

**FINAL**

**SITE CHARACTERIZATION  
WORK PLAN**

**Lydall Performance Materials (US), Inc.  
12 Davis Street & Kokley Ave. (E of)  
Village of Hoosick Falls  
Rensselaer County, New York  
NYSDEC Site No. 442059**

*Prepared for*

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Project Number: BR0493

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*I, William E. Wertz, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Draft Site Characterization 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).*



October 10, 2019

*William E. Wertz*

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Exhibit 2: NYSDEC Comment Letter (December 18, 2018)

Exhibit 3: Golder Associates, Inc. Phase I ESA (July 10, 2018)

Exhibit 4: PFOA/PFOS Facility Identification Survey Questions (July 13, 2016)

## 1. INTRODUCTION

This Site Characterization Work Plan (SCWP) was prepared on behalf of Lydall Performance Materials (US), Inc. (Lydall) by B & B Engineers & Geologists of New York, P.C. (B&BPC), an affiliate of Geosyntec Consultants, Inc. (collectively referred to as Geosyntec). In June 2019, Lydall entered an Order on Consent, Index No. CO 4-20190109-2 with the New York State Department of Environmental Conservation (NYSDEC) to undertake a Site Characterization investigation at Lydall's facility (NYSDEC Site No. 442059) located at 12 Davis Street and Kokley Ave. (E of), Hoosick Falls, New York (Site). A copy of the signed Order on Consent and Administrative Settlement dated June 12, 2019, is included as **Exhibit 1**. This SCWP describes the scope and methods which will be used to determine whether hazardous wastes, attributable to past or current operations, are present on Site and if so, whether the Site poses a threat to public health and the environment and requires further action pursuant to one of the NYSDEC remedial programs.

## 2. BACKGROUND

In a letter to Lydall dated December 18, 2018 (**Exhibit 2**), NYSDEC identified Lydall's property, as a potential inactive hazardous waste disposal site based on the premise that detections of per- and polyfluoroalkyl substances (PFAS) in nearby soil, surface water and groundwater may be attributable to past or current operations at the Site. The letter also states that a field investigation is needed for NYSDEC to determine whether to list the Site on the State's Registry of Inactive Hazardous Waste Disposal Sites (Registry). The decision to list the Site on the Registry will be based on an assessment of whether hazardous waste has been disposed of at the Site and if so, whether it poses a significant threat to public health or the environment and, if so, whether the threat requires further investigation.

In response to this letter, Lydall entered into discussions with NYSDEC regarding a legal agreement to self-perform the investigation in accordance with NYSDEC's technical requirements. Lydall retained the services of B&BPC to complete a Site visit and facility tour, participate in a meeting with NYSDEC and develop a site characterization program to assess whether the Site poses a threat to public health and the environment. The Site visit and facility tour was conducted on February 20, 2019 and a subsequent Site meeting with NYSDEC occurred on March 12, 2019. B&BPC developed this SCWP in consideration of NYSDEC regulations and guidance, existing Site and regional data, and information obtained during the Site visit and facility tour.

## 3. SITE DESCRIPTION

The Site is in a mixed residential and commercial area in the Village of Hoosick Falls, Rensselaer County, New York. The 11.94-acre property, which includes two adjacent lots (Tax Map Identifier: 27.10-7-3 and 27.10-2-5), is located at 12 Davis Street and Kokley Ave. (E of) with access to the Site from Davis and White Street. Primary Site features include three permanent buildings which comprises approximately 125,000 square feet of warehouse, manufacturing and administrative office space as well as an electrical substation owned by Niagara Mohawk. The Site

is generally level and includes open grassy and gravel areas with a paved parking area located on the southeast side of the manufacturing building. No current or former septic systems or leach fields were identified at the Site. Bordering the Site to the north is the Hoosic River and to the west is an unnamed stream. Residential properties border the Site to south/southeast and the Pan Am Southern Railroad to the east.

The Town provides potable water and grey water disposal for the administrative offices at the Site. Approximately 70% of the water utilized during manufacturing is obtained from the Hoosic River and the remaining 30% from on-site production wells. Wastewater generated during production is collected in floor drains, sumps and holding tanks and is treated in an on-site wastewater treatment plant (WWTP) prior to being discharged back to the river. Sludge and limited scrap waste generated during the manufacturing process are removed and disposed of off-site as non-hazardous waste.

### **3.1 Site Geology**

The bedrock geology of the Hoosick Falls area is comprised of Cambrian and Ordovician slates, shales, graywacke (sandstone) and carbonates that have been highly deformed by folding and faulting. They are part of the range of high hills between the Hudson River valley and the Green Mountains that are referred to as the Taconics (Potter, 1963).

A sequence of unconsolidated sediments overlies the bedrock in the vicinity of the Site. The genesis of the sequence has been attributed to glacially-related depositional processes (DeSimone, 2017, Williams and Heisig, 2018). The basal unit of the sequence is comprised of sands and gravels that serve as a source of production water for Site operations and, to west of the Hoosic River, as the primary drinking water aquifer for the Village of Hoosick Falls. That unit is thought to be a subaqueous fan deposit that formed at the bottom of former glacial Lake Bascom during a period of glacial recession.

A sequence of varved glaciolacustrine silts and clays was deposited above the basal sand unit and, where present, serves as a confining layer that inhibits vertical migration of groundwater to the lower unit. The uppermost unconsolidated unit is comprised of sands, gravels and silts that are thought to have been deposited as fluvial terraces in the early Hoosic River. The boundary between the fluvial terrace deposits and the underlying glaciolacustrine sediments is an unconformity that reflects the erosional surface of the glaciolacustrine sediments prior to deposition of the terrace deposits.

## **4. SITE HISTORY**

The Lydall Performance Materials (US), Inc. Site has been utilized for manufacturing purposes by Lydall and its predecessors since the late 1880s. Early operations included the manufacturing of reaping and mowing machines, a foundry and materials utilized in the printing industry. From the early 1980s to the present the Site has been utilized for the production of specialty papers and gaskets used in the medical and automotive industries. Details regarding the activities associated with these operations are provided in Golder Associates, Inc. (Golder) Phase 1 Environmental Site Assessment (ESA) Report included as **Exhibit 3**.

#### **4.1 Historical Chemical Use**

Chemical usage associated with past manufacturing processes on the Site may have included petroleum-based fuels, lubricants, degreasing agents, solvents, pigments and limited quantities of PFAS. Details regarding volumes of PFAS and specific compounds used in past manufacturing processes are included in the PFOA/PFOS Facility Identification Survey Questions provided as **Exhibit 4**, completed by Interface Performance Materials (IPM), the prior owner and operator of the Site, on July 13, 2006, and included in Appendix C of Golder's July 2018 ESA.

#### **4.2 Previous Environmental Investigations**

A Phase I ESA Report was prepared for Lydall by Golder, dated July 10, 2018. This work was completed as an update to a Phase I ESA Report which was prepared by HRP Associates (HRP), dated April 5, 2018 (HRP April 2018 Phase I ESA), for IPM. An additional environmental report dated August 26, 2011 was prepared by GaiaTech on behalf of Wind Point Partners is included as an attachment (Appendix E – Supporting Documentation) of the HRP 2018 Phase I ESA. Golder's Phase I ESA, which includes both the HRP and Wind Point Partners environmental reports, is provided as **Exhibit 3** and fulfills the requirement of a records search report as described in Appendix 3A of DER-10 (NYSDEC, 2010)

The information contained in the previous reports identified above were considered when developing the scope of this SCWP. Proposed sampling locations are based on the Recognized Environmental Conditions (RECs) that Golder identified including: former unlined lagoons associated with the on-site WWTP previously located on the northern portion of the Site; electrical substation/ transformer area located in the northern part of the Site; the former clay tailings disposal area located in the northwest corner of the Site; the former underground fuel oil storage tank and coal storage area located beneath the paved parking area, southeast of the manufacturing facility; and regional PFAS contamination from several sources within the area including the Saint-Gobain's Liberty and McCaffrey Street facilities, the Oak Materials John Street facility and the Hoosick Falls Landfill.

The former clay tailings disposal area was first identified in 1985 when the presence of a white leachate was observed north of the facility by the Rensselaer County Department of Health (Golder, 2018). This leachate reportedly, "contained aluminum at a concentration of 12 parts per million (ppm) near the source" (Golder, 2018). Lydall, who owned the property at the time, reportedly excavated this area and backfilled it with clean fill. However, no supporting documentation was identified by Golder or HRP during their Phase I ESA.

#### **4.3 Recorded Spills**

The environmental reports prepared by Golder and GaiaTech for Lydall included the identification of six historical Site-related spills associated with process wastewater discharge, petroleum bulk storage and chemical bulk storage. These following historical spills were reported to the NYSDEC as required and have subsequently been closed by the NYSDEC, with corrective action taken as needed:

- Spill #9005679, August 23, 1990. The spill record lists a spill of unknown amounts of phenolic resins affecting surface water. The spill was closed on April 9, 1993.
- Spill #9008710, November 8, 1990. The spill record lists a spill of unknown amounts of sludge. An affected resource was not identified. The spill was closed on November 9, 1990.
- Spill #9408852, October 4, 1994. The spill record lists a spill of unknown material and unknown quantity. An affected resource was not identified. The spill was closed on June 20, 1995.
- Spill #0402455, June 6, 2004. The spill record lists a 3000-gallon spill of carbolic acid affecting surface water. The spill was closed on November 11, 2004.
- Spill #0410046, December 3, 2004. The spill record lists a spill of unknown quantity of aluminum sulfate and other unknown material affecting soil. The spill was closed on March 16, 2007.
- Spill #1101381, May 5, 2011. The spill record lists a three-gallon spill of #6 fuel oil. An affected resource was not identified. The Spill was closed on May 16, 2011.

Additional information regarding the nature of these spills is included as **Exhibit 3**.

## 5. PURPOSE

This SCWP describes the scope and methods by which environmental data will be obtained to assess whether hazardous wastes are present on Site. If an evaluation of the data concludes that hazardous wastes are present, NYSDEC will determine whether the Site poses a threat to public health and/or the environment and requires further action pursuant to one of the NYSDEC remedial programs. It is noteworthy that PFAS compounds have been released to the environment from and attributed to several listed hazardous waste or investigation sites in the vicinity of the Site (**Figure 1**). PFAS contamination is known to be present in the soil, groundwater, sediments and stream samples collected at and in the vicinity of the Saint-Gobain Liberty Street facility (Site No. 4-42-046)<sup>1</sup> located south of the Site, as well as in sediments and surface water samples from the Hoosic River upstream and downstream of the Site<sup>2</sup>. Atmospheric deposition of those compounds may also have taken place from the Saint-Gobain Liberty Street facility and other investigation sites.

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<sup>1</sup> See [https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/ridatasummary.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/ridatasummary.pdf)

<sup>2</sup> See the following NYSDEC webpages

[https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/hoosickpfoasediment.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/hoosickpfoasediment.pdf)

[http://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/hoosickpfoar1sw.pdf](http://www.dec.ny.gov/docs/remediation_hudson_pdf/hoosickpfoar1sw.pdf)

[https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/hoosickpfoar2sw.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/hoosickpfoar2sw.pdf)

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[https://www.dec.ny.gov/docs/remediation\\_hudson\\_pdf/hoosickpfoalfr3.pdf](https://www.dec.ny.gov/docs/remediation_hudson_pdf/hoosickpfoalfr3.pdf)

## 6. SCOPE & RATIONALE

The media proposed for sampling and locations have been selected to investigate areas of the Site where past activities may have potentially impacted the environment, and to assess whether constituents of concern could be present at the Site as a result of migration from off-site sources. Soil, sediment, sludge, groundwater, surface water, and soil gas sampling locations proposed for this site characterization are included on **Figure 2**. The actual sampling locations may vary from the proposed based on the geophysical survey results and access limitations.

Sampled media will be analyzed for the compounds/constituents listed in **Table 1** by methods listed in **Table 2**. Soil, sediment, sludge, groundwater, and surface water samples will be analyzed for: the full NYSDEC target compound list (TCL) of organic compounds plus the 30 highest concentration Tentatively Identified Compounds (TICs; 10 Volatile Organic Compounds [VOCs] and 20 Semi-volatile Compounds [SVOCs]); TCL Polycyclic Biphenyls (PCBs); TCL pesticides; the full NYSDEC target analyte list (TAL) of inorganic compounds; total mercury; total cyanide, 1,4-dioxane, and PFAS compounds. Soil, and sediment samples will also be analyzed for total organic carbon, grain size, pH, and moisture content. Soil gas samples will be analyzed for VOCs. Draft analytical data tables shall be provided to the New York State Department of Health (NYSDOH) Project Manager for their review. Sample holding times, containers, and preservation methods are summarized in **Table 2**.

Groundwater and surface water samples will be analyzed for PFAS via United States Environmental Protection Agency (USEPA) Method 537.1 modified with a reporting limit of 2 nanograms/liter (ng/L) or parts-per-trillion (ppt). Soil, sediment, and sludge samples will be analyzed for PFAS via USEPA Method 537.1 modified with a reporting limit of 1 microgram per kilogram ( $\mu\text{g}/\text{kg}$ ) or parts-per-billion (ppb). The reported PFAS results will include NYSDEC's most current PFAS analyte list; presently the 21 compounds listed in NYSDEC's February 2019 memorandum (**Table 3**).<sup>3</sup>

Groundwater and surface water samples will be analyzed for 1,4-dioxane via USEPA Method 8270 SIM with a reporting limit of 0.35  $\mu\text{g}/\text{L}$ . Soil, sediment, and sludge samples will be analyzed for 1,4-dioxane via USA EPA Method 8270 with a reporting limit of 100  $\mu\text{g}/\text{kg}$ .

A full list of the reporting limits and method detection limits for specific analytes and matrices are provided in **Table 4**.

### 6.1 Fill/Soil Sampling

Soil (and fill, if present) samples will be collected at eleven locations (SS-A to SS-K; **Figure 2**). Sample locations SS-A, SS-B and SS-C are designed to characterize soils on areas of the property located between the manufacturing buildings and the Saint-Gobain Liberty Street facility. Locations SS-E, SS-G, SS-H are designed to characterize soils between the manufacturing

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<sup>3</sup> NYSDEC, 2019. Sampling for 1,4-Dioxane and Per- and Polyfluoroalkyl Substances (PFAS) Under DEC's Part 375 Remedial Programs. Accessed 21 March 2019. [Available online: [https://alphalab.com/images/NYDEC\\_emergcontsamplngext.pdf](https://alphalab.com/images/NYDEC_emergcontsamplngext.pdf)].

buildings and the Hoosic River. Locations SS-D and SS-F are designed to characterize soils in the vicinity of the former clay tailings storage area and the electrical substation/transformer area, respectively. Location SS-I is designed to characterize soils in the vicinity of the former coal pile and underground fuel oil storage tanks. Locations SS-J and SS-K are designed to characterize soils at the northwestern and southeastern edges of the property.

Continuous soil cores (typically in intervals 4-5 ft long) will be collected via a direct push technology (DPT) drill rig at each sampling location to characterize the Site stratigraphy and to provide soil samples for analysis. The cores will be logged via visual inspection using the Unified Soil Classification System and screened with a photoionization detector (PID). At a minimum, three soil samples will be collected from the cores at: 0-2 inches below ground surface (bgs) including the root zone; 2-12 inches bgs; and 6-12 inches above the water table. In addition, a soil sample will be collected at the interface between the fill and native soils (sample depth to be determined based on field observations) at location SS-D within the former clay tailings storage area. If clay tailings are encountered at the SS-C or SS-D locations, an additional sample(s) of the clay tailings material will be collected where present. Auxiliary soil samples shall also be collected based on visual indication of soil mottling, discoloration, or other observations suggestive of possible organic-rich zones, as determined in-field, in consultation with a NYSDEC field representative.

In the event that a proposed sampling location is inaccessible by the drill rig (Geoprobe® or equivalent), Geosyntec will communicate with NYSDEC field oversight staff to determine whether to select an alternate location or to attempt to obtain the shallow soil samples using a hand auger.

## **6.2 Groundwater Sampling and Depth to Groundwater Measurement**

Groundwater samples and depth to water table measurements will be collected from permanent wells installed in the fluvial terrace deposits (or equivalent) that form the upper water bearing zone at nine of the eleven soil sampling locations depicted as GW-A through GW-I (**Figure 2**). If the fluvial terrace deposits are not present at a particular location but a water bearing zone is present near the top of the glaciolacustrine silts and clays or at a higher elevation, a well will be installed and screened across the water table. If a shallow water bearing zone is not present at a given location, the potential of an alternate well location will be discussed with the NYSDEC field oversight staff. If non-dedicated pumps are used, they shall be decontaminated prior to use in the next well. The wells will be developed and purged prior to sampling.

Monitoring well installation will be performed in accordance with SOPs A.9 (**Appendix A**). Monitoring wells will be constructed of 2-inch diameter polyvinyl chloride (PVC) with 5-foot-long, 0.010"-slot screens with prepacked sand filter packs. The wells will be installed such that the screened interval spans the water table, which is anticipated to be near the top of the glaciolacustrine silts and clays, approximately 15 feet bgs. The annular space around each well will be filled with bentonite chips at least two feet thick above the top of the well screen and with cement/bentonite grout from the top of the bentonite chips to the ground surface. Monitoring wells will be completed with road boxes or protective steel surface casings (i.e., stick-up) in concrete

pads. Geosyntec will contract a licensed surveyor to determine the top of riser elevation and ground surface elevation at each well location.

Monitoring well development shall be performed in accordance with SOP A.10 (**Appendix A**) using dedicated equipment as soon as practical, but not sooner than 24 hours following placement of the grout seal. The cap and all internal components of the well casing above the water table shall be rinsed with PFAS-free water to remove all traces of soil, sediment, and cuttings, as necessary before and/or during well development. Development of wells shall be accomplished using a surge block, peristaltic pump, inertial pump, and/or bailer. Bailers shall be used to develop wells only where the volume of water is so small that other development methods are clearly inappropriate.

A peristaltic pump will be used to remove silt and fine sand that enter through screen slots immediately following well installation. Surging will be conducted slowly to reduce disruption to the filter pack and screen. Following surging, the well will be pumped or bailed again to remove sediment drawn in by the surging process until suspended sediment is reduced to acceptable levels (see below). Pumping shall continue from the screened interval until a volume of water equal to or greater than three saturated well volumes has been purged. Water shall not be added to the well to aid in development.

A well is considered fully developed when all the following criteria are met:

- the well water is clear to the unaided eye (based on observations of water clarity through a clear glass jar);
- the sediment thickness remaining in the well is less than one percent of the screen length; and
- the total volume of water removed from the well equals five times the standing water volume in the well (including the well screen and casing plus saturated annulus, assuming 30 percent porosity) plus the volume of drilling fluid lost.

