-4	4-Chlorotoluene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
67-64-1	Acetone	ND		ug/kg dry	420	830	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
71-43-2	Benzene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-86-1	Bromobenzene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-97-5	Bromochloromethane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-27-4	Bromodichloromethane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-25-2	Bromoform	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-83-9	Bromomethane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
56-23-5	Carbon tetrachloride	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: **Soil boring SB-6** **York Sample ID:** **17L0152-07**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-90-7	Chlorobenzene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-00-3	Chloroethane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
67-66-3	Chloroform	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-87-3	Chloromethane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
156-59-2	cis-1,2-Dichloroethylene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
124-48-1	Dibromochloromethane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-95-3	Dibromomethane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-71-8	Dichlorodifluoromethane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
100-41-4	**Ethyl Benzene**	**950**		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
98-82-8	Isopropylbenzene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-09-2	Methylene chloride	ND		ug/kg dry	420	830	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
91-20-3	Naphthalene	ND		ug/kg dry	210	830	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
104-51-8	**n-Butylbenzene**	**310**	J	ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
103-65-1	**n-Propylbenzene**	**260**	J	ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-47-6	**o-Xylene**	**570**		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
179601-23-1	**p- & m- Xylenes**	**2700**		ug/kg dry	420	830	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
99-87-6	p-Isopropyltoluene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
135-98-8	sec-Butylbenzene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
100-42-5	Styrene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: Soil boring SB-6 | **York Sample ID:** 17L0152-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5035A

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
98-06-6	tert-Butylbenzene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
127-18-4	Tetrachloroethylene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-88-3	Toluene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
156-60-5	trans-1,2-Dichloroethylene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
79-01-6	Trichloroethylene	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-69-4	Trichlorofluoromethane	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-05-4	Vinyl acetate	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-01-4	Vinyl Chloride	ND		ug/kg dry	210	420	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
1330-20-7	**Xylenes, Total**	**3300**		ug/kg dry	630	1300	100	EPA 8260C	12/11/2017 13:24	12/12/2017 10:27	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058		

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*95.6 %*	*77-125*
2037-26-5	*Surrogate: Toluene-d8*	*108 %*	*85-120*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*90.3 %*	*76-130*

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
95-50-1	1,2-Dichlorobenzene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications:	NELAC-NY10854,PADEP		
541-73-1	1,3-Dichlorobenzene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications:	NELAC-NY10854,PADEP		
106-46-7	1,4-Dichlorobenzene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications:	NELAC-NY10854,PADEP		
95-95-4	2,4,5-Trichlorophenol	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		
88-06-2	2,4,6-Trichlorophenol	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,PADEP		

Sample Information

Client Sample ID: Soil boring SB-6 **York Sample ID:** 17L0152-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-83-2	2,4-Dichlorophenol	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
105-67-9	2,4-Dimethylphenol	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
51-28-5	2,4-Dinitrophenol	ND		ug/kg dry	93.7	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
121-14-2	2,4-Dinitrotoluene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
606-20-2	2,6-Dinitrotoluene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
91-58-7	2-Chloronaphthalene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
95-57-8	2-Chlorophenol	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
91-57-6	2-Methylnaphthalene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
95-48-7	2-Methylphenol	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
88-74-4	2-Nitroaniline	ND		ug/kg dry	93.7	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
88-75-5	2-Nitrophenol	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
65794-96-9	3- & 4-Methylphenols	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
91-94-1	3,3-Dichlorobenzidine	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: NELAC-NY10854,NJDEP,PADEP			
99-09-2	3-Nitroaniline	ND		ug/kg dry	93.7	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/kg dry	93.7	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
101-55-3	4-Bromophenyl phenyl ether	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
59-50-7	4-Chloro-3-methylphenol	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
106-47-8	4-Chloroaniline	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
100-01-6	4-Nitroaniline	ND		ug/kg dry	93.7	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
100-02-7	4-Nitrophenol	ND		ug/kg dry	93.7	187	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: Soil boring SB-6 **York Sample ID:** 17L0152-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
83-32-9	Acenaphthene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
208-96-8	Acenaphthylene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
62-53-3	Aniline	ND		ug/kg dry	188	375	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
120-12-7	Anthracene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
56-55-3	Benzo(a)anthracene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
50-32-8	Benzo(a)pyrene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
207-08-9	Benzo(k)fluoranthene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
100-51-6	Benzyl alcohol	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
85-68-7	Benzyl butyl phthalate	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
111-44-4	Bis(2-chloroethyl)ether	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
218-01-9	Chrysene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
132-64-9	Dibenzofuran	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
84-66-2	Diethyl phthalate	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
131-11-3	Dimethyl phthalate	ND		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR
84-74-2	**Di-n-butyl phthalate**	**113**		ug/kg dry	47.0	93.7	2	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/12/2017 07:10	12/12/2017 22:17	SR

Sample Information

Client Sample ID: Soil boring SB-6 **York Sample ID:** 17L0152-07

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
117-84-0	Di-n-octyl phthalate	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
206-44-0	Fluoranthene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
86-73-7	Fluorene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: NELAC-NY10854,NJDEP,PADEP			
118-74-1	Hexachlorobenzene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
87-68-3	Hexachlorobutadiene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
77-47-4	Hexachlorocyclopentadiene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
67-72-1	Hexachloroethane	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
78-59-1	Isophorone	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
91-20-3	**Naphthalene**	**62.9**	J	ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
98-95-3	Nitrobenzene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
62-75-9	N-Nitrosodimethylamine	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
621-64-7	N-nitroso-di-n-propylamine	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
86-30-6	N-Nitrosodiphenylamine	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
87-86-5	Pentachlorophenol	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
85-01-8	Phenanthrene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
108-95-2	Phenol	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
129-00-0	Pyrene	ND		ug/kg dry	47.0	93.7	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
110-86-1	Pyridine	ND		ug/kg dry	188	375	2	EPA 8270D	12/12/2017 07:10	12/12/2017 22:17	SR
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*78.2 %*	*20-108*
4165-62-2	*Surrogate: Phenol-d5*	*81.7 %*	*23-114*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*73.2 %*	*22-108*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*73.6 %*	*21-113*

Sample Information

Client Sample ID: **Soil boring SB-6** | **York Sample ID:** **17L0152-07**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Soil	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3550C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
118-79-6	*Surrogate: 2,4,6-Tribromophenol*	*84.1 %*			*19-110*						
1718-51-0	*Surrogate: Terphenyl-d14*	*55.9 %*			*24-116*						

Metals, RCRA

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 3050B

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7440-38-2	**Arsenic**	**1.37**		mg/kg dry	1.14	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:18	BML
7440-39-3	**Barium**	**39.6**		mg/kg dry	1.14	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:18	BML
7440-43-9	Cadmium	ND		mg/kg dry	0.342	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:18	BML
7440-47-3	**Chromium**	**11.5**		mg/kg dry	0.569	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:18	BML
7439-92-1	**Lead**	**6.34**		mg/kg dry	0.569	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:18	BML
7782-49-2	**Selenium**	**2.50**		mg/kg dry	1.14	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:18	BML
7440-22-4	Silver	ND		mg/kg dry	0.569	1	EPA 6010C Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/11/2017 10:16	12/11/2017 20:18	BML

Mercury by 7473

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 7473 soil

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
7439-97-6	Mercury	ND		mg/kg dry	0.0342	1	EPA 7473 Certifications: CTDOH,NJDEP,NELAC-NY10854,PADEP	12/13/2017 09:17	12/13/2017 12:38	SY

Total Solids

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: % Solids Prep

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
solids	*** % Solids**	**87.8**		%	0.100	1	SM 2540G Certifications: CTDOH	12/07/2017 14:41	12/07/2017 17:35	TJM