These criteria may be modified with approval by the Sampling Manager and/or Project Manager in consultation with NYSDEC field oversight staff. Should the recharge to the well be so slow that the required volume cannot be removed in 2 to 3 consecutive hours, if the water remains discolored, or excess sediment remains after the five-volume removal, the project team shall terminate purging and/or discuss other options for improving water quality. Development fluids shall be handled in accordance with SOP A.19 (**Appendix A**). Purge water will be containerized in a steel drum as it is generated and temporarily stored on-site in an area with secondary containment while awaiting characterization for disposal.

Groundwater sampling will be performed in accordance with SOPs A.5, A.6, A.7, and A.8 using peristaltic pumps and dedicated HDPE and/or silicon tubing utilizing and low-flow groundwater sampling protocols (**Appendix A**). If Site conditions are such that the use of a peristaltic pump is impractical, other groundwater sampling devices, including submersible pumps, bladder pumps, inertia pumps, and bailers, may be used with approval by the Sampling Manager and/or Project Manager, in consultation with NYSDEC field oversight staff. If non-dedicated pumps are used, they shall be thoroughly decontaminated before and after use.

Groundwater flow directions in the shallow aquifer will be developed from measurements of the depth to the water table and surveyed monitoring well elevations as described in SOP A.6 (**Appendix A**). Those data will be used to assess whether compounds found in the groundwater are Site-related or from an off-site source.

### **6.3 Sediment Sampling**

Two sediment samples (SED-A and SED-B) will be collected from the unnamed stream that flows adjacent to the western boundary of the Site. One sediment sample will be collected at a location upstream of the Site's stormwater discharge point and another sample will be collected at a downstream location (**Figure 2**). All samples will be taken within the top 6 inches of the stream bed.

### **6.4 Surface Water Sampling**

Two surface water samples (SW-A and SW-B) will be collected from the unnamed stream that flows adjacent to the western boundary of the Site. One surface water sample will be collected at a location upstream of the Site's stormwater discharge point and another sample will be collected at a downstream location (**Figure 2**). Surface water samples will be collected from the center of the water column.

### **6.5 Sludge Sampling**

Two sludge samples will be collected to help assess whether Site operations could be a source of the constituents found in the Site environmental samples (**Figure 2**). One sludge sample (SLDG-A) will be collected from the sump below the surface application processing equipment; the only known location at the Site where small quantities of coatings, believed to contain PFAS compounds, were applied. Another sample (SLDG-B) will be collected from the WWTP sludge which is temporarily stored in an exterior storage bin before being shipped off-site for disposal. Sludge samples will be taken from within the top 6 inches of the available material.

### **6.6 Soil Gas Sampling**

Ten soil gas samples will be collected to help assess if impacts from past activities at the site may have potentially impacted shallow groundwater and/or soil leading to detectable concentrations in Site soil gas (**Figure 2**). Soil gas samples will be collected from a target depth of eight feet bgs.

The proposed locations were selected to provide sufficient geographic coverage to yield a representative depiction of soil vapor concentrations along the perimeter of the Site buildings; the primary vapor intrusion exposure pathway (should one exist) would be from the soil gas to building occupants. The specific locations were selected to sample:

1. Location between potential source areas (Former Sludge Beds and Clay Tailings Area, Former Fuel Oil Tank Areas, Sludge Storage Area) and the nearby buildings; and
2. Locations where releases of VOCs from within the building to the subsurface could be detected, if they occurred.

## 7. SAMPLING METHODS AND PROCEDURES

Sampling methods and procedures are presented in Standard Operating Procedures (SOP) included in **Appendix A, Table 1** and **Table 2**. NYSDEC guidance documents for PFAS sampling, *Groundwater Sampling for Emerging Contaminants*, *Collection of Surface Water Samples for Perfluorooctanoic Acid (PFOA) and Perfluorinated Compounds (PFCs) Protocol* and *Collection of Shallow Soil Samples for Perfluorooctanoic Acid (PFOA) and Perfluorinated Compounds (PFCs) Protocol* were reviewed and considered when preparing the SOPs.

### 7.1 Fill/Soil Sampling

Soil samples will be collected and placed directly into laboratory provided containers, which will then be stored in a pre-chilled cooler. Soil samples for PFAS analysis will be collected first and samples will be maintained in a separate cooler from other types of soil samples to prevent cross contamination. Sampling procedures for PFAS are presented in Site specific SOP A.1 (**Appendix A**). Sampling procedures for the remaining parameters are presented in SOPs A.2, A.3 and A.4 (**Appendix A**).

### 7.2 Groundwater Sampling

Groundwater Samples will be collected and placed directly into laboratory provided containers, which will then be stored in a pre-chilled cooler. Groundwater samples for PFAS analysis will be collected first to prevent cross contamination and samples will be maintained in a separate cooler from other types of groundwater samples to prevent cross contamination. Sampling procedures for PFAS are presented in SOP A.5 (**Appendix A**). Sampling procedures for the remaining parameters are presented in SOPs A.6, A.7, A.8, A.9 and A.10 (**Appendix A**). In the event that insufficient groundwater volume is available for sample collection the prioritization list of parameters will be as follows:

1. PFAS
2. TLC VOCs (+10 TICs)
3. 1,4-dioxane;
4. TCL SVOCs (+20 TICs), polychlorinated biphenyls (PCBs), and pesticides
5. TAL metals, mercury, and cyanide

### 7.3 Sediment Sampling

Sediment samples will be collected and placed directly into laboratory provided containers, which will then be stored in a pre-chilled cooler. Sediment samples for PFAS analysis will be collected first to prevent cross contamination and samples will be maintained in a separate cooler from other types of sediment samples to prevent cross contamination. Sampling procedures for PFAS are presented in Site specific SOP A.11 (**Appendix A**). Sampling procedures for the remaining parameters are presented in SOP A.12 (**Appendix A**).

#### **7.4 Surface Water Sampling**

Surface water samples will be collected and placed directly into laboratory provided containers, which will then be stored in a pre-chilled cooler. Surface water samples for PFAS analysis will be collected first to prevent cross contamination and samples will be maintained in a separate cooler from other types of surface water samples to prevent cross contamination. Sampling procedures for PFAS are presented in Site specific SOPs contained in SOP A.13 and sampling procedures for the remaining parameters are presented in SOP A.12 (**Appendix A**).

#### **7.5 Sludge Sampling**

Sludge samples will be collected and placed directly into laboratory provided containers, which will then be stored in a pre-chilled cooler. Sludge samples for PFAS analysis will be collected first to prevent cross contamination and samples will be maintained in a separate cooler from other types of sludge samples to prevent cross contamination. Sampling procedures for PFAS are presented in Site specific SOP A.11 and sampling procedures for the remaining parameters are presented in SOP A.12 (**Appendix A**).

#### **7.6 Soil gas sampling**

Soil gas samples will be collected in accordance with NYSDOH Guidance For Evaluating Soil Vapor Intrusion in the State of New York (2006, rev. 2017). Soil gas sample probes will be installed within the vadose zone using a GeoProbe® DPT drill rig (or equivalent) to a target depth of eight feet bgs. The probe depth may be adjusted in the field to target a more porous layer in the vadose zone if one is present and the exact soil gas sampling depth will be determined in the field. Each soil gas probe will consist of ¼-inch diameter Nylaflo® or Teflon® tubing connected with a compression fitting to a diameter stainless steel sampling point. Probes will be installed inside the borehole and a sand filter pack will be placed in the annulus to a height of 6 inches above the top of the sample point screen. Granular bentonite will be placed in two lifts of 3 inches above the filter pack and hydrated with a small amount of distilled water after each lift. A thick slurry of powdered bentonite and water will be added to seal the remainder of the borehole annulus to ground surface. The top of the probe will be fitted with a compression-fit brass or stainless-steel ball valve to maintain an air-tight seal between installation and sampling. Soil gas samples will be collected from the soil gas probes via laboratory prepared Summa canisters. Prior to sample collection, pneumatic testing will be performed to check the gas transmissive properties of the sampling zone and for a “shut in” test and helium tracer test will be used to verify that there are no leaks in the sampling equipment or annular space. Sample collection flow rates will not exceed 0.2 liters per minute, as per NYSDOH Guidance For Evaluating Soil Vapor Intrusion in the State of New York (2006, rev. 2017). Additional information on soil gas probe installations, pneumatic testing, and soil gas sampling procedures for VOCs are presented in SOP A.14 (**Appendix A**).

#### **7.7 Geophysical Survey**

Prior to commencing subsurface explorations, a day of geophysical surveying will be performed to delineate underground utilities in the vicinity of proposed sampling locations and the former underground fuel oil tank area which could serve as preferential transport pathways and potential

source of contamination. As appropriate, geophysical methods will include ground penetrating radar and magnetometer surveys. SOPs for geophysical surveys are included as SOP A.15 and SOP A.16 (**Appendix A**). Field adjustment of proposed sampling locations may be appropriate based on the geophysical survey results and will be made in consultation with NYSDEC.

## **7.8 Surveying Methods**

Sampling locations, monitoring wells and significant Site features will be surveyed relative to a permanent surface structure by a New York State licensed surveyor. The survey data to will be provided in North America Datum 83 [NAD83] format.

# **8. QUALITY CONTROL QUALITY ASSURANCE PROJECT PLAN**

## **8.1 Overview**

The Quality Assurance Project Plan (QAPP) described in this section includes the activities and procedures that will be used to ensure that data acquired during the site characterization are thoroughly documented, verifiable, and defensible, and that the quality of the data meets the requirements for its intended use. Project Quality Assurance (QA) objectives and Quality Control (QC) requirements have been used to develop the Data Quality Objectives and Criteria (DQOs) described in the following subsections for acquiring valid usable data. Criteria for data quality were established in terms of the precision, accuracy, representativeness, comparability, completeness, and sensitivity (PARCCS) parameters.

The QAPP was developed using the guidelines presented in USEPA Requirements for Quality Assurance Project Plans, EPA Quality Assurance/R-5 (USEPA, 2001) and the guidance presented in the NYSDEC DER-10, (NYSDEC, 2010).

## **8.2 QAPP Organization and Responsibility**

The primary project team assembled to oversee, direct and complete the sampling activities at the Site consists of personnel from Geosyntec. Geosyntec will be responsible for development of the project's technical direction, supervision and implementation of investigation activities including oversight of subcontractors, data management, and data quality assessment. The project team and corresponding projects roles are summarized below:

- Project Director, Peter King, PE, LSP, LEP, Geosyntec. Mr. King will provide strategic direction to the project team as well as oversight and guidance during project execution. He will also verify that adequate resources are available, and client expectations are met.
- Project Manager, Stefanie Lamb, P.G. (NH), Geosyntec. Ms. Lamb has responsibility for technical, financial, and scheduling matters and overall management of the project.
- Qualified Environmental Professionals, William Wertz, Ph.D., P.G. (N.Y.) and Seth Kellogg, P.G. (N.Y.), Geosyntec. Dr. Wertz and Ms. Kellogg have responsibility for

verifying that the technical requirements of the SCWP are met in accordance with DER-10.

- Sampling Manager and Quality Assurance Manager (QAM), Dylan Eberle, Ph.D. and Julia Caprio, Geosyntec. Dr. Eberle and Ms. Caprio have the overall responsibility for completion of sampling activities in accordance with the SWCP and QAPP and the overall responsibility for QA. Ms. Caprio is the communication link between the Geosyntec Project Manager and the field team on matters pertaining to sampling as well as the communication link between the Project Manager and Laboratory manager on matters pertaining to QA, data validation, and laboratory analyses.
- Database Manager, Tyson Knowles, Geosyntec. Mr. Knowles has the responsibility for maintaining the project database, archiving project data files, uploading laboratory electronic data deliverables (EDDs) and data qualifiers into the project database, and data transmittal to regulating agencies.
- Health and Safety Officer, Matthew Mraw, Geosyntec. Mr. Mraw will be responsible for safely implementing field activities and ensuring that they comply with the Site Health and Safety Plan (HASP).
- Analytical Laboratories, Eurofins TestAmerica Lancaster, PA and Sacramento, CA laboratories. These Eurofins TestAmerica Laboratories will be responsible for aqueous and solid sample analyses for the project. The laboratories will ultimately be responsible for the data produced and will ensure that laboratory data are generated in compliance with this QAPP, NYSDEC Analytical Services Protocols, internal laboratory procedures, and other applicable guidance.
- Subcontractors. Geosyntec will procure various subcontractors to implement the SCWP scope of work. The subcontractors are responsible for conducting the work in accordance with the SCWP, contractual agreements and for communicating any issues concerning the budget, schedule, or achievement of the technical specifications to the Geosyntec Field Team Leader.

The resumes of all B&BPC and Geosyntec project personnel listed above are provided in **Appendix B**.

### **8.3 QAPP Revision or Amendment**

It is expected that the procedures outlined in this QAPP will be followed. However, procedural modifications may be warranted depending on field conditions, equipment limitations, or limitations imposed by the procedure(s). Modification to this QAPP requires approval in advance by the Project Manager and the QAM. Deviations from the QAPP will be documented and discussed with NYSDEC field personnel when possible.

### **8.4 Data Quality Objectives and Criteria**

The overall quality objective of the project is to provide valid data of known and documented quality from environmental media (soil, sediment, groundwater, and surface water) collected

during site characterization. Data from a certified laboratory analysis of field samples may serve as the primary basis for reaching final conclusions from the Site Characterization. These data will be derived through standard methods and will be assessed through PARCCS parameters to determine any potential limitations applicable to the data and its suitability for meeting the DQOs of this QAPP.

Analytical samples will be collected following procedures and precautions detailed in the attached SOPs (**Appendix A**). Procedures and precautions specific to the collection of PFAS samples in soils, groundwater, sediments, and surface water are contained in SOPs A.1, A.5, A.11, and A.13 (**Appendix A**).

The analytical laboratories selected for this project are certified by NYSDOH through the National Environmental Laboratory Accreditation Program (NELAP) for the analytical methods required for the project. Laboratory analytical methods used to analyze field samples may include the following analyses listed in **Table 2**. In addition, screening of soil samples with a photoionization detector and visual inspection and documentation of observed conditions will generate supporting data.

## **8.5 Special Training and Certification**

### **8.5.1 Health and Safety Training**

Field activities will be performed by individuals with appropriate training (i.e., Code of Federal Regulations [CFR] 1910.120) and in accordance with the site-specific HASP. Before field activities commence, the site-specific HASP shall be reviewed and signed by Geosyntec personnel conducting field work and submitted to the NYSDEC.

### **8.5.2 Subcontractor Training**

Subcontractors performing work as part of this site characterization will be required to conduct activities in accordance with applicable health and safety regulations (e.g., CFR 1910.120) and site-specific requirements. Subcontractors will be responsible for the health and safety of their personnel while working at the Site. Each day before work commences, a tailgate health and safety meeting shall be conducted by the contractor field team lead. All field personnel present that day will be required to attend the meeting (or if they arrive on-site after the meeting, discuss the safety issues of the day with the on-site project manager) and sign the appropriate log sheet before they commence work.

## **8.6 Quality Assurance/Quality Control Measures**

### **8.6.1 Field Quality Control**

Field QC samples will be collected and analyzed to assess the precision and accuracy of groundwater and soil sampling activities. Field QC samples for this project will include field duplicates, matrix spike/matrix spike duplicate (MS/MSD) pairs, temperature blanks, and equipment rinsates and source blanks when necessary. **Table 1** describes the field quality control samples per matrix and their frequencies.

## **8.6.2 Field Duplicates**

Field duplicates are two samples (an original and a duplicate) of the same matrix, collected at the same time and location and using the same sampling techniques, to the extent practicable. Field duplicate samples are used to evaluate the precision of the overall sample collection process. Field duplicates will be collected at a frequency of 1 per 10 regular samples and will be analyzed for the full set of analyses used for the regular samples collected. Field duplicates receive unique sample numbers; therefore, the identities of the duplicate samples are “blind” to the analytical laboratory. Exact locations of duplicate samples and sample identifications will be recorded in the field logbook.

## **8.6.3 Matrix Spike/Matrix Spike Duplicate**

The laboratory will analyze a MS/MSD pair for every 20 samples analyzed or for every analytical batch prepared (not to exceed 20 samples), whichever is more frequent. Field personnel will collect three times the amount of the volume of the sample matrix for the designated MS/MSD sample. The MS/MSD sample will be used to determine the precision and accuracy of the sample preparation and analytical methods.

## **8.6.4 Equipment Rinsate Blank and Source Blank**

Equipment rinsate samples will be collected at a frequency of one per day per sample matrix. Rinsate samples are laboratory-certified clean water collected from the final rinse of the decontamination process. Rinsate samples will be collected from the sampling equipment, placed in appropriate containers supplied by the analytical laboratory, and analyzed for the full set of analyses used for the samples collected that day. Equipment rinsate samples are used to evaluate the effectiveness of the decontamination procedure and the potential for cross-contamination during sampling events. One source blank will be collected per event by pouring laboratory-certified clean water directly into the appropriate sample containers while at the Site.

## **8.6.5 Temperature Blanks**

Each cooler will be shipped with a temperature blank. A temperature blank is a sample container filled with tap water and stored in the cooler during sample collection and transportation. The laboratory will record the temperature of the temperature blank immediately upon receipt of the samples. If samples are received at the laboratory less than 8 hours after collection, they may not have had sufficient time to cool to the required  $\leq 4$  °C.

## **8.6.6 Trip Blanks**

A laboratory supplied trip blank will accompany dissolved hydrocarbon bottleware during shipment from the lab, transport on Site, and return shipment to the lab.

## **8.6.7 Decontamination of Sampling Equipment**

The decontamination procedures that will be followed for non-dedicated sampling equipment are in accordance with procedures approved by NYSDEC. Decontamination of sampling equipment

must be conducted consistently to assure the quality of samples collected. Non-dedicated equipment that comes into contact with potentially contaminated soil, sediment, and groundwater will be decontaminated. Decontamination will occur after each use of a piece of non-dedicated equipment using PFAS-free and 1,4-dioxane free detergent and laboratory certified PFAS-free water. Liquinox® shall not be used for the decontamination of sampling equipment used for the collection of media to be submitted for analysis of 1,4-dioxane.

## **8.7 Laboratory Quality Control/Quality Assurance**

Samples will be analyzed by an analytical method included in the most current DEC Analytical Services Protocol (ASP) at a laboratory that is accredited pursuant to the NYSDOH Environmental Laboratory Accreditation Program (ELAP) for the category of parameters analyzed. There is not currently an ELAP certification program for the analysis of PFAS compounds other than those in drinking water. Consistent with NYSDEC policy (NYSDEC 2018), the samples analyzed for PFAS will be performed using a modified USEPA Method 573 approach at a laboratory that has ELAP certification for PFOA and PFOS in drinking water.

### **8.7.1 Laboratory Qualifications**

The analytical laboratory selected for soil and groundwater analyses for this site characterization will be the Eurofins TestAmerica Lancaster, PA and Sacramento, CA laboratories. These laboratories are certified by New York State through the National Environmental Laboratory Accreditation Program.