Sample Information

Client Sample ID: Soil boring SB-6/GW **York Sample ID:** 17L0152-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List - Low Level **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	1,1,1,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
71-55-6	**1,1,1-Trichloroethane**	**53**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
79-00-5	1,1,2-Trichloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
75-34-3	**1,1-Dichloroethane**	**160**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
75-35-4	**1,1-Dichloroethylene**	**18**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
563-58-6	1,1-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058	12/12/2017 12:12	12/13/2017 10:19	SS
87-61-6	1,2,3-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
96-18-4	1,2,3-Trichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
95-93-2	*** 1,2,4,5-Tetramethylbenzene**	**41**	CCV-E	ug/L	0.20	0.50	1	EPA 8260C Certifications:	12/12/2017 12:12	12/13/2017 10:19	SS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
95-63-6	**1,2,4-Trimethylbenzene**	**780**		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/13/2017 07:30	12/13/2017 16:39	SS
96-12-8	1,2-Dibromo-3-chloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
106-93-4	1,2-Dibromoethane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
95-50-1	1,2-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
107-06-2	**1,2-Dichloroethane**	**0.53**		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
78-87-5	1,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
108-67-8	**1,3,5-Trimethylbenzene**	**210**		ug/L	4.0	10	20	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/13/2017 07:30	12/13/2017 16:39	SS
541-73-1	1,3-Dichlorobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS
142-28-9	1,3-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C Certifications: NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP	12/12/2017 12:12	12/13/2017 10:19	SS

Sample Information

Client Sample ID: **Soil boring SB-6/GW** **York Sample ID:** **17L0152-08**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List - Low Level **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
106-46-7	**1,4-Dichlorobenzene**	**1.3**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
594-20-7	2,2-Dichloropropane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
78-93-3	2-Butanone	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-49-8	2-Chlorotoluene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
591-78-6	2-Hexanone	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
106-43-4	4-Chlorotoluene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-10-1	**4-Methyl-2-pentanone**	**1.0**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
67-64-1	**Acetone**	**3.1**	CCV-E	ug/L	1.0	2.0	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
71-43-2	**Benzene**	**0.91**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-86-1	Bromobenzene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-97-5	Bromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-27-4	Bromodichloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-25-2	Bromoform	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-83-9	Bromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-15-0	**Carbon disulfide**	**0.20**	J	ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
56-23-5	Carbon tetrachloride	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-90-7	**Chlorobenzene**	**0.72**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-00-3	Chloroethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
67-66-3	**Chloroform**	**2.1**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-87-3	Chloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
156-59-2	**cis-1,2-Dichloroethylene**	**1800**		ug/L	20	50	100	EPA 8260C	12/14/2017 07:30	12/14/2017 15:25	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: Soil boring SB-6/GW **York Sample ID:** 17L0152-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List - Low Level **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
124-48-1	Dibromochloromethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
74-95-3	Dibromomethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-71-8	Dichlorodifluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
100-41-4	**Ethyl Benzene**	**1900**		ug/L	4.0	10	20	EPA 8260C	12/13/2017 07:30	12/13/2017 16:39	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
87-68-3	Hexachlorobutadiene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
98-82-8	**Isopropylbenzene**	**65**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
75-09-2	Methylene chloride	ND		ug/L	1.0	2.0	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
91-20-3	**Naphthalene**	**87**	CCV-E	ug/L	20	40	20	EPA 8260C	12/13/2017 07:30	12/13/2017 16:39	SS
								Certifications:	NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
104-51-8	**n-Butylbenzene**	**16**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
103-65-1	**n-Propylbenzene**	**110**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
95-47-6	**o-Xylene**	**1600**		ug/L	4.0	10	20	EPA 8260C	12/13/2017 07:30	12/13/2017 16:39	SS
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
179601-23-1	**p- & m- Xylenes**	**4300**		ug/L	10	20	20	EPA 8260C	12/13/2017 07:30	12/13/2017 16:39	SS
								Certifications:	CTDOH,NELAC-NY10854,NELAC-NY12058,PADEP		
105-05-5	*** p-Diethylbenzene**	**45**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:			
622-96-8	*** p-Ethyltoluene**	**210**		ug/L	4.0	10	20	EPA 8260C	12/13/2017 07:30	12/13/2017 16:39	SS
								Certifications:			
99-87-6	**p-Isopropyltoluene**	**14**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
135-98-8	**sec-Butylbenzene**	**14**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
100-42-5	Styrene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
98-06-6	**tert-Butylbenzene**	**3.4**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
127-18-4	**Tetrachloroethylene**	**13**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
108-88-3	**Toluene**	**130**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
156-60-5	**trans-1,2-Dichloroethylene**	**110**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications:	CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP		

Sample Information

Client Sample ID: **Soil boring SB-6/GW** **York Sample ID:** **17L0152-08**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, 8260 List - Low Level

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA 5030B

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
79-01-6	**Trichloroethylene**	**60**		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP			
75-69-4	Trichlorofluoromethane	ND		ug/L	0.20	0.50	1	EPA 8260C	12/12/2017 12:12	12/13/2017 10:19	SS
								Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP			
75-01-4	**Vinyl Chloride**	**650**		ug/L	20	50	100	EPA 8260C	12/14/2017 07:30	12/14/2017 15:25	SS
								Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058,PADEP			
1330-20-7	**Xylenes, Total**	**5900**		ug/L	12	30	20	EPA 8260C	12/13/2017 07:30	12/13/2017 16:39	SS
								Certifications: CTDOH,NELAC-NY10854,NJDEP,NELAC-NY12058			

	Surrogate Recoveries	Result	Acceptance Range
17060-07-0	*Surrogate: 1,2-Dichloroethane-d4*	*92.7 %*	*69-130*
2037-26-5	*Surrogate: Toluene-d8*	*95.8 %*	*81-117*
460-00-4	*Surrogate: p-Bromofluorobenzene*	*94.9 %*	*79-122*

Semi-Volatiles, 8270 Target List

Log-in Notes: **Sample Notes:** EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
120-82-1	1,2,4-Trichlorobenzene	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
95-50-1	1,2-Dichlorobenzene	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: NELAC-NY10854,PADEP			
541-73-1	1,3-Dichlorobenzene	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: NELAC-NY10854,PADEP			
106-46-7	1,4-Dichlorobenzene	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: NELAC-NY10854,PADEP			
95-95-4	2,4,5-Trichlorophenol	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
88-06-2	2,4,6-Trichlorophenol	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
120-83-2	2,4-Dichlorophenol	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
105-67-9	**2,4-Dimethylphenol**	**5.11**		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
51-28-5	2,4-Dinitrophenol	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
121-14-2	2,4-Dinitrotoluene	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
606-20-2	2,6-Dinitrotoluene	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
91-58-7	2-Chloronaphthalene	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			
95-57-8	2-Chlorophenol	ND		ug/L	2.50	5.00	1	EPA 8270D	12/07/2017 08:06	12/07/2017 19:58	KH
								Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP			

Sample Information

Client Sample ID: Soil boring SB-6/GW **York Sample ID:** 17L0152-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:** EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-57-6	**2-Methylnaphthalene**	**3.28**	J	ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
95-48-7	2-Methylphenol	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
88-74-4	2-Nitroaniline	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
88-75-5	2-Nitrophenol	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
65794-96-9	3- & 4-Methylphenols	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
91-94-1	3,3-Dichlorobenzidine	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
99-09-2	3-Nitroaniline	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
534-52-1	4,6-Dinitro-2-methylphenol	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
101-55-3	4-Bromophenyl phenyl ether	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
59-50-7	4-Chloro-3-methylphenol	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
106-47-8	4-Chloroaniline	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
7005-72-3	4-Chlorophenyl phenyl ether	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
100-01-6	4-Nitroaniline	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
100-02-7	4-Nitrophenol	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
83-32-9	**Acenaphthene**	**0.180**		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
208-96-8	Acenaphthylene	ND		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
62-53-3	Aniline	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
120-12-7	**Anthracene**	**0.0600**		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
56-55-3	Benzo(a)anthracene	ND		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
50-32-8	Benzo(a)pyrene	ND		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
205-99-2	Benzo(b)fluoranthene	ND		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
191-24-2	Benzo(g,h,i)perylene	ND		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR

Sample Information

Client Sample ID: Soil boring SB-6/GW **York Sample ID:** 17L0152-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List **Log-in Notes:** **Sample Notes:** EXT-EM

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
207-08-9	Benzo(k)fluoranthene	ND		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
100-51-6	Benzyl alcohol	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
85-68-7	Benzyl butyl phthalate	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
111-91-1	Bis(2-chloroethoxy)methane	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
111-44-4	Bis(2-chloroethyl)ether	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
108-60-1	Bis(2-chloroisopropyl)ether	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
117-81-7	Bis(2-ethylhexyl)phthalate	ND		ug/L	0.500	0.500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
218-01-9	Chrysene	ND		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
53-70-3	Dibenzo(a,h)anthracene	ND		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
132-64-9	Dibenzofuran	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
84-66-2	Diethyl phthalate	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
131-11-3	Dimethyl phthalate	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
84-74-2	**Di-n-butyl phthalate**	**3.96**	J	ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
117-84-0	Di-n-octyl phthalate	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
206-44-0	**Fluoranthene**	**0.0500**	J	ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
86-73-7	**Fluorene**	**0.240**		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
118-74-1	Hexachlorobenzene	ND		ug/L	0.0200	0.0200	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
87-68-3	Hexachlorobutadiene	ND		ug/L	0.500	0.500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
77-47-4	Hexachlorocyclopentadiene	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
67-72-1	Hexachloroethane	ND		ug/L	0.500	0.500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
193-39-5	Indeno(1,2,3-cd)pyrene	ND		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
78-59-1	Isophorone	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH

Sample Information

Client Sample ID: Soil boring SB-6/GW   **York Sample ID:** 17L0152-08

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0152	584 Chestnut Ridge Rd Spring Valley, NY	Water	December 5, 2017 3:00 pm	12/06/2017

Semi-Volatiles, 8270 Target List   **Log-in Notes:**   **Sample Notes:**

Sample Prepared by Method: EPA 3510C

CAS No.	Parameter	Result	Flag	Units	Reported to LOD/MDL	LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
91-20-3	**Naphthalene**	**137**		ug/L	12.5	25.0	5	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:02	KH
98-95-3	Nitrobenzene	ND		ug/L	0.250	0.250	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
62-75-9	N-Nitrosodimethylamine	ND		ug/L	0.500	0.500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
621-64-7	N-nitroso-di-n-propylamine	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
86-30-6	N-Nitrosodiphenylamine	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
87-86-5	Pentachlorophenol	ND		ug/L	0.250	0.250	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
85-01-8	**Phenanthrene**	**0.300**		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
108-95-2	Phenol	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH
129-00-0	Pyrene	ND		ug/L	0.0500	0.0500	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/08/2017 14:36	SR
110-86-1	Pyridine	ND		ug/L	2.50	5.00	1	EPA 8270D Certifications: CTDOH,NELAC-NY10854,NJDEP,PADEP	12/07/2017 08:06	12/07/2017 19:58	KH

	Surrogate Recoveries	Result	Acceptance Range
367-12-4	*Surrogate: 2-Fluorophenol*	*28.9 %*	*19.7-63.1*
4165-62-2	*Surrogate: Phenol-d5*	*19.6 %*	*10.1-41.7*
4165-60-0	*Surrogate: Nitrobenzene-d5*	*73.9 %*	*50.2-113*
321-60-8	*Surrogate: 2-Fluorobiphenyl*	*55.9 %*	*39.9-105*
118-79-6	*Surrogate: 2,4,6-Tribromophenol*	*94.7 %*	*39.3-151*
1718-51-0	*Surrogate: Terphenyl-d14*	*43.6 %*	*30.7-106*

Volatile Analysis Sample Containers

Lab ID	Client Sample ID	Volatile Sample Container
17L0152-01	Soil boring SB-1	40mL Pre-Tared Vial + 10mL MeOH; Cool to 4° C
17L0152-02	Soil boring SB-2	40mL Pre-Tared Vial + 10mL MeOH; Cool to 4° C
17L0152-03	Soil boring SB-2/GW	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C
17L0152-04	Soil boring SB-3	40mL Vial with Stir Bar-Cool 4° C
17L0152-05	Soil boring SB-4	40mL Vial with Stir Bar-Cool 4° C
17L0152-06	Soil boring SB-5	40mL Vial with Stir Bar-Cool 4° C
17L0152-07	Soil boring SB-6	40mL Pre-Tared Vial + 10mL MeOH; Cool to 4° C
17L0152-08	Soil boring SB-6/GW	40mL Clear Vial (pre-pres.) HCl; Cool to 4° C

Sample and Data Qualifiers Relating to This Work Order

S-08	The recovery of this surrogate was outside of QC limits.
QR-04	The RPD exceeded control limits for the LCS/LCSD QC.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QL-02	This LCS analyte is outside Laboratory Recovery limits due the analyte behavior using the referenced method. The reference method has certain limitations with respect to analytes of this nature.
J	Detected below the Reporting Limit but greater than or equal to the Method Detection Limit (MDL/LOD) or in the case of a TIC, the result is an estimated concentration.
EXT-EM	The sample exhibited emulsion formation during the extraction process. This may affect surrogate recoveries.
CCV-E	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>20% Difference for average Rf or >20% Drift for quadratic fit).
B	Analyte is found in the associated analysis batch blank. For volatiles, methylene chloride and acetone are common lab contaminants.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

YORK ANALYTICAL LABORATORIES
120 RESEARCH DR.
STRATFORD, CT 06615
(203) 325-1371
FAX (203) 357-0166

Field Chain-of-Custody Record

Page 1 of ____

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions.

York Project No. 17L0152

YOUR Information	Report To:	Invoice To:	YOUR Project ID	Turn-Around Time	Report Type
Company: DT Consulting Services Inc	Company: Same	Company: Same	584 Chestnut Ridge Rd Spring Valley, NY	RUSH - Same Day ☐	Summary Report ✓
Address:	Address:	Address:	**Purchase Order No.**	RUSH - Next Day ☐	Summary w/ QA Summary ____
Phone No.	Phone No.	Phone No.		RUSH - Two Day ☐	CT RCP Package ____
Contact Person: Deborah Thompson	Attention:	Attention:		RUSH - Three Day ☐	CTRCP DQA/DUE Pkg ____
E-Mail Address:	E-Mail Address:	E-Mail Address:	Samples from: CT ___ NY ✓ NJ ___	RUSH - Four Day ☐	NY ASP A Package ____
				Standard(5-7 Days) ✓	NY ASP B Package ____
					NJDEP Red. Deliv. ____

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Deborah Thompson
Samples Collected/Authorized By (Signature)
Deborah J Thompson
Name (printed)

Matrix Codes
S - soil
Other - specify(oil, etc.)
WW - wastewater
GW - groundwater
DW - drinking water
Air-A - ambient air
Air-SV - soil vapor

Volatiles		Semi-Vols.	Pest/PCB/Herb	Metals	Misc. Org.	Full Lists	Misc.
8260 full	TICs	8270 or 625	8082PCB	RCRA8	TPH GRO	Pri.Poll.	Corrosivity
624	Site Spec.	STARS list	8081Pest	PP13 list	TPH DRO	TCL Organics	Reactivity
STARS list	Nassau Co.	BN Only	8151Herb	TAL	CT ETPH	TAL Met/CN	Ignitability
BTEX	Suffolk Co.	Acids Only	CT RCP	CT15 list	NY 310-13	Full TCLP	Flash Point
MTBE	Ketones	PAH list	App. IX	TAGM list	TPH 1664	Full App. IX	Sieve Anal.
TCL list	Oxygenates	TAGM list	Site Spec.	NJDEP list	Air TO14A	Part 360-Routine	Heterotrophs
TAGM list	TCLP list	CT RCP list	SPLP or TCLP	Total	Air TO15	Part 360-Baseline	TOX
CT RCP list	524.2	TCL list	TCLP Pest	Dissolved	Air STARS	Part 360-Expanded	BTU/lb.
Arom. only	502.2	NJDEP list	TCLP Herb	SPLP or TCLP	Air VPH	Part 360-Expanded	Aquatic Tox.
Halog.only	NJDEP list	App. IX	Chlordane	Indiv. Metals	Air TICs	NYCDEP Sewer	TOC
App.IX list	SPLP or TCLP	TCLP BNA	608 Pest	LIST Below	Methane	NYSDEC Sewer	Asbestos
8021B list		SPLP or TCLP	608 PCB		Helium	TAGM	Silica

Electronic Data Deliverables (EDD)
Simple Excel ____
NYSDEC EQuIS ____
EQuIS (std) ____
EZ-EDD (EQuIS) ____
NJDEP SRP HazSite EDD ____
GIS/KEY (std) ____
Other ____
York Regulatory Comparison Excel Spreadsheet
Compare to the following Regs. (please fill in):

Sample Identification	Date/Time Sampled	Sample Matrix	Choose Analyses Needed from the Menu Above and Enter Below	Container Description(s)
Soil boring SB-1	12/5/17	S	8260 (full), 8270 (full) RCRA8	(4) 40ml (1) 8oz
Soil boring SB-2	↓	↓	↓ ↓ ↓	↓
Soil boring SB-2/GW	↓	GW	8260 (full) 8270 (full)	(2) 40ml (1) 1L
Soil boring SB-3	↓	S	8260 (full) 8270 (full) RCRA8	(4) 40ml (1) 1L
Soil boring SB-4	↓	↓	↓ ↓ ↓	↓
Soil boring SB-5	↓	↓	↓ ↓ ↓	↓
Soil boring SB-6	↓	↓	↓ ↓ ↓	↓
Soil boring SB-6 GW	↓	GW	8260 (full) 8270 (full)	(2) 40ml (1) 1L

Comments

Preservation Check those Applicable: 4°C ✓ Frozen ___ HCl ___ MeOH ✓ HNO3 ___ H2SO4 ___ NaOH ___ ZnAc ___ Ascorbic Acid ___ Other ___

Special Instructions
Field Filtered ☐
Lab to Filter ☐

Samples Relinquished By	Date/Time	Samples Received By	Date/Time
Deborah Thompson	12/6/17	[illegible signature]	12-6-17 11:16
Samples Relinquished By	Date/Time	Samples Received in LAB by: PGrace	Date/Time: 12-6-17 15:25

Temperature on Receipt 3.0 °C

Sub-Slab Soil Gas

Technical Report

prepared for:

DT Consulting Services
1291 Old Post Road
Ulster Park NY, 12487
Attention: Deborah Thompson

Report Date: 12/14/2017
Client Project ID: 584 Chestnut Ridge Rd., Spring Valley, NY
York Project (SDG) No.: 17L0145

CT Cert. No. PH-0723 New Jersey Cert. No. CT005 and NY037 New York Cert. Nos. 10854 and 12058 PA Cert. No. 68-04440

Report Date: 12/14/2017

Client Project ID: 584 Chestnut Ridge Rd., Spring Valley, NY

York Project (SDG) No.: 17L0145

DT Consulting Services

1291 Old Post Road

Ulster Park NY, 12487

Attention: Deborah Thompson

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on December 06, 2017 and listed below. The project was identified as your project: **584 Chestnut Ridge Rd., Spring Valley, NY**.

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the customary acceptance requirements for environmental samples except those indicated under the Sample and Analysis Qualifiers section of this report.

All analyses met the method and laboratory standard operating procedure requirements except as indicated by any data flags, the meaning of which are explained in the Sample and Data Qualifiers Relating to This Work Order section of this report and case narrative if applicable.

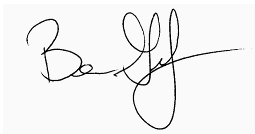
The results of the analyses, which are all reported on dry weight basis (soils) unless otherwise noted, are detailed in the following pages.

Please contact Client Services at 203.325.1371 with any questions regarding this report.

York Sample ID	Client Sample ID	Matrix	Date Collected	Date Received
17L0145-01	SG-1	Soil Vapor	12/05/2017	12/06/2017
17L0145-02	SG-2	Soil Vapor	12/05/2017	12/06/2017
17L0145-03	SG-3	Soil Vapor	12/05/2017	12/06/2017
17L0145-04	SG-4	Soil Vapor	12/05/2017	12/06/2017

General Notes for York Project (SDG) No.: 17L0145

1. The RLs and MDLs (Reporting Limit and Method Detection Limit respectively) reported are adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. The RL(REPORTING LIMIT) is based upon the lowest standard utilized for the calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All analyses conducted met method or Laboratory SOP requirements. See the Sample and Data Qualifiers Section for further information.
6. It is noted that no analyses reported herein were subcontracted to another laboratory, unless noted in the report.
7. This report reflects results that relate only to the samples submitted on the attached chain-of-custody form(s) received by York.
8. Analyses conducted at York Analytical Laboratories, Inc. Stratford, CT are indicated by NY Cert. No. 10854; those conducted at York Analytical Laboratories, Inc., Richmond Hill, NY are indicated by NY Cert. No. 12058.

Approved By:  **Date:** 12/14/2017

Benjamin Gulizia
Laboratory Director

Sample Information

Client Sample ID: **SG-1** | **York Sample ID:** **17L0145-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List

Log-in Notes:

Sample Notes:

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	9.2	13.4	EPA TO-15 Certifications:	12/08/2017 12:43	12/08/2017 12:43	LDS
71-55-6	**1,1,1-Trichloroethane**	**4100**		ug/m³	58	107	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/13/2017 10:52	12/13/2017 10:52	LDS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	9.2	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	10	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	7.3	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
75-34-3	**1,1-Dichloroethane**	**9100**	IS-LO	ug/m³	22	53.6	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 21:49	12/12/2017 21:49	LDS
75-35-4	**1,1-Dichloroethylene**	**120**		ug/m³	1.3	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	9.9	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
95-63-6	**1,2,4-Trimethylbenzene**	**53**		ug/m³	6.6	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
106-93-4	1,2-Dibromoethane	ND		ug/m³	10	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	8.1	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
107-06-2	1,2-Dichloroethane	ND		ug/m³	5.4	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
78-87-5	1,2-Dichloropropane	ND		ug/m³	6.2	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	9.4	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
108-67-8	**1,3,5-Trimethylbenzene**	**21**		ug/m³	6.6	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
106-99-0	1,3-Butadiene	ND		ug/m³	8.9	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	8.1	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	6.2	13.4	EPA TO-15 Certifications:	12/08/2017 12:43	12/08/2017 12:43	LDS
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	8.1	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
123-91-1	1,4-Dioxane	ND		ug/m³	9.7	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
78-93-3	**2-Butanone**	**51**		ug/m³	4.0	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS

Sample Information

Client Sample ID: **SG-1** | **York Sample ID:** **17L0145-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
591-78-6	*** 2-Hexanone**	**25**		ug/m³	11	13.4	EPA TO-15 Certifications:	12/08/2017 12:43	12/08/2017 12:43	LDS
107-05-1	3-Chloropropene	ND		ug/m³	21	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
108-10-1	**4-Methyl-2-pentanone**	**18**		ug/m³	5.5	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
67-64-1	**Acetone**	**1200**		ug/m³	6.4	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
107-13-1	Acrylonitrile	ND		ug/m³	2.9	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
71-43-2	**Benzene**	**10**		ug/m³	4.3	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
100-44-7	Benzyl chloride	ND		ug/m³	6.9	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
75-27-4	Bromodichloromethane	ND		ug/m³	9.0	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
75-25-2	Bromoform	ND		ug/m³	14	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
74-83-9	Bromomethane	ND		ug/m³	5.2	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
75-15-0	Carbon disulfide	ND		ug/m³	4.2	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
56-23-5	Carbon tetrachloride	ND		ug/m³	2.1	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
108-90-7	Chlorobenzene	ND	IS-LO	ug/m³	6.2	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
75-00-3	**Chloroethane**	**34**		ug/m³	3.5	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
67-66-3	**Chloroform**	**94**		ug/m³	6.5	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
74-87-3	Chloromethane	ND		ug/m³	2.8	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
156-59-2	**cis-1,2-Dichloroethylene**	**10000**	IS-LO	ug/m³	5.3	53.6	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 21:49	12/12/2017 21:49	LDS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	6.1	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
110-82-7	**Cyclohexane**	**12**		ug/m³	4.6	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
124-48-1	Dibromochloromethane	ND		ug/m³	11	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
75-71-8	Dichlorodifluoromethane	ND		ug/m³	6.6	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
141-78-6	* Ethyl acetate	ND		ug/m³	9.7	13.4	EPA TO-15 Certifications:	12/08/2017 12:43	12/08/2017 12:43	LDS

Sample Information

Client Sample ID: **SG-1** **York Sample ID:** **17L0145-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
100-41-4	**Ethyl Benzene**	**24**	IS-LO	ug/m³	5.8	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
87-68-3	Hexachlorobutadiene	ND	IS-LO	ug/m³	14	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
67-63-0	**Isopropanol**	**820**		ug/m³	6.6	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
80-62-6	Methyl Methacrylate	ND		ug/m³	5.5	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	4.8	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
75-09-2	Methylene chloride	ND		ug/m³	9.3	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
142-82-5	**n-Heptane**	**9.3**		ug/m³	5.5	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
110-54-3	**n-Hexane**	**15**		ug/m³	4.7	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
95-47-6	**o-Xylene**	**31**	IS-LO	ug/m³	5.8	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
179601-23-1	**p- & m- Xylenes**	**60**	IS-LO	ug/m³	12	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
622-96-8	*** p-Ethyltoluene**	**46**	IS-LO	ug/m³	6.6	13.4	EPA TO-15 Certifications:	12/08/2017 12:43	12/08/2017 12:43	LDS
115-07-1	*** Propylene**	**100**		ug/m³	2.3	13.4	EPA TO-15 Certifications:	12/08/2017 12:43	12/08/2017 12:43	LDS
100-42-5	Styrene	ND	IS-LO	ug/m³	5.7	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
127-18-4	**Tetrachloroethylene**	**17000**		ug/m³	18	107	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/13/2017 10:52	12/13/2017 10:52	LDS
109-99-9	* Tetrahydrofuran	ND		ug/m³	7.9	13.4	EPA TO-15 Certifications:	12/08/2017 12:43	12/08/2017 12:43	LDS
108-88-3	**Toluene**	**53**		ug/m³	5.0	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
156-60-5	**trans-1,2-Dichloroethylene**	**92**		ug/m³	5.3	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	6.1	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
79-01-6	**Trichloroethylene**	**13000**	IS-LO	ug/m³	7.2	53.6	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 21:49	12/12/2017 21:49	LDS
75-69-4	Trichlorofluoromethane (Freon 11)	ND		ug/m³	7.5	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
108-05-4	Vinyl acetate	ND		ug/m³	4.7	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS
593-60-2	Vinyl bromide	ND		ug/m³	5.9	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS

Sample Information

Client Sample ID: **SG-1** | **York Sample ID:** **17L0145-01**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-01-4	**Vinyl Chloride**	**40**		ug/m³	0.86	13.4	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/08/2017 12:43	12/08/2017 12:43	LDS

Sample Information

Client Sample ID: **SG-2** | **York Sample ID:** **17L0145-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	*** 1,1,1,2-Tetrachloroethane**	**330**		ug/m³	9.4	13.72	EPA TO-15 Certifications:	12/11/2017 15:10	12/11/2017 15:10	LDS
71-55-6	**1,1,1-Trichloroethane**	**65000**		ug/m³	750	1372	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/13/2017 11:15	12/13/2017 17:05	LDS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	9.4	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
76-13-1	**1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)**	**11**		ug/m³	11	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
79-00-5	**1,1,2-Trichloroethane**	**91**		ug/m³	7.5	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
75-34-3	**1,1-Dichloroethane**	**23000**		ug/m³	110	274	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/13/2017 11:54	12/13/2017 11:54	LDS
75-35-4	**1,1-Dichloroethylene**	**2600**		ug/m³	1.4	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	10	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
95-63-6	1,2,4-Trimethylbenzene	ND		ug/m³	6.7	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
106-93-4	1,2-Dibromoethane	ND		ug/m³	11	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	8.2	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
107-06-2	1,2-Dichloroethane	ND		ug/m³	5.6	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
78-87-5	1,2-Dichloropropane	ND		ug/m³	6.3	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	9.6	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS

Sample Information

Client Sample ID: **SG-2** | **York Sample ID:** **17L0145-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List

Log-in Notes: **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m³	6.7	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
106-99-0	1,3-Butadiene	ND		ug/m³	9.1	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	8.2	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	6.3	13.72	EPA TO-15 Certifications:	12/11/2017 15:10	12/11/2017 15:10	LDS
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	8.2	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
123-91-1	1,4-Dioxane	ND		ug/m³	9.9	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
78-93-3	**2-Butanone**	**19**		ug/m³	4.0	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
591-78-6	* 2-Hexanone	ND		ug/m³	11	13.72	EPA TO-15 Certifications:	12/11/2017 15:10	12/11/2017 15:10	LDS
107-05-1	3-Chloropropene	ND		ug/m³	21	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	5.6	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
67-64-1	**Acetone**	**130**		ug/m³	6.5	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
107-13-1	Acrylonitrile	ND		ug/m³	3.0	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
71-43-2	**Benzene**	**35**		ug/m³	4.4	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
100-44-7	Benzyl chloride	ND		ug/m³	7.1	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
75-27-4	Bromodichloromethane	ND		ug/m³	9.2	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
75-25-2	Bromoform	ND		ug/m³	14	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
74-83-9	Bromomethane	ND		ug/m³	5.3	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
75-15-0	Carbon disulfide	ND		ug/m³	4.3	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
56-23-5	**Carbon tetrachloride**	**6.0**		ug/m³	2.2	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
108-90-7	Chlorobenzene	ND	IS-LO	ug/m³	6.3	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
75-00-3	**Chloroethane**	**140**		ug/m³	3.6	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
67-66-3	**Chloroform**	**2000**		ug/m³	6.7	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS

Sample Information

Client Sample ID: **SG-2** | **York Sample ID:** **17L0145-02**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List | **Log-in Notes:** | **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
74-87-3	**Chloromethane**	**4.2**		ug/m³	2.8	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
156-59-2	**cis-1,2-Dichloroethylene**	**42000**		ug/m³	27	274	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/13/2017 11:54	12/13/2017 11:54	LDS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	6.2	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
110-82-7	**Cyclohexane**	**91**		ug/m³	4.7	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
124-48-1	Dibromochloromethane	ND		ug/m³	12	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
75-71-8	Dichlorodifluoromethane	ND		ug/m³	6.8	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
141-78-6	* Ethyl acetate	ND		ug/m³	9.9	13.72	EPA TO-15 Certifications:	12/11/2017 15:10	12/11/2017 15:10	LDS
100-41-4	**Ethyl Benzene**	**17**	IS-LO	ug/m³	6.0	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
87-68-3	Hexachlorobutadiene	ND	IS-LO	ug/m³	15	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
67-63-0	**Isopropanol**	**48**		ug/m³	6.7	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
80-62-6	Methyl Methacrylate	ND		ug/m³	5.6	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	4.9	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
75-09-2	**Methylene chloride**	**370**		ug/m³	9.5	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
142-82-5	**n-Heptane**	**39**		ug/m³	5.6	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
110-54-3	**n-Hexane**	**60**		ug/m³	4.8	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
95-47-6	**o-Xylene**	**9.5**	IS-LO	ug/m³	6.0	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
179601-23-1	**p- & m- Xylenes**	**24**	IS-LO	ug/m³	12	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
622-96-8	* p-Ethyltoluene	ND	IS-LO	ug/m³	6.7	13.72	EPA TO-15 Certifications:	12/11/2017 15:10	12/11/2017 15:10	LDS
115-07-1	*** Propylene**	**15**		ug/m³	2.4	13.72	EPA TO-15 Certifications:	12/11/2017 15:10	12/11/2017 15:10	LDS
100-42-5	Styrene	ND	IS-LO	ug/m³	5.8	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
127-18-4	**Tetrachloroethylene**	**740000**		ug/m³	470	2744	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/13/2017 11:15	12/14/2017 10:49	LDS
109-99-9	* Tetrahydrofuran	ND		ug/m³	8.1	13.72	EPA TO-15 Certifications:	12/11/2017 15:10	12/11/2017 15:10	LDS

Sample Information

Client Sample ID: SG-2 **York Sample ID:** 17L0145-02

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
108-88-3	**Toluene**	**130**		ug/m³	5.2	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
156-60-5	**trans-1,2-Dichloroethylene**	**130**		ug/m³	5.4	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	6.2	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
79-01-6	**Trichloroethylene**	**59000**		ug/m³	37	274	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/13/2017 11:54	12/13/2017 11:54	LDS
75-69-4	**Trichlorofluoromethane (Freon 11)**	**10**		ug/m³	7.7	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
108-05-4	Vinyl acetate	ND		ug/m³	4.8	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
593-60-2	Vinyl bromide	ND		ug/m³	6.0	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS
75-01-4	**Vinyl Chloride**	**350**		ug/m³	0.88	13.72	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 15:10	12/11/2017 15:10	LDS

	Surrogate Recoveries	Result		Acceptance Range
460-00-4	*Surrogate: p-Bromofluorobenzene*	*17.3 %*	S-04	*70-130*

Sample Information

Client Sample ID: SG-3 **York Sample ID:** 17L0145-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	9.6	14.01	EPA TO-15 Certifications:	12/12/2017 20:48	12/12/2017 20:48	LDS
71-55-6	**1,1,1-Trichloroethane**	**150**		ug/m³	7.6	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	9.6	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	11	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	7.6	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
75-34-3	**1,1-Dichloroethane**	**7.9**		ug/m³	5.7	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS

Sample Information

Client Sample ID: **SG-3** **York Sample ID:** **17L0145-03**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-35-4	1,1-Dichloroethylene	ND		ug/m³	1.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	10	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
95-63-6	**1,2,4-Trimethylbenzene**	**12**		ug/m³	6.9	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
106-93-4	1,2-Dibromoethane	ND		ug/m³	11	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	8.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
107-06-2	1,2-Dichloroethane	ND		ug/m³	5.7	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
78-87-5	1,2-Dichloropropane	ND		ug/m³	6.5	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	9.8	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m³	6.9	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
106-99-0	1,3-Butadiene	ND		ug/m³	9.3	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	8.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	6.5	14.01	EPA TO-15 Certifications:	12/12/2017 20:48	12/12/2017 20:48	LDS
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	8.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
123-91-1	1,4-Dioxane	ND		ug/m³	10	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
78-93-3	2-Butanone	ND		ug/m³	4.1	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
591-78-6	* 2-Hexanone	ND		ug/m³	11	14.01	EPA TO-15 Certifications:	12/12/2017 20:48	12/12/2017 20:48	LDS
107-05-1	3-Chloropropene	ND		ug/m³	22	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	5.7	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
67-64-1	**Acetone**	**15**		ug/m³	6.7	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
107-13-1	Acrylonitrile	ND		ug/m³	3.0	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
71-43-2	Benzene	ND		ug/m³	4.5	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
100-44-7	Benzyl chloride	ND		ug/m³	7.3	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS

Sample Information

Client Sample ID: SG-3 **York Sample ID:** 17L0145-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
75-27-4	Bromodichloromethane	ND		ug/m³	9.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
75-25-2	Bromoform	ND		ug/m³	14	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
74-83-9	Bromomethane	ND		ug/m³	5.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
75-15-0	Carbon disulfide	ND		ug/m³	4.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
56-23-5	Carbon tetrachloride	ND		ug/m³	2.2	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
108-90-7	Chlorobenzene	ND	IS-LO	ug/m³	6.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
75-00-3	Chloroethane	ND		ug/m³	3.7	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
67-66-3	Chloroform	ND		ug/m³	6.8	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
74-87-3	Chloromethane	ND		ug/m³	2.9	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
156-59-2	**cis-1,2-Dichloroethylene**	**14**		ug/m³	1.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	6.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
110-82-7	Cyclohexane	ND		ug/m³	4.8	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
124-48-1	Dibromochloromethane	ND		ug/m³	12	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
75-71-8	Dichlorodifluoromethane	ND		ug/m³	6.9	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
141-78-6	* Ethyl acetate	ND		ug/m³	10	14.01	EPA TO-15 Certifications:	12/12/2017 20:48	12/12/2017 20:48	LDS
100-41-4	**Ethyl Benzene**	**11**	IS-LO	ug/m³	6.1	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
87-68-3	Hexachlorobutadiene	ND	IS-LO	ug/m³	15	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
67-63-0	**Isopropanol**	**8.3**		ug/m³	6.9	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
80-62-6	Methyl Methacrylate	ND		ug/m³	5.7	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m³	5.1	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
75-09-2	Methylene chloride	ND		ug/m³	9.7	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
142-82-5	n-Heptane	ND		ug/m³	5.7	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS

Sample Information

Client Sample ID: SG-3 **York Sample ID:** 17L0145-03

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
110-54-3	n-Hexane	ND		ug/m³	4.9	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
95-47-6	**o-Xylene**	**8.5**	IS-LO	ug/m³	6.1	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
179601-23-1	**p- & m- Xylenes**	**24**	IS-LO	ug/m³	12	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
622-96-8	*** p-Ethyltoluene**	**10**	IS-LO	ug/m³	6.9	14.01	EPA TO-15 Certifications:	12/12/2017 20:48	12/12/2017 20:48	LDS
115-07-1	* Propylene	ND		ug/m³	2.4	14.01	EPA TO-15 Certifications:	12/12/2017 20:48	12/12/2017 20:48	LDS
100-42-5	Styrene	ND	IS-LO	ug/m³	6.0	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
127-18-4	**Tetrachloroethylene**	**850**		ug/m³	2.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
109-99-9	* Tetrahydrofuran	ND		ug/m³	8.3	14.01	EPA TO-15 Certifications:	12/12/2017 20:48	12/12/2017 20:48	LDS
108-88-3	**Toluene**	**27**		ug/m³	5.3	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m³	5.6	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m³	6.4	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
79-01-6	**Trichloroethylene**	**23**		ug/m³	1.9	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
75-69-4	Trichlorofluoromethane (Freon 11)	ND		ug/m³	7.9	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
108-05-4	Vinyl acetate	ND		ug/m³	4.9	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
593-60-2	Vinyl bromide	ND		ug/m³	6.1	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS
75-01-4	Vinyl Chloride	ND		ug/m³	0.90	14.01	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 20:48	12/12/2017 20:48	LDS