### **8.7.2 Quality Control Samples**

The Eurofins TestAmerica Laboratories have a QC program in place to ensure the reliability and validity of the analysis performed by their laboratories. Analytical procedures are documented in writing as SOPs. Each SOP includes a QC section which addresses the minimum QC requirements for the procedures. The SOPs used by Eurofins TestAmerica are provided as **Appendix C** which was submitted to NYSDEC under separate cover, because it contains confidential business information.

### **8.7.3 Calibration**

Instruments will be calibrated, and the calibration acceptance criteria met before samples are analyzed. Initial calibration acceptance criteria documented in the laboratory SOPs will be evaluated as part of the data usability assessment as described in Section 8.8. Calibration data (calibration tables, chromatograms, instrument printouts, and laboratory logbooks) will be clearly labeled to identify the source and preparation of the calibration standard, and, will therefore be traceable to the standard preparation records.

## **8.8 Data Management, Validation, and Usability**

### **8.8.1 Data Management**

Data management operations include data recording, validation, transformation, transmittal, reduction, analysis, tracking, storage and retrieval. Upon receipt from the laboratory, the analytical report and electronic data deliverable (EDD) will be entered into the project's data validation tracking system, which allows the data to be tracked from receipt, through validation, to data loading and storage. The electronic data will be imported into the database system concurrent with the data validation process. The database will be updated with validated data after validation of the laboratory data is complete. The data will be considered final when data validation is complete and any required data qualifiers have been added to the database. Any changes made to the database after finalization will be documented, including a description of the change, date of change, person responsible, and reason for change.

### **8.8.2 Data Validation Procedures**

Following data verification by the laboratory, data validation will be coordinated and/or conducted by Geosyntec's QAM. Data validation shall be completed by Mary Tyler, a Geosyntec employee who is independent of the project team. Ms. Tyler's resume is included in **Appendix B**. Stage 2A data validation will be performed on all samples in general accordance with the following data validation guidance documents, where applicable:

- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, OSWER 9240.1-51, EPA 540-R-10-011, January 2010
- USEPA, Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, EPA 540-R-08-01, June 2008
- DER-10/Technical Guidance for Site Investigation and Remediation, NYSDEC May 3, 2010

Where necessary, data qualifiers will be assigned to provide the basis of describing data quality. Validation qualifiers, reason codes, and comments (as warranted) will be added to each EDD and uploaded to the project database. This information will be supplied to the project team via a validation report. The validated analytical data, with applicable data qualifiers, will be included in summary tables in the site characterization report. Data will be submitted to NYSDEC in Category B Laboratory format and EDD format.

### **8.8.3 Data Usability**

Upon completion of data validation, a Data Usability Summary Report (DUSR) consistent with the requirements of DER-10 will be prepared by an experienced environmental scientist who is fully capable of conducting a full data validation and who is pre-approved by the NYSDEC Division of Environmental Remediation. The validated analytical data, with applicable data qualifiers, will be included in summary tables in the site characterization report. An EDD meeting the requirements of the NYSDEC EDD Manual (NYSDEC, 2013) will be submitted with the site characterization report

to NYSDEC so that the data can be uploaded to the NYSDEC Environmental Information Management System (EIMS).

## 9. REPORTING

The results of the site characterization will be summarized in a report and submitted to the NYSDEC in an electronic format that complies with NYSDEC's Electronic Document Standards (EDS). The report submitted to NYSDEC shall include narrative, tables, and figures sufficient to accurately convey the findings of the site characterization.

### 9.1 Health and Safety

A Site-specific HASP and Task Hazard Analysis (THA), will be prepared for site characterization activities to ensure Site worker health and safety and the safety of the downwind community by identifying potential hazards and means of mitigating the risk of exposure should contamination be identified on Site. The HASP and THA are currently in development and will be submitted to NYSDEC for review prior to execution of the SCWP. Although the HASP and THA will consider the hazards associated with planned Site activities, subcontractors performing the work will be required to develop their own HASP, THA or equivalent per 29 CFR Part 1019.120. Site workers and subcontractor's will be OSHA 40-hour HAZWOPER trained and current with applicable refresher courses.

**Appendix D** contains a Community Air Monitoring Plan (CAMP), as described in Appendix 1A of NYSDEC DER-10, which describes the monitoring methods and action levels that will be utilized to keep VOCs, dust, odors, etc., at a minimum during site characterization activities. Daily CAMP data, including a figure showing wind direction, CAMP monitoring locations, and daily work zones, shall be transmitted to the NYSDOH Project Manager daily. CAMP exceedances and corrective actions taken should be reported to the NYSDOH and NYSDEC PMs on the day of occurrence or the next business day.

### 9.2 Schedule

Field work will begin approximately 2 weeks following NYSDEC approval of the SCWP. The draft site characterization report will be submitted 6 weeks following receipt of data from the analytical laboratory. At this time, laboratory capacity for PFAS analysis has resulted in turn-around times greater than 28 days.

Field Characterization	November 2019 – January 2020
Draft Site Characterization Report	February 2020 – March 2020
Final Site Characterization Report	4 weeks after receipt of NYSDEC comments

## 10. SUBMITTALS

Communications will be transmitted by email, United States Postal Service, private courier, or hand delivered to the following individuals. Final documents, as they become available, will also be submitted to the following individuals:

### **NYSDEC Project Manager**

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## 11. REFERENCES

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- USEPA (United States Environmental Protection Agency), Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review. OSWER 9240.1-51. EPA 540-R-10-011. January 2010.
- Williams, J.H., and Heisig, P.M., 2018, Groundwater-level analysis of selected wells in the Hoosick River Valley near Hoosick Falls, New York, for aquifer framework and properties: U.S. Geological Survey Open-File Report 2018–1015, 14 p., <https://doi.org/10.3133/ofr20181015>.

# TABLES

# TABLES

Table 1  
Proposed Site Characterization Samples  
Lydall Performance Materials (US), Inc.  
Hoosick Falls, New York

Sample Type	Sample Location	Sample Name	Anticipated # of Samples	Anticipated # of Samples per Matrix	Sample Depth	Analytical Parameters	Sampling Method	Rationale	
Groundwater	GW-A	GW-A-xxxxxx (Date)	1	13	15-20' bgs or as determined in-field	TCL, TAL, total mercury, total cyanide, 1,4-dioxane, and PFAS	low flow	The sampling locations were selected to identify potential impacts where past activities at the site (clay tailings storage area [GW-D], former coal pile & underground fuel oil tanks [GW-H], sludge storage bin [GW-E], transformer [GW-F]) may have potentially impacted the shallow groundwater, to provide sufficient geographic coverage to determine shallow groundwater flow directions, and to identify whether constituents of concern may be migrating from off-site sources (GW-A,GW-B,GW-C).  Duplicate sampling location will be selected based on soil descriptions, PID readings and water production MS/MSD sampling location will be selected based on soil descriptions, PID readings and water production	
	GW-B	GW-B-xxxxxx (Date)	1						
	GW-C	GW-C-xxxxxx (Date)	1						
	GW-D	GW-D-xxxxxx (Date)	1						
	GW-E	GW-E-xxxxxx (Date)	1						
	GW-F	GW-F-xxxxxx (Date)	1						
	GW-G	GW-G-xxxxxx (Date)	1						
	GW-H	GW-H-xxxxxx (Date)	1						
	GW-I	GW-I-xxxxxx (Date)	1						
	Duplicate	GW-Z-xxxxxx (Date)	1						
	MS/MSD	per selected sample	1						NA
Field Blank	FB-xxxxxx (Date)	1	NA	One per day or per decontamination event, whichever is fewer					
Trip Blank	TB-xxxxxx (Date)	1	NA	One per cooler per day					
Sludge	SLDG - A	SLDG-A-xxxxxx (Date)	1	7	0-6"	TCL, TAL, total mercury, total cyanide, 1,4-dioxane, pH, and PFAS	Grab sample	The sampling location is a sump below equipment where small volumes of PFAS containing products were used as a coating agent	
	SLDG - B	SLDG-B-xxxxxx (Date)	1					The sampling location is a roll-off storage bin where wastewater treatment plant sludge is temporarily stored before shipment for off-site disposal as a non-hazardous waste	
	Duplicate	SLDG-Z-xxxxxx (Date)	1					MS/MSD sampling location will be selected based on sludge descriptions and PID readings	
	MS/MSD	per selected sample	1					NA	One per day or per decontamination event, whichever is fewer
	Field Blank	FB-xxxxxx (Date)	1					NA	One per cooler per day
	Trip Blank	TB-xxxxxx (Date)	1					NA	One per cooler per day
	Rinsate Blank	RB-xxxxxx (Date)	1					NA	One per day per type of non-dedicated sampling equipment used
Soil	SS-A	SS-A-xxxxxx (Date)	3	37	0-2", 2-12", 6" above the water table	TCL, TAL, total mercury, total cyanide, 1,4-dioxane, pH, and PFAS	Geoprobe	Characterize soil quality across the site	
	SS-B	SS-B-xxxxxx (Date)	3					Characterize soil quality in the vicinity of the former clay tailings storage area	
	SS-C	SS-C-xxxxxx (Date)	3					Characterize soils in the vicinity of the former clay tailings storage area	
	SS-D	SS-D-xxxxxx (Date)	3					Characterize soil quality between the Site and the Hoosic River[characterize soils between the Site and the Hoosic River]	
	SS-E	SS-E-xxxxxx (Date)	3					Characterize soils in the vicinity of the electrical substation and transformer area	
	SS-F	SS-F-xxxxxx (Date)	3					Characterize soil quality between the Site and the Hoosic River	
	SS-G	SS-G-xxxxxx (Date)	3					Characterize soil quality between the Site and the Hoosic River	
	SS-H	SS-H-xxxxxx (Date)	3					Characterize soils in the vicinity of the former coal storage and former underground fuel oil tank area	
	SS-I	SS-I-xxxxxx (Date)	3					Characterize soil quality in remaining geographic regions of property	
	SS-J	SS-J-xxxxxx (Date)	3					Duplicate sampling location will be selected based on soil descriptions, PID readings and water production	
	SS-K	SS-K-xxxxxx (Date)	3					MS/MSD sampling location will be selected based on soil descriptions, PID readings and water production	
	Duplicates	SS-Z-xxxxxx (Date) SS-Y-xxxxxx (Date)	TBD					NA	One per day or per decontamination event, whichever is fewer
	MS/MSD	per selected sample	1					NA	One per cooler per day
	Field Blank	FB-xxxxxx (Date)	1					NA	One per day per type of non-dedicated sampling equipment used
	Trip Blank	TB-xxxxxx (Date)	1					NA	
	Rinsate Blank	RB-xxxxxx (Date)	1					NA	
	Surface Water	SW-A	SW-A-xxxxxx (Date)					1	6
SW-B		SW-B-xxxxxx (Date)	1	Characterize water quality across the Site					
Duplicate		SW-Z-xxxxxx (Date)	1	Duplicate sampling location will be selected based on sediment descriptions, PID readings and water production					
MS/MSD		per selected sample	1	MS/MSD sampling location will be selected based on sediment descriptions, PID readings and water production					
Field Blank		FB-xxxxxx (Date)	1	NA	One per day or per decontamination event, whichever is fewer				
Trip Blank		TB-xxxxxx (Date)	1	NA	One per cooler per day				

Table 1  
Proposed Site Characterization Samples  
Lydall Performance Materials (US), Inc.  
Hoosick Falls, New York

Sample Type	Sample Location	Sample Name	Anticipated # of Samples	Anticipated # of Samples per Matrix	Sample Depth	Analytical Parameters	Sampling Method	Rationale
Sediment	SED-A	SD-A-xxxxxx (Date)	1	7	0-6"	TCL, TAL, total mercury, total cyanide, 1,4-dioxane, and PFAS	Grab sample	Characterize stream sediment quality across the Site
	SED-B	SD-B-xxxxxx (Date)	1				Grab sample	Characterize stream sediment quality across the Site
	Duplicate	SD-Z-xxxxxx (Date)	1				Grab sample	Duplicate sampling location will be selected based on sediment descriptions, PID readings and water production
	MS/MSD	per selected sample	1		NA		Grab sample	MS/MSD sampling location will be selected based on sediment descriptions, PID readings and water production
	Field Blank	FB-xxxxxx (Date)	1		NA		NA	One per day or per decontamination event, whichever is fewer
	Trip Blank	TB-xxxxxx (Date)	1		NA		NA	One per cooler per day
	Rinsate Blank	RB-xxxxxx (Date)	1		NA		NA	One per day per type of non-dedicated sampling equipment used
Soil Gas	SG-A	SS-A-xxxxxx (Date)	1	11	Within the vadose zone, final depth to be determined in the field	VOC	Grab sample	The sampling locations were selected to provide sufficient geographic coverage to determine if impacts from past activities at the site may have potentially impacted shallow groundwater and/or soil leading to detectable concentrations in site soil gas.
	SG-B	SS-B-xxxxxx (Date)	1					
	SG-C	SS-C-xxxxxx (Date)	1					
	SG-D	SS-D-xxxxxx (Date)	1					
	SG-E	SS-E-xxxxxx (Date)	1					
	SG-F	SS-F-xxxxxx (Date)	1					
	SG-G	SS-G-xxxxxx (Date)	1					
	SG-H	SS-H-xxxxxx (Date)	1					
	SG-I	SS-I-xxxxxx (Date)	1					
	SG-J	SS-J-xxxxxx (Date)	1					
	Equipment Blank	EB-xxxxxx (Date)	1					

**Notes**

1. Samples will be analyzed for the the full target compound list (TCL) of organic compounds plus the 30 highest concentration Tentatively Identified Compounds (TICs; 10 VOCs and 20 SVOCs); TCL PCBs; TCL pesticides; the full target analyte list (TAL) of inorganic compounds; total mercury; total cyanide, 1,4-dioxane and PFAS.
2. Table 2 of this SCWP includes the specific analytes and analytical methods that will be utilized analysis of site characterization samples.
3. Reported results for PFAS will include all compounds listed on NYSDEC's most current PFAS Analyte List.
4. Monitoring well and soil boring samples will be collected at depths achieved using direct-push drilling methodologies. SS-J and SS-K may be limited based on accessibility.
5. GW = Groundwater; SLDG = Sludge; SS = Soil Sample; SW = Surface Water; SED = Sediment; FB = Field Blank; TB = Trip Blank; RB = Rinsate Blank; TCL = Target Compound List; TAL = Target Analyte List; TIC = Tentatively Identified Compound; VOC = Volatile Organic Compound; SVOC = Semi-Volatile Organic Compound; PFAS = Per- and Polyfluoroalkyl Substances; PID = Photoionization Detector; MS = Matrix Spike; MSD = Matrix Spike Duplicate; TBD = To Be Determined; NA = Not Applicable

Table 2  
 Analytes and Analytical Methods for Site Characterization Samples  
 Lydall Performance Materials (US), Inc.  
 Hoosick Falls, New York

Media	Analytes	USEPA Analytical Method	Preservation	Holding Time	Sample Container
<b>Soil, Sludge &amp; Sediment</b>	TCL VOCs (+10 TICs)	USEPA Method 8260C	pH<2 with HCl, Cool to 4°C	14 days to analysis	(3) 40 mL VOA vial
	TCL SVOCs (+20 TICs)	USEPA Method 8270D	Cool to 4°C	14 days to extraction; 40 days from extraction to analysis	8 oz amber glass jar
	Pesticides	USEPA Method 8081B	Cool to 4°C	14 days to extraction; 40 days from extraction to analysis	8 oz amber glass jar
	PCBs	USEPA Method 8082A	Cool to 4°C	1 year to extraction; 40 days from extraction to analysis	8 oz amber glass jar
	TAL Metals	USEPA Method 6010C	Cool to 4°C	6 months	8 oz amber glass or plastic jar
	NYSDEC PFAS Analyte List	Modified USEPA Method 537.1	Cool to 4°C	14 days to extraction; 40 days to analysis	(2) 250 mL HDPE containers
	Total Organic Carbon	Lloyd Kahn Method	Cool to 4°C	14 days to analysis	8 oz glass jar
	Mercury	USEPA Method 7471B	Cool to 4°C	28 days to analysis	8 oz amber glass or plastic jar
	Cyanide	USEPA Method 9010	Cool to 4°C	14 days	(1) 500 ml plastic or glass jar
	1,4-dioxane	USEPA Method 8270	pH<2 with HCl, Cool to 4°C	14 days to analysis	(3) 40 mL VOA vial
	Grain Size*	ASTM D6913	Cool to 4°C	None	2 oz glass or plastic jar
	Moisture Content*	ASTM D4959	Cool to 4°C	As soon as possible	2 oz glass or plastic jar
pH*	EPA Method 9045D	Cool to 4°C	As soon as possible	2 oz glass or plastic jar	
<b>Groundwater &amp; Surface Water</b>	TCL VOCs (+10 TICs)	USEPA Method 8260C	pH<2 with HCl, Cool to 4°C	14 days to analysis	(3) 40 mL VOA vial
	TCL SVOCs (+20 TICs)	USEPA Method 8270D	Cool to 4°C	7 days to extraction; 40 days from extraction to analysis	(2) 1 L amber glass jar
	Pesticides	USEPA Method 8081B	Cool to 4°C	7 days to extraction; 40 days from extraction to analysis	(1) 1 L amber glass jar
	PCBs	USEPA Method 8082A	Cool to 4°C	7 days to extraction; 40 days from extraction to analysis	(1) 1 L amber glass jar
	TAL Metals	USEPA Method 6010C	pH<2 with HNO <sub>3</sub> ; Cool to 4°C	28 days to analysis for mercury; 6 months to analysis for other metals	(1) 500 mL polyethylene container
	NYSDEC PFAS Analyte List	Modified USEPA Method 537.1	Cool to 4°C	14 days to extraction; 40 days to analysis	(1) 8 oz HDPE containers
	Mercury	USEPA Method 7470A	pH <2 with HNO <sub>3</sub> Cool to 4°C	28 days	(1) 250 ml plastic or glass
	Cyanide	USEPA Method 9012B	pH >12 with NaOH; Cool to 4°C	14 days	(1) 500 ml plastic or glass jar
	1,4-dioxane	USEPA Method 8270 SIM	Cool to 4°C	7 days to extraction; 40 days from extraction to analysis	(2) 1 L amber glass jar
<b>Soil Gas</b>	VOCs	EPA Method TO-15	none	30 days	(1) Summa Canister

**Notes:**

1. TCL VOCs (+ 10 TIC) is the NYSDEC Target Compound List of volatile organic compounds plus the 10 tentatively identified compounds with the highest estimated concentrations.
  2. TCL SVOCs (+20 TICs) is the NYSDEC Target Compound List of semi-volatile organic compounds plus the 20 tentatively identified compounds with the highest estimated concentrations.
  3. NYSDEC PFAS Analyte List is the list of PFAS compounds identified in the most current memorandum regarding emerging contaminants. NYSDEC's Current Per- and Polyfluoroalkyl Substances (PFAS) Analyte List is provided in Table 3.
- \*Grain size, moisture content, and pH will be performed on soil and sediment samples

New York State Department of Environmental Conservation's  
Current Per- and Polyfluoroalkyl Substances (PFAS) Analyte List

<b>PFAS names and abbreviation</b>
N-Ethyl Perfluorooctane Sulfonamidoacetic Acid (NETFOSAA)
N-Methyl Perfluorooctane Sulfonamidoacetic Acid (NMEFOSAA)
Perfluorobutane Sulfonate (PFBS)
Perfluorobutanoic Acid (PFBA)
Perfluorodecane Sulfonic Acid (PFDS)
Perfluorodecanoic Acid (PFDA)
Perfluorododecanoic Acid (PFDOA)
Perfluoroheptanesulfonic Acid (PFHpS)
Perfluoroheptanoic Acid (PFHPA)
Perfluorohexane Sulfonate (PFHXS)
Perfluorohexanoic Acid (PFHXA)
Perfluorononanoic Acid (PFNA)
Perfluorooctane Sulfonamide (FOSA)
Perfluorooctane Sulphonic Acid (PFOS)
Perfluorooctanoic Acid (PFOA)
Perfluoropentanoic Acid (PFPA)
Perfluorotetradecanoic Acid (PFTEA)
Perfluorotridecanoic Acid (PFTRIA)
Perfluoroundecanoic Acid (PFUNA)
8:2 Fluorotelomer Sulfonate (6:2 FTS) or Sodium 1h,1h,2h,2h-Perfluorodecane Sulfonate
6:2 Fluorotelomer Sulfonate (6:2 FTS) or Sodium 1h,1h,2h,2h-Perfluorooctane Sulfonate

**Source:**

NYSDEC, 2019. Sampling for 1,4-Dioxane and Per- and Polyfluoroalkyl Substances (PFAS) Under DEC's Part 375 Remedial Programs. Accessed 21 March 2019. [Available online: [https://alphalab.com/images/NYDEC\\_emergcontsamplngext.pdf](https://alphalab.com/images/NYDEC_emergcontsamplngext.pdf)].