Sample Information

Client Sample ID: SG-4 **York Sample ID:** 17L0145-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Sample Information

Client Sample ID: **SG-4** | **York Sample ID:** **17L0145-04**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
630-20-6	* 1,1,1,2-Tetrachloroethane	ND		ug/m³	9.9	14.46	EPA TO-15 Certifications:	12/11/2017 17:13	12/11/2017 17:13	LDS
71-55-6	**1,1,1-Trichloroethane**	**13**		ug/m³	7.9	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
79-34-5	1,1,2,2-Tetrachloroethane	ND		ug/m³	9.9	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND		ug/m³	11	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
79-00-5	1,1,2-Trichloroethane	ND		ug/m³	7.9	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
75-34-3	1,1-Dichloroethane	ND		ug/m³	5.9	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
75-35-4	1,1-Dichloroethylene	ND		ug/m³	1.4	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
120-82-1	1,2,4-Trichlorobenzene	ND		ug/m³	11	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
95-63-6	**1,2,4-Trimethylbenzene**	**23**		ug/m³	7.1	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
106-93-4	1,2-Dibromoethane	ND		ug/m³	11	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
95-50-1	1,2-Dichlorobenzene	ND		ug/m³	8.7	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
107-06-2	1,2-Dichloroethane	ND		ug/m³	5.9	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
78-87-5	1,2-Dichloropropane	ND		ug/m³	6.7	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
76-14-2	1,2-Dichlorotetrafluoroethane	ND		ug/m³	10	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
108-67-8	1,3,5-Trimethylbenzene	ND		ug/m³	7.1	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
106-99-0	1,3-Butadiene	ND		ug/m³	9.6	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
541-73-1	1,3-Dichlorobenzene	ND		ug/m³	8.7	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
142-28-9	* 1,3-Dichloropropane	ND		ug/m³	6.7	14.46	EPA TO-15 Certifications:	12/11/2017 17:13	12/11/2017 17:13	LDS
106-46-7	1,4-Dichlorobenzene	ND		ug/m³	8.7	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
123-91-1	1,4-Dioxane	ND		ug/m³	10	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
78-93-3	**2-Butanone**	**11**		ug/m³	4.3	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
591-78-6	* 2-Hexanone	ND		ug/m³	12	14.46	EPA TO-15 Certifications:	12/11/2017 17:13	12/11/2017 17:13	LDS

Sample Information

Client Sample ID: SG-4 **York Sample ID:** 17L0145-04

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List **Log-in Notes:** **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
107-05-1	3-Chloropropene	ND		ug/m³	23	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
108-10-1	4-Methyl-2-pentanone	ND		ug/m³	5.9	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
67-64-1	**Acetone**	**39**		ug/m³	6.9	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
107-13-1	Acrylonitrile	ND		ug/m³	3.1	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
71-43-2	**Benzene**	**5.1**		ug/m³	4.6	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
100-44-7	Benzyl chloride	ND		ug/m³	7.5	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
75-27-4	Bromodichloromethane	ND		ug/m³	9.7	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
75-25-2	Bromoform	ND		ug/m³	15	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
74-83-9	Bromomethane	ND		ug/m³	5.6	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
75-15-0	Carbon disulfide	ND		ug/m³	4.5	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
56-23-5	Carbon tetrachloride	ND		ug/m³	2.3	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
108-90-7	Chlorobenzene	ND		ug/m³	6.7	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
75-00-3	Chloroethane	ND		ug/m³	3.8	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
67-66-3	Chloroform	ND		ug/m³	7.1	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
74-87-3	Chloromethane	ND		ug/m³	3.0	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
156-59-2	cis-1,2-Dichloroethylene	ND		ug/m³	1.4	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
10061-01-5	cis-1,3-Dichloropropylene	ND		ug/m³	6.6	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
110-82-7	Cyclohexane	ND		ug/m³	5.0	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
124-48-1	Dibromochloromethane	ND		ug/m³	12	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
75-71-8	Dichlorodifluoromethane	ND		ug/m³	7.2	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
141-78-6	* Ethyl acetate	ND		ug/m³	10	14.46	EPA TO-15 Certifications:	12/11/2017 17:13	12/11/2017 17:13	LDS
100-41-4	**Ethyl Benzene**	**15**		ug/m³	6.3	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS

Sample Information

Client Sample ID: **SG-4** — **York Sample ID:** **17L0145-04**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Volatile Organics, EPA TO15 Full List — **Log-in Notes:** — **Sample Notes:**

Sample Prepared by Method: EPA TO15 PREP

CAS No.	Parameter	Result	Flag	Units	Reported to LOQ	Dilution	Reference Method	Date/Time Prepared	Date/Time Analyzed	Analyst
87-68-3	Hexachlorobutadiene	ND		ug/m^3	15	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
67-63-0	Isopropanol	ND		ug/m^3	7.1	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
80-62-6	Methyl Methacrylate	ND		ug/m^3	5.9	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
1634-04-4	Methyl tert-butyl ether (MTBE)	ND		ug/m^3	5.2	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
75-09-2	Methylene chloride	ND		ug/m^3	10	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
142-82-5	n-Heptane	ND		ug/m^3	5.9	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
110-54-3	n-Hexane	ND		ug/m^3	5.1	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
95-47-6	**o-Xylene**	**15**		ug/m^3	6.3	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
179601-23-1	**p- & m- Xylenes**	**39**		ug/m^3	13	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
622-96-8	*** p-Ethyltoluene**	**19**		ug/m^3	7.1	14.46	EPA TO-15 Certifications:	12/11/2017 17:13	12/11/2017 17:13	LDS
115-07-1	*** Propylene**	**4.0**		ug/m^3	2.5	14.46	EPA TO-15 Certifications:	12/11/2017 17:13	12/11/2017 17:13	LDS
100-42-5	Styrene	ND		ug/m^3	6.2	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
127-18-4	**Tetrachloroethylene**	**6800**		ug/m^3	4.9	28.92	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/12/2017 19:47	12/12/2017 19:47	LDS
109-99-9	* Tetrahydrofuran	ND		ug/m^3	8.5	14.46	EPA TO-15 Certifications:	12/11/2017 17:13	12/11/2017 17:13	LDS
108-88-3	**Toluene**	**40**		ug/m^3	5.4	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
156-60-5	trans-1,2-Dichloroethylene	ND		ug/m^3	5.7	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
10061-02-6	trans-1,3-Dichloropropylene	ND		ug/m^3	6.6	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
79-01-6	**Trichloroethylene**	**84**		ug/m^3	1.9	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
75-69-4	Trichlorofluoromethane (Freon 11)	ND		ug/m^3	8.1	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
108-05-4	Vinyl acetate	ND		ug/m^3	5.1	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
593-60-2	Vinyl bromide	ND		ug/m^3	6.3	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS
75-01-4	Vinyl Chloride	ND		ug/m^3	0.92	14.46	EPA TO-15 Certifications: NELAC-NY12058,NJDEP-Queens	12/11/2017 17:13	12/11/2017 17:13	LDS

Sample Information

Client Sample ID: **SG-4** | **York Sample ID:** **17L0145-04**

York Project (SDG) No.	Client Project ID	Matrix	Collection Date/Time	Date Received
17L0145	584 Chestnut Ridge Rd., Spring Valley, NY	Soil Vapor	December 5, 2017 3:00 pm	12/06/2017

Sample and Data Qualifiers Relating to This Work Order

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QL-03	This LCS analyte recovered outside of acceptance limits. The LCS contains approximately 70 compounds, a limited number of which may be outside acceptance windows.
IS-LO	The internal std associated with this target compound did not meet acceptance criteria (area <50% CCV) at the stated dilution due to matrix effects. Sample was rerun to confirm matrix effects.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
CCV-A	The value reported is ESTIMATED. The value is estimated due to its behavior during continuing calibration verification (>30% Difference for average Rf). This applies to dectected analytes only.