Table 4  
Reporting and Method Detection Limits for Specific Compounds and Matrices  
Lydall Performance Materials (US), Inc.  
Hoosick Falls, New York

Analysis Group	Method Description	Method Code	Prep Method	Analyte Description	CAS Number	RL	MDL	LOD	Units	LCS - Low	LCS - High	LCS - RPD %	MS - Low	MS - High	MS - RPD %	Surrogate Low	Surrogate High
Soil Samples	Volatile Organic Compounds by GC/MS	8260C	5035FP_Calc	1,1,1-Trichloroethane	71-55-6	5.00	0.363		ug/Kg	77	121	20	77	121	30		
				1,2-Dichlorobenzene	95-50-1	5.00	0.391		ug/Kg	75	120	20	75	120	30		
				1,1,2,2-Tetrachloroethane	79-34-5	5.00	0.811		ug/Kg	80	120	20	80	120	30		
				1,1,2-Trichloroethane	79-00-5	5.00	0.650		ug/Kg	78	122	20	78	122	30		
				1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5.00	1.14		ug/Kg	60	140	20	60	140	30		
				1,1-Dichloroethane	75-34-3	5.00	0.610		ug/Kg	73	126	20	73	126	30		
				1,1-Dichloroethene	75-35-4	5.00	0.612		ug/Kg	59	125	20	59	125	30		
				1,2,4-Trichlorobenzene	120-82-1	5.00	0.304		ug/Kg	64	120	20	64	120	30		
				1,2-Dibromo-3-Chloropropane	96-12-8	5.00	2.50		ug/Kg	63	124	20	63	124	30		
				1,2-Dichloroethane	107-06-2	5.00	0.251		ug/Kg	77	122	20	77	122	30		
				1,2-Dichloropropane	78-87-5	5.00	2.50		ug/Kg	75	124	20	75	124	30		
				1,3-Dichlorobenzene	541-73-1	5.00	0.257		ug/Kg	74	120	20	74	120	30		
				1,4-Dichlorobenzene	106-46-7	5.00	0.700		ug/Kg	73	120	20	73	120	30		
				2-Butanone (MEK)	78-93-3	25.0	1.83		ug/Kg	70	134	20	70	134	30		
				2-Hexanone	591-78-6	25.0	2.50		ug/Kg	59	130	20	59	130	30		
				4-Methyl-2-pentanone (MIBK)	108-10-1	25.0	1.64		ug/Kg	65	133	20	65	133	30		
				Acetone	67-64-1	25.0	4.21		ug/Kg	61	137	20	61	137	30		
				Benzene	71-43-2	5.00	0.245		ug/Kg	79	127	20	79	127	30		
				Bromodichloromethane	75-27-4	5.00	0.670		ug/Kg	80	122	20	80	122	30		
				Bromoform	75-25-2	5.00	2.50		ug/Kg	68	126	20	68	126	30		
				Bromomethane	74-83-9	5.00	0.450		ug/Kg	37	149	20	37	149	30		
				Carbon disulfide	75-15-0	5.00	2.50		ug/Kg	64	131	20	64	131	30		
				Carbon tetrachloride	56-23-5	5.00	0.484		ug/Kg	75	135	20	75	135	30		
				Chlorobenzene	108-90-7	5.00	0.660		ug/Kg	76	124	20	76	124	30		
				Dibromochloromethane	124-48-1	5.00	0.640		ug/Kg	76	125	20	76	125	30		
				Chloroethane	75-00-3	5.00	1.13		ug/Kg	69	135	20	69	135	30		
				Chloroform	67-66-3	5.00	0.309		ug/Kg	80	120	20	80	120	30		
				Chloromethane	74-87-3	5.00	0.302		ug/Kg	63	127	20	63	127	30		
				cis-1,2-Dichloroethene	156-59-2	5.00	0.640		ug/Kg	81	120	20	80	120	30		
				cis-1,3-Dichloropropene	10061-01-5	5.00	0.720		ug/Kg	80	120	20	80	120	30		
				Cyclohexane	110-82-7	5.00	0.700		ug/Kg	65	120	20	65	120	30		
				Dichlorodifluoromethane	75-71-8	5.00	0.413		ug/Kg	57	142	20	57	142	30		
				Ethylbenzene	100-41-4	5.00	0.345		ug/Kg	80	120	20	80	120	30		
				1,2-Dibromoethane	106-93-4	5.00	0.642		ug/Kg	78	120	20	78	120	30		
				Isopropylbenzene	98-82-8	5.00	0.754		ug/Kg	72	120	20	72	120	30		
				Methyl acetate	79-20-9	25.0	3.02		ug/Kg	55	136	20	55	136	30		
				Methyl tert-butyl ether	1634-04-4	5.00	0.491		ug/Kg	63	125	20	63	125	30		
				Methylcyclohexane	108-87-2	5.00	0.760		ug/Kg	60	140	20	60	140	30		
				Methylene Chloride	75-09-2	5.00	2.30		ug/Kg	61	127	20	61	127	30		
				Styrene	100-42-5	5.00	0.250		ug/Kg	80	120	20	80	120	30		
				Tetrachloroethene	127-18-4	5.00	0.671		ug/Kg	74	122	20	74	122	30		
				Toluene	108-88-3	5.00	0.378		ug/Kg	74	128	20	74	128	30		
				trans-1,2-Dichloroethene	156-60-5	5.00	0.516		ug/Kg	78	126	20	78	126	30		
				trans-1,3-Dichloropropene	10061-02-6	5.00	2.20		ug/Kg								
				Trichloroethene	79-01-6	5.00	1.10		ug/Kg	77	129	20	77	129	30		
Trichlorofluoromethane	75-69-4	5.00	0.473		ug/Kg	65	146	20	65	146	30						
Vinyl chloride	75-01-4	5.00	0.610		ug/Kg	61	133	20	61	133	30						
Xylenes, Total	1330-20-7		10.0	0.840	ug/Kg												
Tentatively Identified Compound	STL00231				ug/Kg												
Toluene-d8 (Surr)	2037-26-5				ug/Kg											71	125
1,2-Dichloroethane-d4 (Surr)	17060-07-0				ug/Kg											64	126
4-Bromofluorobenzene (Surr)	460-00-4				ug/Kg											72	126
Dibromofluoromethane (Surr)	1868-53-7				ug/Kg							20			30	60	140

Table 4  
Reporting and Method Detection Limits for Specific Compounds and Matrices  
Lydall Performance Materials (US), Inc.  
Hoosick Falls, New York

Analysis Group	Method Description	Method Code	Prep Method	Analyte Description	CAS Number	RL	MDL	LOD	Units	LCS - Low	LCS - High	LCS - RPD %	MS - Low	MS - High	MS - RPD %	Surrogate Low	Surrogate High		
Soil Samples	Semivolatile Organic Compounds (GC/MS)	8270D	3550C	Biphenyl	92-52-4	170	25.0		ug/Kg	59	120	20	58	120	20				
				bis (2-chloroisopropyl) ether	108-60-1	170	34.0		ug/Kg	44	120	24	31	120	24				
				2,4,5-Trichlorophenol	95-95-4	170	46.0		ug/Kg	59	126	18	46	120	18				
				2,4,6-Trichlorophenol	88-06-2	170	34.0		ug/Kg	59	123	19	41	123	19				
				2,4-Dichlorophenol	120-83-2	170	18.0		ug/Kg	61	120	19	45	120	19				
				2,4-Dimethylphenol	105-67-9	170	41.0		ug/Kg	59	120	42	52	120	42				
				2,4-Dinitrophenol	51-28-5	1660	784		ug/Kg	41	146	22	41	146	22				
				2,4-Dinitrotoluene	121-14-2	170	35.0		ug/Kg	63	120	20	63	125	20				
				2,6-Dinitrotoluene	606-20-2	170	20.0		ug/Kg	66	120	15	66	120	15				
				2-Chloronaphthalene	91-58-7	170	28.0		ug/Kg	57	120	21	57	120	21				
				1,4-Dioxane	123-91-1	100	55.0		ug/Kg	23	120	50	13	120	50				
				2-Chlorophenol	95-57-8	170	31.0		ug/Kg	53	120	25	43	120	25				
				2-Methylnaphthalene	91-57-6	170	34.0		ug/Kg	59	120	21	55	120	21				
				2-Methylphenol	95-48-7	170	20.0		ug/Kg	54	120	27	48	120	27				
				2-Nitroaniline	88-74-4	330	25.0		ug/Kg	61	120	15	61	120	15				
				2-Nitrophenol	88-75-5	170	48.0		ug/Kg	56	120	18	37	120	18				
				3,3'-Dichlorobenzidine	91-94-1	330	200		ug/Kg	54	120	25	37	126	25				
				3-Nitroaniline	99-09-2	330	47.0		ug/Kg	48	120	19	48	120	19				
				4,6-Dinitro-2-methylphenol	534-52-1	330	170		ug/Kg	49	122	15	23	149	15				
				4-Bromophenyl phenyl ether	101-55-3	170	24.0		ug/Kg	58	120	15	58	120	15				
				4-Chloro-3-methylphenol	59-50-7	170	42.0		ug/Kg	61	120	27	49	125	27				
				4-Chloroaniline	106-47-8	170	42.0		ug/Kg	38	120	22	38	120	22				
				4-Chlorophenyl phenyl ether	7005-72-3	170	21.0		ug/Kg	63	124	16	63	124	16				
				4-Methylphenol	106-44-5	330	20.0		ug/Kg	55	120	24	50	120	24				
				4-Nitroaniline	100-01-6	330	89.0		ug/Kg	56	120	24	47	120	24				
				4-Nitrophenol	100-02-7	330	119		ug/Kg	43	147	25	31	147	25				
				Acenaphthene	83-32-9	170	25.0		ug/Kg	62	120	35	60	120	35				
				Acenaphthylene	208-96-8	170	22.0		ug/Kg	58	121	18	58	121	18				
				Acetophenone	98-86-2	170	23.0		ug/Kg	54	120	20	47	120	20				
				Anthracene	120-12-7	170	42.0		ug/Kg	62	120	15	62	120	15				
				Atrazine	1912-24-9	170	59.0		ug/Kg	60	127	20	60	150	20				
				Benzaldehyde	100-52-7	170	135		ug/Kg	10	150	20	10	150	20				
				Benzo[a]anthracene	56-55-3	170	17.0		ug/Kg	65	120	15	65	120	15				
				Benzo[a]pyrene	50-32-8	170	25.0		ug/Kg	64	120	15	64	120	15				
				Benzo[b]fluoranthene	205-99-2	170	27.0		ug/Kg	64	120	15	10	150	15				
				Benzo[g,h,i]perylene	191-24-2	170	18.0		ug/Kg	45	145	15	45	145	15				
				Benzo[k]fluoranthene	207-08-9	170	22.0		ug/Kg	65	120	22	23	150	22				
				Bis(2-chloroethoxy)methane	111-91-1	170	36.0		ug/Kg	55	120	17	52	120	17				
				Bis(2-chloroethyl)ether	111-44-4	170	22.0		ug/Kg	45	120	21	45	120	21				
				Bis(2-ethylhexyl) phthalate	117-81-7	170	58.0		ug/Kg	61	133	15	61	133	15				
				Butyl benzyl phthalate	85-68-7	170	28.0		ug/Kg	61	129	16	61	120	16				
				Caprolactam	105-60-2	170	51.0		ug/Kg	47	120	20	37	133	20				
				Carbazole	86-74-8	170	20.0		ug/Kg	65	120	20	59	120	20				
				Chrysene	218-01-9	170	38.0		ug/Kg	64	120	15	64	120	15				
				Di-n-butyl phthalate	84-74-2	170	29.0		ug/Kg	58	130	15	58	130	15				
				Di-n-octyl phthalate	117-84-0	170	20.0		ug/Kg	57	133	16	57	133	16				
				Dibenz(a,h)anthracene	53-70-3	170	30.0		ug/Kg	54	132	15	54	132	15				
				Dibenzofuran	132-64-9	170	20.0		ug/Kg	63	120	15	62	120	15				
				Diethyl phthalate	84-66-2	170	22.0		ug/Kg	66	120	15	66	120	15				
				Dimethyl phthalate	131-11-3	170	20.0		ug/Kg	65	124	15	65	124	15				
Fluoranthene	206-44-0	170	18.0		ug/Kg	62	120	15	62	120	15								
Fluorene	86-73-7	170	20.0		ug/Kg	63	120	15	63	120	15								
Hexachlorobenzene	118-74-1	170	23.0		ug/Kg	60	120	15	60	120	15								
Hexachlorobutadiene	87-68-3	170	25.0		ug/Kg	45	120	44	45	120	44								
Hexachlorocyclopentadiene	77-47-4	170	23.0		ug/Kg	47	120	49	31	120	49								
Hexachloroethane	67-72-1	170	22.0		ug/Kg	41	120	46	21	120	46								
Indeno[1,2,3-cd]pyrene	193-39-5	170	21.0		ug/Kg	56	134	15	56	134	15								
Isophorone	78-59-1	170	36.0		ug/Kg	56	120	17	56	120	17								
N-Nitrosodi-n-propylamine	621-64-7	170	29.0		ug/Kg	52	120	31	46	120	31								
N-Nitrosodiphenylamine	86-30-6	170	138		ug/Kg														

Table 4  
Reporting and Method Detection Limits for Specific Compounds and Matrices  
Lydall Performance Materials (US), Inc.  
Hoosick Falls, New York

Analysis Group	Method Description	Method Code	Prep Method	Analyte Description	CAS Number	RL	MDL	LOD	Units	LCS - Low	LCS - High	LCS - RPD %	MS - Low	MS - High	MS - RPD %	Surrogate Low	Surrogate High				
Soil Samples	Semivolatile Organic Compounds (GC/MS)	8270D	3550C	Naphthalene	91-20-3	170	22.0		ug/Kg	55	120	29	46	120	29						
				Nitrobenzene	98-95-3	170	19.0		ug/Kg	54	120	24	49	120	24						
				Pentachlorophenol	87-86-5	330	170		ug/Kg	51	120	35	25	136	35						
				Phenanthrene	85-01-8	170	25.0		ug/Kg	60	120	15	60	122	15						
				Phenol	108-95-2	170	26.0		ug/Kg	53	120	35	50	120	35						
				Pyrene	129-00-0	170	20.0		ug/Kg	61	133	35	61	133	35						
				Tentatively Identified Compound	STL00231				ug/Kg												
				2,4,6-Tribromophenol	118-79-6	0.000			ug/Kg										54	120	
				2-Fluorobiphenyl	321-60-8				ug/Kg										60	120	
				2-Fluorophenol	367-12-4				ug/Kg										52	120	
				Nitrobenzene-d5	4165-60-0				ug/Kg										53	120	
				p-Terphenyl-d14	1718-51-0				ug/Kg										79	130	
Phenol-d5	4165-62-2				ug/Kg										54	120					
Soil Samples	Metals (ICP)	6010C	3050B	Aluminum	7429-90-5	10.0	4.40		mg/Kg	41	160	20	75	125	20						
				Antimony	7440-36-0	15.0	0.400		mg/Kg	25	272	20	75	125	20						
				Arsenic	7440-38-2	2.00	0.400		mg/Kg	69	131	20	75	125	20						
				Barium	7440-39-3	0.500	0.110		mg/Kg	72	127	20	75	125	20						
				Beryllium	7440-41-7	0.200	0.0280		mg/Kg	73	127	20	75	125	20						
				Cadmium	7440-43-9	0.200	0.0300		mg/Kg	73	127	20	75	125	20						
				Calcium	7440-70-2	50.0	3.30		mg/Kg	74	126	20	75	125	20						
				Chromium	7440-47-3	0.500	0.200		mg/Kg	68	132	20	75	125	20						
				Cobalt	7440-48-4	0.500	0.0500		mg/Kg	75	125	20	75	125	20						
				Copper	7440-50-8	1.00	0.210		mg/Kg	74	126	20	75	125	20						
				Iron	7439-89-6	10.0	3.50		mg/Kg	31	169	20	75	125	20						
				Lead	7439-92-1	1.00	0.240		mg/Kg	70	130	20	75	125	20						
				Magnesium	7439-95-4	20.0	0.927		mg/Kg	64	136	20	75	125	20						
				Manganese	7439-96-5	0.200	0.0320		mg/Kg	74	125	20	75	125	20						
				Nickel	7440-02-0	5.00	0.230		mg/Kg	70	130	20	75	125	20						
				Potassium	7440-09-7	30.0	20.0		mg/Kg	61	139	20	75	125	20						
				Selenium	7782-49-2	4.00	0.400		mg/Kg	64	137	20	75	125	20						
				Silver	7440-22-4	0.600	0.200		mg/Kg	66	135	20	75	125	20						
				Sodium	7440-23-5	140	13.0		mg/Kg	27	174	20	75	125	20						
				Thallium	7440-28-0	6.00	0.300		mg/Kg	67	132	20	75	125	20						
Vanadium	7440-62-2	0.500	0.110		mg/Kg	54	146	20	75	125	20										
Zinc	7440-66-6	2.00	0.640		mg/Kg	67	133	20	75	125	20										
Soil Samples	Mercury (CVAA)	7471B	7471B Prep	Mercury	7439-97-6	0.0200	0.00810	0.00810	mg/Kg	51	149	20	80	120	20						
Soil Samples	Organochlorine Pesticides (GC)	8081B	3550C	4,4'-DDD	72-54-8	1.67	0.324		ug/Kg	56	120	18	37	126	21						
				4,4'-DDE	72-55-9	1.67	0.350		ug/Kg	44	120	16	34	120	18						
				4,4'-DDT	50-29-3	1.67	0.390		ug/Kg	38	120	17	43	123	25						
				Aldrin	309-00-2	1.67	0.410		ug/Kg	38	120	24	37	125	12						
				alpha-BHC	319-84-6	1.67	0.300		ug/Kg	39	120	19	39	120	15						
				cis-Chlordane	5103-71-9	1.67	0.830		ug/Kg	47	120	13	35	120	23						
				beta-BHC	319-85-7	1.67	0.300		ug/Kg	40	120	17	36	120	19						
				delta-BHC	319-86-8	1.67	0.310		ug/Kg	45	120	14	34	120	14						
				Dieldrin	60-57-1	1.67	0.400		ug/Kg	58	120	13	45	120	12						
				Endosulfan I	959-98-8	1.67	0.320		ug/Kg	49	120	16	39	120	18						
				Endosulfan II	33213-65-9	1.67	0.300		ug/Kg	55	120	17	34	126	26						
				Endosulfan sulfate	1031-07-8	1.67	0.311		ug/Kg	49	124	14	27	130	35						
				Endrin	72-20-8	1.67	0.330		ug/Kg	58	120	19	47	121	20						
				Endrin aldehyde	7421-93-4	1.67	0.426		ug/Kg	37	121	23	33	123	47						
				Endrin ketone	53494-70-5	1.67	0.410		ug/Kg	46	123	14	43	126	37						
				gamma-BHC (Lindane)	58-89-9	1.67	0.306		ug/Kg	50	120	20	50	120	12						
				trans-Chlordane	5103-74-2	1.67	0.530		ug/Kg	48	120	14	31	120	15						
				Heptachlor	76-44-8	1.67	0.361		ug/Kg	50	120	16	42	120	22						
				Heptachlor epoxide	1024-57-3	1.67	0.430		ug/Kg	50	120	17	40	120	15						
				Methoxychlor	72-43-5	1.67	0.340		ug/Kg	58	133	14	44	150	24						
				Toxaphene	8001-35-2	16.7	9.70		ug/Kg												
				DCB Decachlorobiphenyl	2051-24-3				ug/Kg											45	120
				Tetrachloro-m-xylene	877-09-8				ug/Kg											30	124