Definitions and Other Explanations

*	Analyte is not certified or the state of the samples origination does not offer certification for the Analyte.
ND	NOT DETECTED - the analyte is not detected at the Reported to level (LOQ/RL or LOD/MDL)
RL	REPORTING LIMIT - the minimum reportable value based upon the lowest point in the analyte calibration curve.
LOQ	LIMIT OF QUANTITATION - the minimum concentration of a target analyte that can be reported within a specified degree of confidence. This is the lowest point in an analyte calibration curve that has been subjected to all steps of the processing/analysis and verified to meet defined criteria. This is based upon NELAC 2009 Standards and applies to all analyses.
LOD	LIMIT OF DETECTION - a verified estimate of the minimum concentration of a substance in a given matrix that an analytical process can reliably detect. This is based upon NELAC 2009 Standards and applies to all analyses conducted under the auspices of EPA SW-846.
MDL	METHOD DETECTION LIMIT - a statistically derived estimate of the minimum amount of a substance an analytical system can reliably detect with a 99% confidence that the concentration of the substance is greater than zero. This is based upon 40 CFR Part 136 Appendix B and applies only to EPA 600 and 200 series methods.
Reported to	This indicates that the data for a particular analysis is reported to either the LOD/MDL, or the LOQ/RL. In cases where the "Reported to" is located above the LOD/MDL, any value between this and the LOQ represents an estimated value which is "J" flagged accordingly. This applies to volatile and semi-volatile target compounds only.
NR	Not reported
RPD	Relative Percent Difference
Wet	The data has been reported on an as-received (wet weight) basis
Low Bias	Low Bias flag indicates that the recovery of the flagged analyte is below the laboratory or regulatory lower control limit. The data user should take note that this analyte may be biased low but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
High Bias	High Bias flag indicates that the recovery of the flagged analyte is above the laboratory or regulatory upper control limit. The data user should take note that this analyte may be biased high but should evaluate multiple lines of evidence including the LCS and site-specific MS/MSD data to draw bias conclusions. In cases where no site-specific MS/MSD was requested, only the LCS data can be used to evaluate such bias.
Non-Dir.	Non-dir. flag (Non-Directional Bias) indicates that the Relative Percent Difference (RPD) (a measure of precision) among the MS and MSD data is outside the laboratory or regulatory control limit. This alerts the data user where the MS and MSD are from site-specific samples that the RPD is high due to either non-homogeneous distribution of target analyte between the MS/MSD or indicates poor reproducibility for other reasons.

YORK

ANALYTICAL LABORATORIES INC

If EPA SW-846 method 8270 is included herein it is noted that the target compound N-nitrosodiphenylamine (NDPA) decomposes in the gas chromatographic inlet and cannot be separated from diphenylamine (DPA). These results could actually represent 100% DPA, 100% NDPA or some combination of the two. For this reason, York reports the combined result for n-nitrosodiphenylamine and diphenylamine for either of these compounds as a combined concentration as Diphenylamine.

If Total PCBs are detected and the target aroclors reported are "Not detected", the Total PCB value is reported due to the presence of either or both Aroclors 1262 and 1268 which are non-target aroclors for some regulatory lists.

2-chloroethylvinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

Certification for pH is no longer offered by NYDOH ELAP.

Semi-Volatile and Volatile analyses are reported down to the LOD/MDL, with values between the LOD/MDL and the LOQ being "J" flagged as estimated results.

For analyses by EPA SW-846-8270D, the Limit of Quantitation (LOQ) reported for benzidine is based upon the lowest standard used for calibration and is not a verified LOQ due to this compound's propensity for oxidative losses during extraction/concentration procedures and non-reproducible chromatographic performance.

YORK ANALYTICAL LABORATORIES INC

Field Chain-of-Custody Record - AIR

NOTE: York's Std. Terms & Conditions are listed on the back side of this document. This document serves as your written authorization to York to proceed with the analyses requested and your signature binds you to York's Std. Terms & Conditions unless superseded by written contract.

York Project No. 17L0145

YOUR Information
Company: DT Consulting Services Inc
Address:
Phone No.
Contact Person: Deborah Thompson
E-Mail Address:

Report To:
Company: Same
Address:
Phone No.
Attention:
E-Mail Address:

Invoice To:
Company: Same
Address:
Phone No.
Attention:
E-Mail Address:

YOUR Project ID
584 Chestnut Ridge Rd Spring Valley, NY

Purchase Order No.

Samples from: CT___ NY X NJ___

Turn-Around Time
RUSH - Same Day ☐
RUSH - Next Day ☐
RUSH - Two Day ☐
RUSH - Three Day ☐
RUSH - Four Day ☐
Standard(5-7 Days) ☒

Report Type/Deliverables X
Summary Report
Summary w/ QA Summary
CT RCP Package
NY ASP A Package
NY ASP B/CLP Pkg
NJDEP Reduced
Electronic Deliverables:
EDD (Specify Type)
Standard Excel
Regulatory Comparison Excel

Special Instructions

Print Clearly and Legibly. All Information must be complete. Samples will NOT be logged in and the turn-around time clock will not begin until any questions by York are resolved.

Deborah Thompson
Samples Collected/Authorized By (Signature)
Deborah Thompson
Name (printed)

Air Matrix Codes
AI - INDOOR Ambient Air
AO- OUTDOOR Amb. Air
AE- Vapor Extraction Well/ Process Gas/Effluent
AS- SOIL Vapor/Sub-Slab

Additional Notes:

Detection Limits Required
≤1 ug/m³ –
NYSDEC VI Limits
(VI =vapor intrusion)
NJDEP low level
Routine Survey
Other

Please enter the following Field Data

Sample Identification	Date Sampled	AIR Matrix	Canister Vacuum Before Sampling (in. Hg)	Canister Vacuum After Sampling (in. Hg)	Canister ID	Flow Cont.ID	ANALYSES REQUESTED	Sampling Media
SG-1	12/5/17	AS	-30	0	28298	T13	TO-15	6 Liter canister ✓ Tedlar Bag
SG-2	↓	↓	-30	0	17349	T2	↓	6 Liter canister ✓ Tedlar Bag
SG-3	↓	↓	-29	0	28308	T16	↓	6 Liter canister ✓ Tedlar Bag
SG-4	↓	↓	-28	-2	1127	T1	↓	6 Liter canister ✓ Tedlar Bag
								6 Liter canister Tedlar Bag
								6 Liter canister Tedlar Bag
								6 Liter canister Tedlar Bag
								6 Liter canister Tedlar Bag
								6 Liter canister Tedlar Bag
								6 Liter canister Tedlar Bag

Comments

Samples Relinquished By	Date/Time	Samples Received By	Date/Time
Deborah Thompson	12/6/17	[signature]	12-6-17 11:10
[signature]	12/6/17 4:30pm	[signature] (Samples Received in LAB by)	12-6-17 21:30