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Soil Samples	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	8082A	3550C_PCB_1YR	PCB-1016	12674-11-2	0.250	0.0489		mg/Kg	51	185	50	50	177	50					
				PCB-1221	11104-28-2	0.250	0.0489		mg/Kg											
				PCB-1232	11141-16-5	0.250	0.0489		mg/Kg											
				PCB-1242	53469-21-9	0.250	0.0489		mg/Kg											
				PCB-1248	12672-29-6	0.250	0.0489		mg/Kg											
				PCB-1254	11097-69-1	0.250	0.117		mg/Kg											
				PCB-1260	11096-82-5	0.250	0.117		mg/Kg	61	184	50	33	200	50					
				Tetrachloro-m-xylene	877-09-8				mg/Kg										60	154
DCB Decachlorobiphenyl	2051-24-3				mg/Kg										65	174				
Soil Samples	Cyanide, Total and/or Amenable	9012B	9012B_Prep	Cyanide, Total	57-12-5	1.00	0.483	0.483	mg/Kg	29	122	15	85	115	15					
Soil Samples	Grain Size	D422	N/A	Sieve Size 3 inch	STL00567				%											
				Sieve Size 2 inch	STL00568				%											
				Sieve Size 1.5 inch	STL00569				%											
				Sieve Size 1 inch	STL00570				%											
				Sieve Size 0.75 inch	STL00571				%											
				Sieve Size 0.375 inch	STL00572				%											
				Sieve Size #4	STL00573				%											
				Sieve Size #10	STL00574				%											
				Sieve Size #20	STL00575				%											
				Sieve Size #40	STL00576				%											
				Sieve Size #60	STL00577				%											
				Sieve Size #80	STL01176				%											
				Sieve Size #100	STL01175				%											
				Sieve Size #200	STL00579				%											
				Hydrometer Reading 1	STL01158				%											
				Hydrometer Reading 2	STL01159				%											
				Hydrometer Reading 3	STL01160				%											
				Hydrometer Reading 4	STL01161				%											
				Hydrometer Reading 5	STL01162				%											
				Hydrometer Reading 6	STL01163				%											
				Hydrometer Reading 7	STL01164				%											
				Gravel	STL00581				%											
				Sand	STL00582				%											
				Coarse Sand	STL00583				%											
Medium Sand	STL00584				%															
Fine Sand	STL00585				%															
Silt	STL00586				%															
Clay	STL00587				%															
Hydrometer Reading 1 - Particle Size	STL01494				%															
Hydrometer Reading 2 - Particle Size	STL01495				%															
Hydrometer Reading 3 - Particle Size	STL01496				%															
Hydrometer Reading 4 - Particle Size	STL01497				%															
Hydrometer Reading 5 - Particle Size	STL01498				%															
Hydrometer Reading 6 - Particle Size	STL01499				%															
Hydrometer Reading 7 - Particle Size	STL01500				%															
Soil Samples	Organic Carbon, Total (TOC)	Lloyd_Kahn	N/A	TOC Result 1	STL00338	1000	684	750	mg/Kg											
				TOC Result 2	STL00339	1000	684	750	mg/Kg											
				TOC Result 3	STL00340	1000	684	750	mg/Kg											
				Total Organic Carbon	7440-44-0	1000	684	750	mg/Kg	75	125	20	75	125	20					
				TOC Result 4	STL00341	1000	684	750	mg/Kg											
Soil Samples	Fluorinated Alkyl Substances	PFC_IDA	Shake_Bath_14D	Perfluorobutanoic acid (PFBA)	375-22-4	0.200	0.0280	0.150	ug/Kg	81	133	30	81	133	30					
				Perfluoropentanoic acid (PFPeA)	2706-90-3	0.200	0.0770	0.150	ug/Kg	79	120	30	79	120	30					
				Perfluorohexanoic acid (PFHxA)	307-24-4	0.200	0.0420	0.150	ug/Kg	75	125	30	75	125	30					
				Perfluoroheptanoic acid (PFHpA)	375-85-9	0.200	0.0290	0.150	ug/Kg	76	124	30	76	124	30					
				Perfluorooctanoic acid (PFOA)	335-67-1	0.200	0.0860	0.150	ug/Kg	76	121	30	76	121	30					
				Perfluorononanoic acid (PFNA)	375-95-1	0.200	0.0360	0.150	ug/Kg	74	126	30	74	126	30					
				Perfluorodecanoic acid (PFDA)	335-76-2	0.200	0.0220	0.150	ug/Kg	74	124	30	74	124	30					
				Perfluoroundecanoic acid (PFUnA)	2058-94-8	0.200	0.0360	0.150	ug/Kg	74	114	30	74	114	30					
				Perfluorododecanoic acid (PFDoA)	307-55-1	0.200	0.0670	0.150	ug/Kg	75	123	30	75	123	30					
				Perfluorotridecanoic acid (PFTriA)	72629-94-8	0.200	0.0510	0.150	ug/Kg	43	116	30	43	116	30					

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Soil Samples	Fluorinated Alkyl Substances	PFC_IDA	Shake_Bath_14D	Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.200	0.0540	0.150	ug/Kg	22	129	30	22	129	30		
				Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.200	0.0250	0.150	ug/Kg	73	142	30	73	142	30		
				Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.200	0.0310	0.150	ug/Kg	75	121	30	75	121	30		
				Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	0.200	0.0350	0.150	ug/Kg	78	146	30	78	146	30		
				Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.500	0.200	0.200	ug/Kg	69	131	30	69	131	30		
				Perfluorodecanesulfonic acid (PFDS)	335-77-3	0.200	0.0390	0.150	ug/Kg	54	113	30	54	113	30		
				Perfluorooctanesulfonamide (FOSA)	754-91-6	0.200	0.0820	0.150	ug/Kg	62	135	30	62	135	30		
				N-methylperfluorooctanesulfonamidoacetic acid	2355-31-9	2.00	0.390	1.50	ug/Kg	65	135	30	65	135	30		
				N-ethylperfluorooctanesulfonamidoacetic acid (N)	2991-50-6	2.00	0.370	1.50	ug/Kg	65	135	30	65	135	30		
				6:2 FTS	27619-97-2	2.00	0.150	1.50	ug/Kg	65	135	30	65	135	30		
				8:2 FTS	39108-34-4	2.00	0.250	1.50	ug/Kg	65	135	30	65	135	30		
				13C4 PFBA	STL00992				ug/Kg	25	150		25	150			
				13C5 PFPeA	STL01893				ug/Kg	25	150		25	150			
				13C2 PFHxA	STL00993				ug/Kg	25	150		25	150			
				13C4 PFHpA	STL01892				ug/Kg	25	150		25	150			
				13C4 PFOA	STL00990				ug/Kg	25	150		25	150			
				13C5 PFNA	STL00995				ug/Kg	25	150		25	150			
				13C2 PFDA	STL00996				ug/Kg	25	150		25	150			
				13C2 PFUnA	STL00997				ug/Kg	25	150		25	150			
				13C2 PFDoA	STL00998				ug/Kg	25	150		25	150			
				13C2 PFTeDA	STL02116				ug/Kg	25	150		25	150			
				13C3 PFBS	STL02337				ug/Kg	25	150		25	150			
				18O2 PFHxS	STL00994				ug/Kg	25	150		25	150			
				13C4 PFOS	STL00991				ug/Kg	25	150		25	150			
				13C8 FOSA	STL01056				ug/Kg	25	150		25	150			
				d3-NMeFOSAA	STL02118				ug/Kg	25	150		25	150			
				d5-NEtFOSAA	STL02117				ug/Kg	25	150		25	150			
				M2-6:2 FTS	STL02279				ug/Kg	25	150		25	150			
				M2-8:2 FTS	STL02280				ug/Kg	25	150		25	150			
				Soil Samples	Percent Moisture	Moisture	N/A	Percent Moisture	STL00177	0.100			%				
Sludge - Sediment Samples	Volatile Organic Compounds by GC/MS	8260C	5035FP_Calc	1,1,1-Trichloroethane	71-55-6	5.00	0.363		ug/Kg	77	121	20	77	121	30		
				1,2-Dichlorobenzene	95-50-1	5.00	0.391		ug/Kg	75	120	20	75	120	30		
				1,1,2,2-Tetrachloroethane	79-34-5	5.00	0.811		ug/Kg	80	120	20	80	120	30		
				1,1,2-Trichloroethane	79-00-5	5.00	0.650		ug/Kg	78	122	20	78	122	30		
				1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5.00	1.14		ug/Kg	60	140	20	60	140	30		
				1,1-Dichloroethane	75-34-3	5.00	0.610		ug/Kg	73	126	20	73	126	30		
				1,1-Dichloroethene	75-35-4	5.00	0.612		ug/Kg	59	125	20	59	125	30		
				1,2,4-Trichlorobenzene	120-82-1	5.00	0.304		ug/Kg	64	120	20	64	120	30		
				1,2-Dibromo-3-Chloropropane	96-12-8	5.00	2.50		ug/Kg	63	124	20	63	124	30		
				1,2-Dichloroethane	107-06-2	5.00	0.251		ug/Kg	77	122	20	77	122	30		
				1,2-Dichloropropane	78-87-5	5.00	2.50		ug/Kg	75	124	20	75	124	30		
				1,3-Dichlorobenzene	541-73-1	5.00	0.257		ug/Kg	74	120	20	74	120	30		
				1,4-Dichlorobenzene	106-46-7	5.00	0.700		ug/Kg	73	120	20	73	120	30		
				2-Butanone (MEK)	78-93-3	25.0	1.83		ug/Kg	70	134	20	70	134	30		
				2-Hexanone	591-78-6	25.0	2.50		ug/Kg	59	130	20	59	130	30		
				4-Methyl-2-pentanone (MIBK)	108-10-1	25.0	1.64		ug/Kg	65	133	20	65	133	30		
				Acetone	67-64-1	25.0	4.21		ug/Kg	61	137	20	61	137	30		
				Benzene	71-43-2	5.00	0.245		ug/Kg	79	127	20	79	127	30		
				Bromodichloromethane	75-27-4	5.00	0.670		ug/Kg	80	122	20	80	122	30		
				Bromoform	75-25-2	5.00	2.50		ug/Kg	68	126	20	68	126	30		
				Bromomethane	74-83-9	5.00	0.450		ug/Kg	37	149	20	37	149	30		
				Carbon disulfide	75-15-0	5.00	2.50		ug/Kg	64	131	20	64	131	30		
				Carbon tetrachloride	56-23-5	5.00	0.484		ug/Kg	75	135	20	75	135	30		
				Chlorobenzene	108-90-7	5.00	0.660		ug/Kg	76	124	20	76	124	30		
				Dibromochloromethane	124-48-1	5.00	0.640		ug/Kg	76	125	20	76	125	30		
				Chloroethane	75-00-3	5.00	1.13		ug/Kg	69	135	20	69	135	30		
				Chloroform	67-66-3	5.00	0.309		ug/Kg	80	120	20	80	120	30		
				Chloromethane	74-87-3	5.00	0.302		ug/Kg	63	127	20	63	127	30		
				cis-1,2-Dichloroethene	156-59-2	5.00	0.640		ug/Kg	81	120	20	80	120	30		
				1,4-Dioxane	123-91-1		100	21.8	ug/Kg	64	124	20	64	124	30		

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Sludge - Sediment Samples	Volatile Organic Compounds by GC/MS	8260C	5035FP_Calc	cis-1,3-Dichloropropene	10061-01-5	5.00	0.720		ug/Kg	80	120	20	80	120	30						
				Cyclohexane	110-82-7	5.00	0.700		ug/Kg	65	120	20	65	120	30						
				Dichlorodifluoromethane	75-71-8	5.00	0.413		ug/Kg	57	142	20	57	142	30						
				Ethylbenzene	100-41-4	5.00	0.345		ug/Kg	80	120	20	80	120	30						
				1,2-Dibromoethane	106-93-4	5.00	0.642		ug/Kg	78	120	20	78	120	30						
				Isopropylbenzene	98-82-8	5.00	0.754		ug/Kg	72	120	20	72	120	30						
				Methyl acetate	79-20-9	25.0	3.02		ug/Kg	55	136	20	55	136	30						
				Methyl tert-butyl ether	1634-04-4	5.00	0.491		ug/Kg	63	125	20	63	125	30						
				Methylcyclohexane	108-87-2	5.00	0.760		ug/Kg	60	140	20	60	140	30						
				Methylene Chloride	75-09-2	5.00	2.30		ug/Kg	61	127	20	61	127	30						
				Styrene	100-42-5	5.00	0.250		ug/Kg	80	120	20	80	120	30						
				Tetrachloroethene	127-18-4	5.00	0.671		ug/Kg	74	122	20	74	122	30						
				Toluene	108-88-3	5.00	0.378		ug/Kg	74	128	20	74	128	30						
				trans-1,2-Dichloroethene	156-60-5	5.00	0.516		ug/Kg	78	126	20	78	126	30						
				trans-1,3-Dichloropropene	10061-02-6	5.00	2.20		ug/Kg												
				Trichloroethene	79-01-6	5.00	1.10		ug/Kg	77	129	20	77	129	30						
				Trichlorofluoromethane	75-69-4	5.00	0.473		ug/Kg	65	146	20	65	146	30						
				Vinyl chloride	75-01-4	5.00	0.610		ug/Kg	61	133	20	61	133	30						
				Xylenes, Total	1330-20-7	10.0	0.840		ug/Kg												
				Tentatively Identified Compound	STL00231				ug/Kg												
				Toluene-d8 (Surr)	2037-26-5				ug/Kg											71	125
1,2-Dichloroethane-d4 (Surr)	17060-07-0				ug/Kg											64	126				
4-Bromofluorobenzene (Surr)	460-00-4				ug/Kg											72	126				
Dibromofluoromethane (Surr)	1868-53-7				ug/Kg							20				60	140				
Sludge - Sediment Samples	Semivolatile Organic Compounds (GC/MS)	8270D	3550C	Biphenyl	92-52-4	170	25.0		ug/Kg	59	120	20	58	120	20						
				bis (2-chloroisopropyl) ether	108-60-1	170	34.0		ug/Kg	44	120	24	31	120	24						
				2,4,5-Trichlorophenol	95-95-4	170	46.0		ug/Kg	59	126	18	46	120	18						
				2,4,6-Trichlorophenol	88-06-2	170	34.0		ug/Kg	59	123	19	41	123	19						
				2,4-Dichlorophenol	120-83-2	170	18.0		ug/Kg	61	120	19	45	120	19						
				2,4-Dimethylphenol	105-67-9	170	41.0		ug/Kg	59	120	42	52	120	42						
				2,4-Dinitrophenol	51-28-5	1660	784		ug/Kg	41	146	22	41	146	22						
				2,4-Dinitrotoluene	121-14-2	170	35.0		ug/Kg	63	120	20	63	125	20						
				2,6-Dinitrotoluene	606-20-2	170	20.0		ug/Kg	66	120	15	66	120	15						
				2-Chloronaphthalene	91-58-7	170	28.0		ug/Kg	57	120	21	57	120	21						
				1,4-Dioxane	123-91-1	200	55.0		ug/Kg	23	120	50	13	120	50						
				2-Chlorophenol	95-57-8	170	31.0		ug/Kg	53	120	25	43	120	25						
				2-Methylnaphthalene	91-57-6	170	34.0		ug/Kg	59	120	21	55	120	21						
				2-Methylphenol	95-48-7	170	20.0		ug/Kg	54	120	27	48	120	27						
				2-Nitroaniline	88-74-4	330	25.0		ug/Kg	61	120	15	61	120	15						
				2-Nitrophenol	88-75-5	170	48.0		ug/Kg	56	120	18	37	120	18						
				3,3'-Dichlorobenzidine	91-94-1	330	200		ug/Kg	54	120	25	37	126	25						
				3-Nitroaniline	99-09-2	330	47.0		ug/Kg	48	120	19	48	120	19						
				4,6-Dinitro-2-methylphenol	534-52-1	330	170		ug/Kg	49	122	15	23	149	15						
				4-Bromophenyl phenyl ether	101-55-3	170	24.0		ug/Kg	58	120	15	58	120	15						
				4-Chloro-3-methylphenol	59-50-7	170	42.0		ug/Kg	61	120	27	49	125	27						
				4-Chloroaniline	106-47-8	170	42.0		ug/Kg	38	120	22	38	120	22						
				4-Chlorophenyl phenyl ether	7005-72-3	170	21.0		ug/Kg	63	124	16	63	124	16						
				4-Methylphenol	106-44-5	330	20.0		ug/Kg	55	120	24	50	120	24						
				4-Nitroaniline	100-01-6	330	89.0		ug/Kg	56	120	24	47	120	24						
				4-Nitrophenol	100-02-7	330	119		ug/Kg	43	147	25	31	147	25						
				Acenaphthene	83-32-9	170	25.0		ug/Kg	62	120	35	60	120	35						
				Acenaphthylene	208-96-8	170	22.0		ug/Kg	58	121	18	58	121	18						
				Acetophenone	98-86-2	170	23.0		ug/Kg	54	120	20	47	120	20						
				Anthracene	120-12-7	170	42.0		ug/Kg	62	120	15	62	120	15						
				Atrazine	1912-24-9	170	59.0		ug/Kg	60	127	20	60	150	20						
				Benzaldehyde	100-52-7	170	135		ug/Kg	10	150	20	10	150	20						
				Benzo[a]anthracene	56-55-3	170	17.0		ug/Kg	65	120	15	65	120	15						
Benzo[a]pyrene	50-32-8	170	25.0		ug/Kg	64	120	15	64	120	15										
Benzo[b]fluoranthene	205-99-2	170	27.0		ug/Kg	64	120	15	10	150	15										
Benzo[g,h,i]perylene	191-24-2	170	18.0		ug/Kg	45	145	15	45	145	15										

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Sludge - Sediment Samples	Semivolatile Organic Compounds (GC/MS)	8270D	3550C	Benzo[k]fluoranthene	207-08-9	170	22.0		ug/Kg	65	120	22	23	150	22					
				Bis(2-chloroethoxy)methane	111-91-1	170	36.0		ug/Kg	55	120	17	52	120	17					
				Bis(2-chloroethyl)ether	111-44-4	170	22.0		ug/Kg	45	120	21	45	120	21					
				Bis(2-ethylhexyl) phthalate	117-81-7	170	58.0		ug/Kg	61	133	15	61	133	15					
				Butyl benzyl phthalate	85-68-7	170	28.0		ug/Kg	61	129	16	61	120	16					
				Caprolactam	105-60-2	170	51.0		ug/Kg	47	120	20	37	133	20					
				Carbazole	86-74-8	170	20.0		ug/Kg	65	120	20	59	120	20					
				Chrysene	218-01-9	170	38.0		ug/Kg	64	120	15	64	120	15					
				Di-n-butyl phthalate	84-74-2	170	29.0		ug/Kg	58	130	15	58	130	15					
				Di-n-octyl phthalate	117-84-0	170	20.0		ug/Kg	57	133	16	57	133	16					
				Dibenz(a,h)anthracene	53-70-3	170	30.0		ug/Kg	54	132	15	54	132	15					
				Dibenzofuran	132-64-9	170	20.0		ug/Kg	63	120	15	62	120	15					
				Diethyl phthalate	84-66-2	170	22.0		ug/Kg	66	120	15	66	120	15					
				Dimethyl phthalate	131-11-3	170	20.0		ug/Kg	65	124	15	65	124	15					
				Fluoranthene	206-44-0	170	18.0		ug/Kg	62	120	15	62	120	15					
				Fluorene	86-73-7	170	20.0		ug/Kg	63	120	15	63	120	15					
				Hexachlorobenzene	118-74-1	170	23.0		ug/Kg	60	120	15	60	120	15					
				Hexachlorobutadiene	87-68-3	170	25.0		ug/Kg	45	120	44	45	120	44					
				Hexachlorocyclopentadiene	77-47-4	170	23.0		ug/Kg	47	120	49	31	120	49					
				Hexachloroethane	67-72-1	170	22.0		ug/Kg	41	120	46	21	120	46					
				Indeno[1,2,3-cd]pyrene	193-39-5	170	21.0		ug/Kg	56	134	15	56	134	15					
				Isophorone	78-59-1	170	36.0		ug/Kg	56	120	17	56	120	17					
				N-Nitrosodi-n-propylamine	621-64-7	170	29.0		ug/Kg	52	120	31	46	120	31					
				N-Nitrosodiphenylamine	86-30-6	170	138		ug/Kg											
				Naphthalene	91-20-3	170	22.0		ug/Kg	55	120	29	46	120	29					
				Nitrobenzene	98-95-3	170	19.0		ug/Kg	54	120	24	49	120	24					
				Pentachlorophenol	87-86-5	330	170		ug/Kg	51	120	35	25	136	35					
				Phenanthrene	85-01-8	170	25.0		ug/Kg	60	120	15	60	122	15					
				Phenol	108-95-2	170	26.0		ug/Kg	53	120	35	50	120	35					
				Pyrene	129-00-0	170	20.0		ug/Kg	61	133	35	61	133	35					
				Tentatively Identified Compound	STL00231				ug/Kg											
				2,4,6-Tribromophenol	118-79-6		0.000		ug/Kg											54
2-Fluorobiphenyl	321-60-8				ug/Kg											60	120			
2-Fluorophenol	367-12-4				ug/Kg											52	120			
Nitrobenzene-d5	4165-60-0				ug/Kg											53	120			
p-Terphenyl-d14	1718-51-0				ug/Kg											79	130			
Phenol-d5	4165-62-2				ug/Kg											54	120			
Sludge - Sediment Samples	Metals (ICP)	6010C	3050B	Aluminum	7429-90-5	10.0	4.40		mg/Kg	41	160	20	75	125	20					
				Antimony	7440-36-0	15.0	0.400		mg/Kg	25	272	20	75	125	20					
				Arsenic	7440-38-2	2.00	0.400		mg/Kg	69	131	20	75	125	20					
				Barium	7440-39-3	0.500	0.110		mg/Kg	72	127	20	75	125	20					
				Beryllium	7440-41-7	0.200	0.0280		mg/Kg	73	127	20	75	125	20					
				Cadmium	7440-43-9	0.200	0.0300		mg/Kg	73	127	20	75	125	20					
				Calcium	7440-70-2	50.0	3.30		mg/Kg	74	126	20	75	125	20					
				Chromium	7440-47-3	0.500	0.200		mg/Kg	68	132	20	75	125	20					
				Cobalt	7440-48-4	0.500	0.0500		mg/Kg	75	125	20	75	125	20					
				Copper	7440-50-8	1.00	0.210		mg/Kg	74	126	20	75	125	20					
				Iron	7439-89-6	10.0	3.50		mg/Kg	31	169	20	75	125	20					
				Lead	7439-92-1	1.00	0.240		mg/Kg	70	130	20	75	125	20					
				Magnesium	7439-95-4	20.0	0.927		mg/Kg	64	136	20	75	125	20					
				Manganese	7439-96-5	0.200	0.0320		mg/Kg	74	125	20	75	125	20					
				Nickel	7440-02-0	5.00	0.230		mg/Kg	70	130	20	75	125	20					
				Potassium	7440-09-7	30.0	20.0		mg/Kg	61	139	20	75	125	20					
				Selenium	7782-49-2	4.00	0.400		mg/Kg	64	137	20	75	125	20					
				Silver	7440-22-4	0.600	0.200		mg/Kg	66	135	20	75	125	20					
				Sodium	7440-23-5	140	13.0		mg/Kg	27	174	20	75	125	20					
				Thallium	7440-28-0	6.00	0.300		mg/Kg	67	132	20	75	125	20					
Vanadium	7440-62-2	0.500	0.110		mg/Kg	54	146	20	75	125	20									
Zinc	7440-66-6	2.00	0.640		mg/Kg	67	133	20	75	125	20									
Sludge - Sediment Samples	Mercury (CVAA)	7471B	7471B_Prep	Mercury	7439-97-6	0.0200	0.00810	0.00810	mg/Kg	51	149	20	80	120	20					

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Sludge - Sediment Samples	Organochlorine Pesticides (GC)	8081B	3550C	4,4'-DDD	72-54-8	1.67	0.324		ug/Kg	56	120	18	37	126	21					
				4,4'-DDE	72-55-9	1.67	0.350		ug/Kg	44	120	16	34	120	18					
				4,4'-DDT	50-29-3	1.67	0.390		ug/Kg	38	120	17	43	123	25					
				Aldrin	309-00-2	1.67	0.410		ug/Kg	38	120	24	37	125	12					
				alpha-BHC	319-84-6	1.67	0.300		ug/Kg	39	120	19	39	120	15					
				cis-Chlordane	5103-71-9	1.67	0.830		ug/Kg	47	120	13	35	120	23					
				beta-BHC	319-85-7	1.67	0.300		ug/Kg	40	120	17	36	120	19					
				delta-BHC	319-86-8	1.67	0.310		ug/Kg	45	120	14	34	120	14					
				Dieldrin	60-57-1	1.67	0.400		ug/Kg	58	120	13	45	120	12					
				Endosulfan I	959-98-8	1.67	0.320		ug/Kg	49	120	16	39	120	18					
				Endosulfan II	33213-65-9	1.67	0.300		ug/Kg	55	120	17	34	126	26					
				Endosulfan sulfate	1031-07-8	1.67	0.311		ug/Kg	49	124	14	27	130	35					
				Endrin	72-20-8	1.67	0.330		ug/Kg	58	120	19	47	121	20					
				Endrin aldehyde	7421-93-4	1.67	0.426		ug/Kg	37	121	23	33	123	47					
				Endrin ketone	53494-70-5	1.67	0.410		ug/Kg	46	123	14	43	126	37					
				gamma-BHC (Lindane)	58-89-9	1.67	0.306		ug/Kg	50	120	20	50	120	12					
				trans-Chlordane	5103-74-2	1.67	0.530		ug/Kg	48	120	14	31	120	15					
				Heptachlor	76-44-8	1.67	0.361		ug/Kg	50	120	16	42	120	22					
				Heptachlor epoxide	1024-57-3	1.67	0.430		ug/Kg	50	120	17	40	120	15					
				Methoxychlor	72-43-5	1.67	0.340		ug/Kg	58	133	14	44	150	24					
Toxaphene	8001-35-2	16.7	9.70		ug/Kg															
DCB Decachlorobiphenyl	2051-24-3				ug/Kg											45	120			
Tetrachloro-m-xylene	877-09-8				ug/Kg											30	124			
Sludge - Sediment Samples	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	8082A	3550C_PCB_1YR	PCB-1016	12674-11-2	0.250	0.0489		mg/Kg	51	185	50	50	177	50					
				PCB-1221	11104-28-2	0.250	0.0489		mg/Kg											
				PCB-1232	11141-16-5	0.250	0.0489		mg/Kg											
				PCB-1242	53469-21-9	0.250	0.0489		mg/Kg											
				PCB-1248	12672-29-6	0.250	0.0489		mg/Kg											
				PCB-1254	11097-69-1	0.250	0.117		mg/Kg											
				PCB-1260	11096-82-5	0.250	0.117		mg/Kg	61	184	50	33	200	50					
				Tetrachloro-m-xylene	877-09-8				mg/Kg										60	154
DCB Decachlorobiphenyl	2051-24-3				mg/Kg										65	174				
Sludge - Sediment Samples	Cyanide, Total and/or Amenable	9012B	9012B_Prep	Cyanide, Total	57-12-5	1.00	0.483	0.483	mg/Kg	29	122	15	85	115	15					
Sludge - Sediment Samples	Grain Size	D422	N/A	Sieve Size 3 inch	STL00567				%											
				Sieve Size 2 inch	STL00568				%											
				Sieve Size 1.5 inch	STL00569				%											
				Sieve Size 1 inch	STL00570				%											
				Sieve Size 0.75 inch	STL00571				%											
				Sieve Size 0.375 inch	STL00572				%											
				Sieve Size #4	STL00573				%											
				Sieve Size #10	STL00574				%											
				Sieve Size #20	STL00575				%											
				Sieve Size #40	STL00576				%											
				Sieve Size #60	STL00577				%											
				Sieve Size #80	STL01176				%											
				Sieve Size #100	STL01175				%											
				Sieve Size #200	STL00579				%											
				Hydrometer Reading 1	STL01158				%											
				Hydrometer Reading 2	STL01159				%											
				Hydrometer Reading 3	STL01160				%											
				Hydrometer Reading 4	STL01161				%											
				Hydrometer Reading 5	STL01162				%											
				Hydrometer Reading 6	STL01163				%											
Hydrometer Reading 7	STL01164				%															
Gravel	STL00581				%															
Sand	STL00582				%															
Coarse Sand	STL00583				%															

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Sludge - Sediment Samples	Grain Size	D422	N/A	Medium Sand	STL00584				%												
				Fine Sand	STL00585				%												
				Silt	STL00586					%											
				Clay	STL00587					%											
				Hydrometer Reading 1 - Particle Size	STL01494					%											
				Hydrometer Reading 2 - Particle Size	STL01495					%											
				Hydrometer Reading 3 - Particle Size	STL01496					%											
				Hydrometer Reading 4 - Particle Size	STL01497					%											
				Hydrometer Reading 5 - Particle Size	STL01498					%											
				Hydrometer Reading 6 - Particle Size	STL01499					%											
Hydrometer Reading 7 - Particle Size	STL01500					%															
Sludge - Sediment Samples	Organic Carbon, Total (TOC)	Lloyd_Kahn	N/A	TOC Result 1	STL00338	1000	684	750	mg/Kg												
				TOC Result 2	STL00339	1000	684	750	mg/Kg												
				TOC Result 3	STL00340	1000	684	750	mg/Kg												
				Total Organic Carbon	7440-44-0	1000	684	750	mg/Kg	75	125	20	75	125	20						
				TOC Result 4	STL00341	1000	684	750	mg/Kg												
Sludge - Sediment Samples	Fluorinated Alkyl Substances	PFC_IDA	Shake_Bath_14D	Perfluorobutanoic acid (PFBA)	375-22-4	0.200	0.0280	0.150	ug/Kg	81	133	30	81	133	30						
				Perfluoropentanoic acid (PFPeA)	2706-90-3	0.200	0.0770	0.150	ug/Kg	79	120	30	79	120	30						
				Perfluorohexanoic acid (PFHxA)	307-24-4	0.200	0.0420	0.150	ug/Kg	75	125	30	75	125	30						
				Perfluoroheptanoic acid (PFHpA)	375-85-9	0.200	0.0290	0.150	ug/Kg	76	124	30	76	124	30						
				Perfluorooctanoic acid (PFOA)	335-67-1	0.200	0.0860	0.150	ug/Kg	76	121	30	76	121	30						
				Perfluorononanoic acid (PFNA)	375-95-1	0.200	0.0360	0.150	ug/Kg	74	126	30	74	126	30						
				Perfluorodecanoic acid (PFDA)	335-76-2	0.200	0.0220	0.150	ug/Kg	74	124	30	74	124	30						
				Perfluoroundecanoic acid (PFUnA)	2058-94-8	0.200	0.0360	0.150	ug/Kg	74	114	30	74	114	30						
				Perfluorododecanoic acid (PFDoA)	307-55-1	0.200	0.0670	0.150	ug/Kg	75	123	30	75	123	30						
				Perfluorotridecanoic acid (PFTriA)	72629-94-8	0.200	0.0510	0.150	ug/Kg	43	116	30	43	116	30						
				Perfluorotetradecanoic acid (PFTeA)	376-06-7	0.200	0.0540	0.150	ug/Kg	22	129	30	22	129	30						
				Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.200	0.0250	0.150	ug/Kg	73	142	30	73	142	30						
				Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.200	0.0310	0.150	ug/Kg	75	121	30	75	121	30						
				Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	0.200	0.0350	0.150	ug/Kg	78	146	30	78	146	30						
				Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.500	0.200	0.200	ug/Kg	69	131	30	69	131	30						
				Perfluorodecanesulfonic acid (PFDS)	335-77-3	0.200	0.0390	0.150	ug/Kg	54	113	30	54	113	30						
				Perfluorooctanesulfonamide (FOSA)	754-91-6	0.200	0.0820	0.150	ug/Kg	62	135	30	62	135	30						
				N-methylperfluorooctanesulfonamidoacetic acid (NMPFOA)	2355-31-9	2.00	0.390	1.50	ug/Kg	65	135	30	65	135	30						
				N-ethylperfluorooctanesulfonamidoacetic acid (NEPFOA)	2991-50-6	2.00	0.370	1.50	ug/Kg	65	135	30	65	135	30						
				6:2 FTS	27619-97-2	2.00	0.150	1.50	ug/Kg	65	135	30	65	135	30						
				8:2 FTS	39108-34-4	2.00	0.250	1.50	ug/Kg	65	135	30	65	135	30						
				13C4 PFBA	STL00992				ug/Kg	25	150		25	150							
				13C5 PFPeA	STL01893				ug/Kg	25	150		25	150							
				13C2 PFHxA	STL00993				ug/Kg	25	150		25	150							
				13C4 PFHpA	STL01892				ug/Kg	25	150		25	150							
				13C4 PFOA	STL00990				ug/Kg	25	150		25	150							
				13C5 PFNA	STL00995				ug/Kg	25	150		25	150							
				13C2 PFDA	STL00996				ug/Kg	25	150		25	150							
				13C2 PFUnA	STL00997				ug/Kg	25	150		25	150							
				13C2 PFDoA	STL00998				ug/Kg	25	150		25	150							
				13C2 PFTeA	STL02116				ug/Kg	25	150		25	150							
				13C3 PFBS	STL02337				ug/Kg	25	150		25	150							
				18O2 PFHxS	STL00994				ug/Kg	25	150		25	150							
				13C4 PFOS	STL00991				ug/Kg	25	150		25	150							
				13C8 FOSA	STL01056				ug/Kg	25	150		25	150							
d3-NMeFOSAA	STL02118				ug/Kg	25	150		25	150											
d5-NEtFOSAA	STL02117				ug/Kg	25	150		25	150											
M2-6:2 FTS	STL02279				ug/Kg	25	150		25	150											
M2-8:2 FTS	STL02280				ug/Kg	25	150		25	150											
Sludge - Sediment Samples	Percent Moisture	Moisture	N/A	Percent Moisture	STL00177	0.100			%												
				Percent Solids	STL00234	0.100			%												

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Groundwater Samples	Volatile Organic Compounds by GC/MS	8260C	5030C	1,1,1-Trichloroethane	71-55-6	1.00	0.820		ug/L	73	126	15	73	126	15					
				1,1,2,2-Tetrachloroethane	79-34-5	1.00	0.210		ug/L	76	120	15	76	120	15					
				1,1,2-Trichloroethane	79-00-5	1.00	0.230		ug/L	76	122	15	76	122	15					
				1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	1.00	0.310		ug/L	61	148	20	61	148	20					
				1,1-Dichloroethane	75-34-3	1.00	0.380		ug/L	77	120	20	77	120	20					
				1,1-Dichloroethene	75-35-4	1.00	0.290		ug/L	66	127	16	66	127	16					
				1,2,4-Trichlorobenzene	120-82-1	1.00	0.410		ug/L	79	122	20	79	122	20					
				1,2-Dibromo-3-Chloropropane	96-12-8	1.00	0.390		ug/L	56	134	15	56	134	15					
				1,2-Dibromoethane	106-93-4	1.00	0.730		ug/L	77	120	15	77	120	15					
				1,2-Dichlorobenzene	95-50-1	1.00	0.790		ug/L	80	124	20	80	124	20					
				1,2-Dichloroethane	107-06-2	1.00	0.210		ug/L	75	120	20	75	120	20					
				1,2-Dichloropropane	78-87-5	1.00	0.720		ug/L	76	120	20	76	120	20					
				1,3-Dichlorobenzene	541-73-1	1.00	0.780		ug/L	77	120	20	77	120	20					
				1,4-Dichlorobenzene	106-46-7	1.00	0.840		ug/L	80	120	20	78	124	20					
				2-Hexanone	591-78-6	5.00	1.24		ug/L	65	127	15	65	127	15					
				2-Butanone (MEK)	78-93-3	10.0	1.32		ug/L	57	140	20	57	140	20					
				4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	2.10		ug/L	71	125	35	71	125	35					
				Acetone	67-64-1	10.0	3.00		ug/L	56	142	15	56	142	15					
				Benzene	71-43-2	1.00	0.410		ug/L	71	124	13	71	124	13					
				Bromodichloromethane	75-27-4	1.00	0.390		ug/L	80	122	15	80	122	15					
				Bromoform	75-25-2	1.00	0.260		ug/L	61	132	15	61	132	15					
				Bromomethane	74-83-9	1.00	0.690		ug/L	55	144	15	55	144	15					
				Carbon disulfide	75-15-0	1.00	0.190		ug/L	59	134	15	59	134	15					
				Carbon tetrachloride	56-23-5	1.00	0.270		ug/L	72	134	15	72	134	15					
				Chlorobenzene	108-90-7	1.00	0.750		ug/L	80	120	25	80	120	25					
				Dibromochloromethane	124-48-1	1.00	0.320		ug/L	75	125	15	75	125	15					
				Chloroethane	75-00-3	1.00	0.320		ug/L	69	136	15	69	136	15					
				Chloroform	67-66-3	1.00	0.340		ug/L	73	127	20	73	127	20					
				Chloromethane	74-87-3	1.00	0.350		ug/L	68	124	15	68	124	15					
				cis-1,2-Dichloroethene	156-59-2	1.00	0.810		ug/L	74	124	15	74	124	15					
				cis-1,3-Dichloropropene	10061-01-5	1.00	0.360		ug/L	74	124	15	74	124	15					
				Cyclohexane	110-82-7	1.00	0.180		ug/L	59	135	20	59	135	20					
				Dichlorodifluoromethane	75-71-8	1.00	0.680		ug/L	59	135	20	59	135	20					
				Ethylbenzene	100-41-4	1.00	0.740		ug/L	77	123	15	77	123	15					
				Isopropylbenzene	98-82-8	1.00	0.790		ug/L	77	122	20	77	122	20					
				Methyl acetate	79-20-9	2.50	1.30		ug/L	74	133	20	74	133	20					
				Methyl tert-butyl ether	1634-04-4	1.00	0.160		ug/L	77	120	37	77	120	37					
				Methylcyclohexane	108-87-2	1.00	0.160		ug/L	68	134	20	68	134	20					
				Methylene Chloride	75-09-2	1.00	0.440		ug/L	75	124	15	75	124	15					
				Styrene	100-42-5	1.00	0.730		ug/L	80	120	20	80	120	20					
				Tetrachloroethene	127-18-4	1.00	0.360		ug/L	74	122	20	74	122	20					
				Toluene	108-88-3	1.00	0.510		ug/L	80	122	15	80	122	15					
				trans-1,2-Dichloroethene	156-60-5	1.00	0.900		ug/L	73	127	20	73	127	20					
				trans-1,3-Dichloropropene	10061-02-6	1.00	0.370		ug/L											
				Trichloroethene	79-01-6	1.00	0.460		ug/L	74	123	16	74	123	16					
				Trichlorofluoromethane	75-69-4	1.00	0.880		ug/L	62	150	20	62	150	20					
				Vinyl chloride	75-01-4	1.00	0.900		ug/L	65	133	15	65	133	15					
				Xylenes, Total	1330-20-7	2.00	0.660		ug/L											
				Tentatively Identified Compound	STL00231				ug/L											
				1,2-Dichloroethane-d4 (Surr)	17060-07-0				ug/L											77
Toluene-d8 (Surr)	2037-26-5				ug/L											80	120			
4-Bromofluorobenzene (Surr)	460-00-4				ug/L											73	120			
Dibromofluoromethane (Surr)	1868-53-7				ug/L	5.00	0.100					20			20	75	123			

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Groundwater Samples	Semivolatile Organic Compounds (GC/MS)	8270D	3510C_LVI	Biphenyl	92-52-4	5.00	0.653		ug/L	59	120	20	57	120	20				
				bis (2-chloroisopropyl) ether	108-60-1	5.00	0.520		ug/L	21	136	24	28	121	24				
				2,4,5-Trichlorophenol	95-95-4	5.00	0.480		ug/L	65	126	18	65	126	18				
				2,4,6-Trichlorophenol	88-06-2	5.00	0.610		ug/L	64	120	19	64	120	19				
				2,4-Dichlorophenol	120-83-2	5.00	0.510		ug/L	63	120	19	48	132	19				
				2,4-Dimethylphenol	105-67-9	5.00	0.500		ug/L	47	120	42	39	130	42				
				2,4-Dinitrophenol	51-28-5	10.0	2.22		ug/L	31	137	22	21	150	22				
				2,4-Dinitrotoluene	121-14-2	5.00	0.447		ug/L	69	120	20	54	138	20				
				2,6-Dinitrotoluene	606-20-2	5.00	0.400		ug/L	68	120	15	17	150	15				
				2-Chloronaphthalene	91-58-7	5.00	0.460		ug/L	58	120	21	52	124	21				
				2-Chlorophenol	95-57-8	5.00	0.530		ug/L	48	120	25	48	120	25				
				2-Methylnaphthalene	91-57-6	5.00	0.600		ug/L	59	120	21	34	140	21				
				2-Methylphenol	95-48-7	5.00	0.400		ug/L	39	120	27	46	120	27				
				2-Nitroaniline	88-74-4	10.0	0.420		ug/L	54	127	15	44	136	15				
				2-Nitrophenol	88-75-5	5.00	0.480		ug/L	52	125	18	38	141	18				
				3,3'-Dichlorobenzidine	91-94-1	5.00	0.400		ug/L	49	135	25	10	150	25				
				3-Nitroaniline	99-09-2	10.0	0.480		ug/L	51	120	19	32	150	19				
				4,6-Dinitro-2-methylphenol	534-52-1	10.0	2.20		ug/L	46	136	15	38	150	15				
				4-Bromophenyl phenyl ether	101-55-3	5.00	0.450		ug/L	65	120	15	63	126	15				
				4-Chloro-3-methylphenol	59-50-7	5.00	0.450		ug/L	61	123	27	64	127	27				
				4-Chloroaniline	106-47-8	5.00	0.590		ug/L	30	120	22	16	124	22				
				4-Chlorophenyl phenyl ether	7005-72-3	5.00	0.350		ug/L	62	120	16	61	120	16				
				4-Methylphenol	106-44-5	10.0	0.360		ug/L	29	131	24	36	120	24				
				4-Nitroaniline	100-01-6	10.0	0.250		ug/L	65	120	24	32	150	24				
				4-Nitrophenol	100-02-7	10.0	1.52		ug/L	45	120	48	23	132	48				
				Acenaphthene	83-32-9	5.00	0.410		ug/L	60	120	24	48	120	24				
				Acenaphthylene	208-96-8	5.00	0.380		ug/L	63	120	18	63	120	18				
				Acetophenone	98-86-2	5.00	0.540		ug/L	45	120	20	53	120	20				
				Anthracene	120-12-7	5.00	0.280		ug/L	67	120	15	65	122	15				
				Atrazine	1912-24-9	5.00	0.460		ug/L	71	130	20	50	150	20				
				Benzaldehyde	100-52-7	5.00	0.267		ug/L	10	140	20	10	150	20				
				Benzo(a)anthracene	56-55-3	5.00	0.360		ug/L	70	121	15	43	124	15				
				Benzo(a)pyrene	50-32-8	5.00	0.470		ug/L	60	123	15	23	125	15				
				Benzo(b)fluoranthene	205-99-2	5.00	0.340		ug/L	66	126	15	27	127	15				
				Benzo(g,h,i)perylene	191-24-2	5.00	0.350		ug/L	66	150	15	16	147	15				
				Benzo(k)fluoranthene	207-08-9	5.00	0.730		ug/L	65	124	22	20	124	22				
				Bis(2-chloroethoxy)methane	111-91-1	5.00	0.350		ug/L	50	128	17	44	128	17				
				Bis(2-chloroethyl)ether	111-44-4	5.00	0.400		ug/L	44	120	21	45	120	21				
				Bis(2-ethylhexyl) phthalate	117-81-7	5.00	2.20		ug/L	63	139	15	16	150	15				
				Butyl benzyl phthalate	85-68-7	5.00	1.00		ug/L	70	129	16	51	140	16				
				Caprolactam	105-60-2	5.00	2.20		ug/L	22	120	20	10	120	20				
				Carbazole	86-74-8	5.00	0.300		ug/L	66	123	20	16	148	20				
				Chrysene	218-01-9	5.00	0.330		ug/L	69	120	15	44	122	15				
				Di-n-butyl phthalate	84-74-2	5.00	0.310		ug/L	69	131	15	65	129	15				
				Di-n-octyl phthalate	117-84-0	5.00	0.470		ug/L	63	140	16	16	150	16				
				Dibenz(a,h)anthracene	53-70-3	5.00	0.420		ug/L	65	135	15	16	139	15				
				Dibenzofuran	132-64-9	10.0	0.510		ug/L	66	120	15	60	120	15				
				Diethyl phthalate	84-66-2	5.00	0.220		ug/L	59	127	15	53	133	15				
				Dimethyl phthalate	131-11-3	5.00	0.360		ug/L	68	120	15	59	123	15				
				Fluoranthene	206-44-0	5.00	0.400		ug/L	69	126	15	63	129	15				
Fluorene	86-73-7	5.00	0.360		ug/L	66	120	15	62	120	15								
Hexachlorobenzene	118-74-1	5.00	0.510		ug/L	61	120	15	57	121	15								
Hexachlorobutadiene	87-68-3	5.00	0.680		ug/L	35	120	44	37	120	44								
Hexachlorocyclopentadiene	77-47-4	5.00	0.590		ug/L	31	120	49	21	120	49								
Hexachloroethane	67-72-1	5.00	0.590		ug/L	43	120	46	16	130	46								
Indeno(1,2,3-cd)pyrene	193-39-5	5.00	0.470		ug/L	69	146	15	16	140	15								
Isophorone	78-59-1	5.00	0.430		ug/L	55	120	17	48	133	17								
N-Nitrosodi-n-propylamine	621-64-7	5.00	0.540		ug/L	32	140	31	49	120	31								
N-Nitrosodiphenylamine	86-30-6	5.00	0.510		ug/L														
Naphthalene	91-20-3	5.00	0.760		ug/L	57	120	29	45	120	29								

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Groundwater Samples	Semivolatile Organic Compounds (GC/MS)	8270D	3510C_LVI	Nitrobenzene	98-95-3	5.00	0.290		ug/L	53	123	24	45	123	24					
				Pentachlorophenol	87-86-5	10.0	2.20		ug/L	29	136	37	23	149	37					
				Phenanthrene	85-01-8	5.00	0.440		ug/L	68	120	15	65	122	15					
				Phenol	108-95-2	5.00	0.390		ug/L	17	120	34	16	120	34					
				Pyrene	129-00-0	5.00	0.340		ug/L	70	125	19	58	128	19					
				Tentatively Identified Compound	STL00231				ug/L											
				2,4,6-Tribromophenol	118-79-6				ug/L										41	120
				2-Fluorobiphenyl	321-60-8				ug/L										48	120
				2-Fluorophenol	367-12-4				ug/L										35	120
				Nitrobenzene-d5	4165-60-0				ug/L										46	120
p-Terphenyl-d14	1718-51-0				ug/L										60	148				
Phenol-d5	4165-62-2				ug/L										22	120				
Groundwater Samples	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	8270D_SIM_MS_ID	3510C	1,4-Dioxane	123-91-1	0.200	0.100		ug/L	40	140	20	40	140	20					
				1,4-Dioxane-d8	17647-74-4				ug/L											
Groundwater Samples	Metals (ICP)	6010C	3005A_TOT	Aluminum	7429-90-5	0.200	0.0600		mg/L	80	120	20	75	125	20					
				Antimony	7440-36-0	0.0200	0.00679		mg/L	80	120	20	75	125	20					
				Arsenic	7440-38-2	0.0150	0.00555		mg/L	80	120	20	75	125	20					
				Barium	7440-39-3	0.00200	0.000700		mg/L	80	120	20	75	125	20					
				Beryllium	7440-41-7	0.00200	0.000300		mg/L	80	120	20	75	125	20					
				Cadmium	7440-43-9	0.00200	0.000500		mg/L	80	120	20	75	125	20					
				Calcium	7440-70-2	0.500	0.100		mg/L	80	120	20	75	125	20					
				Chromium	7440-47-3	0.00400	0.00100		mg/L	80	120	20	75	125	20					
				Cobalt	7440-48-4	0.00400	0.000630		mg/L	80	120	20	75	125	20					
				Copper	7440-50-8	0.0100	0.00160		mg/L	80	120	20	75	125	20					
				Iron	7439-89-6	0.0500	0.0193		mg/L	80	120	20	75	125	20					
				Lead	7439-92-1	0.0100	0.00300		mg/L	80	120	20	75	125	20					
				Magnesium	7439-95-4	0.200	0.0434		mg/L	80	120	20	75	125	20					
				Manganese	7439-96-5	0.00300	0.000400		mg/L	80	120	20	75	125	20					
				Nickel	7440-02-0	0.0100	0.00126		mg/L	80	120	20	75	125	20					
				Potassium	7440-09-7	0.500	0.100		mg/L	80	120	20	75	125	20					
				Selenium	7782-49-2	0.0250	0.00870		mg/L	80	120	20	75	125	20					
				Silver	7440-22-4	0.00600	0.00170		mg/L	80	120	20	75	125	20					
Sodium	7440-23-5	1.00	0.324		mg/L	80	120	20	75	125	20									
Thallium	7440-28-0	0.0200	0.0102		mg/L	80	120	20	75	125	20									
Vanadium	7440-62-2	0.00500	0.00150		mg/L	80	120	20	75	125	20									
Zinc	7440-66-6	0.0100	0.00150		mg/L	80	120	20	75	125	20									
Groundwater Samples	Mercury (CVAA)	7470A	7470A_Prep	Mercury	7439-97-6	0.000200	0.000120		mg/L	80	120	20	80	120	20					
Groundwater Samples	Organochlorine Pesticides (GC)	8081B	3510C_LVI	4,4'-DDD	72-54-8	0.0500	0.00920		ug/L	64	129	23	57	130	23					
				4,4'-DDE	72-55-9	0.0500	0.0116		ug/L	50	120	22	39	120	22					
				4,4'-DDT	50-29-3	0.0500	0.0110		ug/L	59	120	24	37	130	24					
				Aldrin	309-00-2	0.0500	0.00810		ug/L	40	125	25	39	125	25					
				alpha-BHC	319-84-6	0.0500	0.00770		ug/L	52	125	24	48	120	24					
				cis-Chlordane	5103-71-9	0.0500	0.0148		ug/L	52	120	23	44	120	23					
				beta-BHC	319-85-7	0.0500	0.0248		ug/L	51	120	24	49	120	24					
				delta-BHC	319-86-8	0.0500	0.0100		ug/L	51	120	24	50	120	24					
				Dieldrin	60-57-1	0.0500	0.00980		ug/L	66	128	24	56	130	24					
				Endosulfan I	959-98-8	0.0500	0.0110		ug/L	57	120	30	40	126	30					
				Endosulfan II	33213-65-9	0.0500	0.0120		ug/L	66	131	40	59	140	40					
				Endosulfan sulfate	1031-07-8	0.0500	0.0157		ug/L	66	136	24	60	134	24					
				Endrin	72-20-8	0.0500	0.0138		ug/L	65	135	24	54	135	24					
				Endrin aldehyde	7421-93-4	0.0500	0.0163		ug/L	61	134	28	50	142	28					
				Endrin ketone	53494-70-5	0.0500	0.0120		ug/L	71	133	26	57	138	26					
				gamma-BHC (Lindane)	58-89-9	0.0500	0.00800		ug/L	56	120	24	50	120	24					
				trans-Chlordane	5103-74-2	0.0500	0.0110		ug/L	54	120	24	42	120	24					
				Heptachlor	76-44-8	0.0500	0.00850		ug/L	58	120	25	56	120	25					
Heptachlor epoxide	1024-57-3	0.0500	0.00740		ug/L	65	125	23	58	125	23									
Methoxychlor	72-43-5	0.0500	0.0141		ug/L	50	150	26	40	150	26									
Toxaphene	8001-35-2	0.500	0.120		ug/L															

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Groundwater Samples	Organochlorine Pesticides (GC)	8081B	3510C_LVI	DCB Decachlorobiphenyl	2051-24-3				ug/L							20	120		
				Tetrachloro-m-xylene	877-09-8				ug/L									44	120
Groundwater Samples	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	8082A	3510C_LVI_1YR	PCB-1016	12674-11-2	0.500	0.176		ug/L	62	130	50	28	150	50				
				PCB-1221	11104-28-2	0.500	0.176		ug/L										
				PCB-1232	11141-16-5	0.500	0.176		ug/L										
				PCB-1242	53469-21-9	0.500	0.176		ug/L										
				PCB-1248	12672-29-6	0.500	0.176		ug/L										
				PCB-1254	11097-69-1	0.500	0.250		ug/L										
				PCB-1260	11096-82-5	0.500	0.250		ug/L	56	123	50	25	131	50				
				DCB Decachlorobiphenyl	2051-24-3				ug/L										19
Tetrachloro-m-xylene	877-09-8				ug/L										39	121			
Groundwater Samples	Cyanide, Total and/or Amenable	9012B	9012B_Prep	Cyanide, Total	57-12-5	0.0100	0.00500		mg/L	90	110	15	90	110	15				
Groundwater Samples	Organic Carbon, Total (TOC)	9060A	N/A	Total Organic Carbon	7440-44-0	1.00	0.434		mg/L	90	110	20	54	131	20				
				Total Organic Carbon - Duplicates	7440-44-0	1.00	0.434		mg/L	90	110	20	54	131	20				
				Total Organic Carbon - Quad	7440-44-0	1.00	0.434		mg/L	90	110	20	54	131	20				
				TOC Result 1	STL00338	1.00	0.434		mg/L	90	110	20	54	131	20				
				TOC Result 2	STL00339	1.00	0.434		mg/L	90	110	20	54	131	20				
				TOC Result 3	STL00340	1.00	0.434		mg/L	90	110	20	54	131	20				
				TOC Result 4	STL00341	1.00	0.434		mg/L	90	110	20	54	131	20				
Total Inorganic Carbon	STL00136	1.00	0.434		mg/L	90	110	20	54	131	20								
Groundwater Samples	Fluorinated Alkyl Substances	PFC_IDA	3535_PFC	Perfluorobutanoic acid (PFBA)	375-22-4	2.00	0.350	1.50	ng/L	70	130	30	70	130	30				
				Perfluoropentanoic acid (PFPeA)	2706-90-3	2.00	0.490	1.50	ng/L	66	126	30	66	126	30				
				Perfluorohexanoic acid (PFHxA)	307-24-4	2.00	0.580	1.50	ng/L	66	126	30	66	126	30				
				Perfluoroheptanoic acid (PFHpA)	375-85-9	2.00	0.250	1.50	ng/L	66	126	30	66	126	30				
				Perfluorooctanoic acid (PFOA)	335-67-1	2.00	0.850	1.50	ng/L	64	124	30	64	124	30				
				Perfluorononanoic acid (PFNA)	375-95-1	2.00	0.270	1.50	ng/L	68	128	30	68	128	30				
				Perfluorodecanoic acid (PFDA)	335-76-2	2.00	0.310	1.50	ng/L	69	129	30	69	129	30				
				Perfluoroundecanoic acid (PFUnA)	2058-94-8	2.00	1.10	1.50	ng/L	60	120	30	60	120	30				
				Perfluorododecanoic acid (PFDoA)	307-55-1	2.00	0.550	1.50	ng/L	71	131	30	71	131	30				
				Perfluorotridecanoic acid (PFTriA)	72629-94-8	2.00	1.30	1.50	ng/L	72	132	30	72	132	30				
				Perfluorotetradecanoic acid (PFTeA)	376-06-7	2.00	0.290	1.50	ng/L	68	128	30	68	128	30				
				Perfluorobutanesulfonic acid (PFBS)	375-73-5	2.00	0.200	1.50	ng/L	73	133	30	73	133	30				
				Perfluorohexanesulfonic acid (PFHxS)	355-46-4	2.00	0.170	1.50	ng/L	63	123	30	63	123	30				
				Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	2.00	0.190	1.50	ng/L	68	128	30	68	128	30				
				Perfluorooctanesulfonic acid (PFOS)	1763-23-1	2.00	0.540	1.50	ng/L	67	127	30	67	127	30				
				Perfluorodecanesulfonic acid (PFDS)	335-77-3	2.00	0.320	1.50	ng/L	68	128	30	68	128	30				
				Perfluorooctanesulfonamide (FOSA)	754-91-6	2.00	0.350	1.50	ng/L	70	130	30	70	130	30				
				N-methylperfluorooctanesulfonamidoacetic acid	2355-31-9	20.0	3.10	10.0	ng/L	67	127	30	67	127	30				
				N-ethylperfluorooctanesulfonamidoacetic acid (N	2991-50-6	20.0	1.90	10.0	ng/L	65	125	30	65	125	30				
				6:2 FTS	27619-97-2	20.0	2.00	10.0	ng/L	66	126	30	66	126	30				
				8:2 FTS	39108-34-4	20.0	2.00	10.0	ng/L	67	127	30	67	127	30				
				13C4 PFBA	STL00992				ng/L	25	150		25	150					
				13C5 PFPeA	STL01893				ng/L	25	150		25	150	30				
				13C2 PFHxA	STL00993				ng/L	25	150		25	150					
				13C4 PFHpA	STL01892				ng/L	25	150		25	150					
				13C4 PFOA	STL00990				ng/L	25	150		25	150					
				13C5 PFNA	STL00995				ng/L	25	150		25	150					
				13C2 PFDA	STL00996				ng/L	25	150		25	150					
				13C2 PFUnA	STL00997				ng/L	25	150		25	150					
				13C2 PFDoA	STL00998				ng/L	25	150		25	150					
				13C2 PFTeA	STL02116				ng/L	25	150		25	150					
				13C3 PFBS	STL02337				ng/L	25	150		25	150					
18O2 PFHxS	STL00994				ng/L	25	150		25	150									
13C4 PFOS	STL00991				ng/L	25	150		25	150									
13C8 FOSA	STL01056				ng/L	25	150		25	150									
d3-NMeFOSAA	STL02118				ng/L	25	150		25	150									
d5-NEtFOSAA	STL02117				ng/L	25	150		25	150									
M2-6:2 FTS	STL02279				ng/L	25	150		25	150									

Table 4  
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Hoosick Falls, New York

Analysis Group	Method Description	Method Code	Prep Method	Analyte Description	CAS Number	RL	MDL	LOD	Units	LCS - Low	LCS - High	LCS - RPD %	MS - Low	MS - High	MS - RPD %	Surrogate Low	Surrogate High	
Groundwater Samples	Fluorinated Alkyl Substances	PFC_IDA	3535_PFC	M2-8:2 FTS	STL02280				ng/L	25	150		25	150				
Surface Water Samples	Volatile Organic Compounds by GC/MS	8260C	5030C	1,1,1-Trichloroethane	71-55-6	1.00	0.820		ug/L	73	126	15	73	126	15			
				1,1,2,2-Tetrachloroethane	79-34-5	1.00	0.210		ug/L	76	120	15	76	120	15			
				1,1,2-Trichloroethane	79-00-5	1.00	0.230		ug/L	76	122	15	76	122	15			
				1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	1.00	0.310		ug/L	61	148	20	61	148	20			
				1,1-Dichloroethane	75-34-3	1.00	0.380		ug/L	77	120	20	77	120	20			
				1,1-Dichloroethene	75-35-4	1.00	0.290		ug/L	66	127	16	66	127	16			
				1,2,4-Trichlorobenzene	120-82-1	1.00	0.410		ug/L	79	122	20	79	122	20			
				1,2-Dibromo-3-Chloropropane	96-12-8	1.00	0.390		ug/L	56	134	15	56	134	15			
				1,2-Dibromoethane	106-93-4	1.00	0.730		ug/L	77	120	15	77	120	15			
				1,2-Dichlorobenzene	95-50-1	1.00	0.790		ug/L	80	124	20	80	124	20			
				1,2-Dichloroethane	107-06-2	1.00	0.210		ug/L	75	120	20	75	120	20			
				1,2-Dichloropropane	78-87-5	1.00	0.720		ug/L	76	120	20	76	120	20			
				1,3-Dichlorobenzene	541-73-1	1.00	0.780		ug/L	77	120	20	77	120	20			
				1,4-Dichlorobenzene	106-46-7	1.00	0.840		ug/L	80	120	20	78	124	20			
				2-Hexanone	591-78-6	5.00	1.24		ug/L	65	127	15	65	127	15			
				2-Butanone (MEK)	78-93-3	10.0	1.32		ug/L	57	140	20	57	140	20			
				4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	2.10		ug/L	71	125	35	71	125	35			
				Acetone	67-64-1	10.0	3.00		ug/L	56	142	15	56	142	15			
				Benzene	71-43-2	1.00	0.410		ug/L	71	124	13	71	124	13			
				Bromodichloromethane	75-27-4	1.00	0.390		ug/L	80	122	15	80	122	15			
				Bromoform	75-25-2	1.00	0.260		ug/L	61	132	15	61	132	15			
				Bromomethane	74-83-9	1.00	0.690		ug/L	55	144	15	55	144	15			
				Carbon disulfide	75-15-0	1.00	0.190		ug/L	59	134	15	59	134	15			
				Carbon tetrachloride	56-23-5	1.00	0.270		ug/L	72	134	15	72	134	15			
				Chlorobenzene	108-90-7	1.00	0.750		ug/L	80	120	25	80	120	25			
				Dibromochloromethane	124-48-1	1.00	0.320		ug/L	75	125	15	75	125	15			
				Chloroethane	75-00-3	1.00	0.320		ug/L	69	136	15	69	136	15			
				Chloroform	67-66-3	1.00	0.340		ug/L	73	127	20	73	127	20			
				Chloromethane	74-87-3	1.00	0.350		ug/L	68	124	15	68	124	15			
				cis-1,2-Dichloroethene	156-59-2	1.00	0.810		ug/L	74	124	15	74	124	15			
				cis-1,3-Dichloropropene	10061-01-5	1.00	0.360		ug/L	74	124	15	74	124	15			
				Cyclohexane	110-82-7	1.00	0.180		ug/L	59	135	20	59	135	20			
				Dichlorodifluoromethane	75-71-8	1.00	0.680		ug/L	59	135	20	59	135	20			
				Ethylbenzene	100-41-4	1.00	0.740		ug/L	77	123	15	77	123	15			
				Isopropylbenzene	98-82-8	1.00	0.790		ug/L	77	122	20	77	122	20			
				Methyl acetate	79-20-9	2.50	1.30		ug/L	74	133	20	74	133	20			
				Methyl tert-butyl ether	1634-04-4	1.00	0.160		ug/L	77	120	37	77	120	37			
				Methylcyclohexane	108-87-2	1.00	0.160		ug/L	68	134	20	68	134	20			
				Methylene Chloride	75-09-2	1.00	0.440		ug/L	75	124	15	75	124	15			
				Styrene	100-42-5	1.00	0.730		ug/L	80	120	20	80	120	20			
Tetrachloroethene	127-18-4	1.00	0.360		ug/L	74	122	20	74	122	20							
Toluene	108-88-3	1.00	0.510		ug/L	80	122	15	80	122	15							
trans-1,2-Dichloroethene	156-60-5	1.00	0.900		ug/L	73	127	20	73	127	20							
trans-1,3-Dichloropropene	10061-02-6	1.00	0.370		ug/L													
Trichloroethene	79-01-6	1.00	0.460		ug/L	74	123	16	74	123	16							
Trichlorofluoromethane	75-69-4	1.00	0.880		ug/L	62	150	20	62	150	20							
Vinyl chloride	75-01-4	1.00	0.900		ug/L	65	133	15	65	133	15							
Xylenes, Total	1330-20-7	2.00	0.660		ug/L													
Tentatively Identified Compound	STL00231				ug/L													
1,2-Dichloroethane-d4 (Surr)	17060-07-0				ug/L											77	120	
Toluene-d8 (Surr)	2037-26-5				ug/L												80	120
4-Bromofluorobenzene (Surr)	460-00-4				ug/L												73	120
Dibromofluoromethane (Surr)	1868-53-7				ug/L	5.00	0.100					20					75	123

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Surface Water Samples	Semivolatile Organic Compounds (GC/MS)	8270D	3510C_LVI	Biphenyl	92-52-4	5.00	0.653		ug/L	59	120	20	57	120	20				
				bis (2-chloroisopropyl) ether	108-60-1	5.00	0.520		ug/L	21	136	24	28	121	24				
				2,4,5-Trichlorophenol	95-95-4	5.00	0.480		ug/L	65	126	18	65	126	18				
				2,4,6-Trichlorophenol	88-06-2	5.00	0.610		ug/L	64	120	19	64	120	19				
				2,4-Dichlorophenol	120-83-2	5.00	0.510		ug/L	63	120	19	48	132	19				
				2,4-Dimethylphenol	105-67-9	5.00	0.500		ug/L	47	120	42	39	130	42				
				2,4-Dinitrophenol	51-28-5	10.0	2.22		ug/L	31	137	22	21	150	22				
				2,4-Dinitrotoluene	121-14-2	5.00	0.447		ug/L	69	120	20	54	138	20				
				2,6-Dinitrotoluene	606-20-2	5.00	0.400		ug/L	68	120	15	17	150	15				
				2-Chloronaphthalene	91-58-7	5.00	0.460		ug/L	58	120	21	52	124	21				
				2-Chlorophenol	95-57-8	5.00	0.530		ug/L	48	120	25	48	120	25				
				2-Methylnaphthalene	91-57-6	5.00	0.600		ug/L	59	120	21	34	140	21				
				2-Methylphenol	95-48-7	5.00	0.400		ug/L	39	120	27	46	120	27				
				2-Nitroaniline	88-74-4	10.0	0.420		ug/L	54	127	15	44	136	15				
				2-Nitrophenol	88-75-5	5.00	0.480		ug/L	52	125	18	38	141	18				
				3,3'-Dichlorobenzidine	91-94-1	5.00	0.400		ug/L	49	135	25	10	150	25				
				3-Nitroaniline	99-09-2	10.0	0.480		ug/L	51	120	19	32	150	19				
				4,6-Dinitro-2-methylphenol	534-52-1	10.0	2.20		ug/L	46	136	15	38	150	15				
				4-Bromophenyl phenyl ether	101-55-3	5.00	0.450		ug/L	65	120	15	63	126	15				
				4-Chloro-3-methylphenol	59-50-7	5.00	0.450		ug/L	61	123	27	64	127	27				
				4-Chloroaniline	106-47-8	5.00	0.590		ug/L	30	120	22	16	124	22				
				4-Chlorophenyl phenyl ether	7005-72-3	5.00	0.350		ug/L	62	120	16	61	120	16				
				4-Methylphenol	106-44-5	10.0	0.360		ug/L	29	131	24	36	120	24				
				4-Nitroaniline	100-01-6	10.0	0.250		ug/L	65	120	24	32	150	24				
				4-Nitrophenol	100-02-7	10.0	1.52		ug/L	45	120	48	23	132	48				
				Acenaphthene	83-32-9	5.00	0.410		ug/L	60	120	24	48	120	24				
				Acenaphthylene	208-96-8	5.00	0.380		ug/L	63	120	18	63	120	18				
				Acetophenone	98-86-2	5.00	0.540		ug/L	45	120	20	53	120	20				
				Anthracene	120-12-7	5.00	0.280		ug/L	67	120	15	65	122	15				
				Atrazine	1912-24-9	5.00	0.460		ug/L	71	130	20	50	150	20				
				Benzaldehyde	100-52-7	5.00	0.267		ug/L	10	140	20	10	150	20				
				Benzo(a)anthracene	56-55-3	5.00	0.360		ug/L	70	121	15	43	124	15				
				Benzo(a)pyrene	50-32-8	5.00	0.470		ug/L	60	123	15	23	125	15				
				Benzo(b)fluoranthene	205-99-2	5.00	0.340		ug/L	66	126	15	27	127	15				
				Benzo(g,h,i)perylene	191-24-2	5.00	0.350		ug/L	66	150	15	16	147	15				
				Benzo(k)fluoranthene	207-08-9	5.00	0.730		ug/L	65	124	22	20	124	22				
				Bis(2-chloroethoxy)methane	111-91-1	5.00	0.350		ug/L	50	128	17	44	128	17				
				Bis(2-chloroethyl)ether	111-44-4	5.00	0.400		ug/L	44	120	21	45	120	21				
				Bis(2-ethylhexyl) phthalate	117-81-7	5.00	2.20		ug/L	63	139	15	16	150	15				
				Butyl benzyl phthalate	85-68-7	5.00	1.00		ug/L	70	129	16	51	140	16				
				Caprolactam	105-60-2	5.00	2.20		ug/L	22	120	20	10	120	20				
				Carbazole	86-74-8	5.00	0.300		ug/L	66	123	20	16	148	20				
				Chrysene	218-01-9	5.00	0.330		ug/L	69	120	15	44	122	15				
				Di-n-butyl phthalate	84-74-2	5.00	0.310		ug/L	69	131	15	65	129	15				
				Di-n-octyl phthalate	117-84-0	5.00	0.470		ug/L	63	140	16	16	150	16				
				Dibenz(a,h)anthracene	53-70-3	5.00	0.420		ug/L	65	135	15	16	139	15				
				Dibenzofuran	132-64-9	10.0	0.510		ug/L	66	120	15	60	120	15				
				Diethyl phthalate	84-66-2	5.00	0.220		ug/L	59	127	15	53	133	15				
				Dimethyl phthalate	131-11-3	5.00	0.360		ug/L	68	120	15	59	123	15				
				Fluoranthene	206-44-0	5.00	0.400		ug/L	69	126	15	63	129	15				
Fluorene	86-73-7	5.00	0.360		ug/L	66	120	15	62	120	15								
Hexachlorobenzene	118-74-1	5.00	0.510		ug/L	61	120	15	57	121	15								
Hexachlorobutadiene	87-68-3	5.00	0.680		ug/L	35	120	44	37	120	44								
Hexachlorocyclopentadiene	77-47-4	5.00	0.590		ug/L	31	120	49	21	120	49								
Hexachloroethane	67-72-1	5.00	0.590		ug/L	43	120	46	16	130	46								
Indeno(1,2,3-cd)pyrene	193-39-5	5.00	0.470		ug/L	69	146	15	16	140	15								
Isophorone	78-59-1	5.00	0.430		ug/L	55	120	17	48	133	17								
N-Nitrosodi-n-propylamine	621-64-7	5.00	0.540		ug/L	32	140	31	49	120	31								
N-Nitrosodiphenylamine	86-30-6	5.00	0.510		ug/L														
Naphthalene	91-20-3	5.00	0.760		ug/L	57	120	29	45	120	29								

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Surface Water Samples	Semivolatile Organic Compounds (GC/MS)	8270D	3510C_LVI	Nitrobenzene	98-95-3	5.00	0.290		ug/L	53	123	24	45	123	24					
				Pentachlorophenol	87-86-5	10.0	2.20		ug/L	29	136	37	23	149	37					
				Phenanthrene	85-01-8	5.00	0.440		ug/L	68	120	15	65	122	15					
				Phenol	108-95-2	5.00	0.390		ug/L	17	120	34	16	120	34					
				Pyrene	129-00-0	5.00	0.340		ug/L	70	125	19	58	128	19					
				Tentatively Identified Compound	STL00231				ug/L											
				2,4,6-Tribromophenol	118-79-6				ug/L										41	120
				2-Fluorobiphenyl	321-60-8				ug/L										48	120
				2-Fluorophenol	367-12-4				ug/L										35	120
				Nitrobenzene-d5	4165-60-0				ug/L										46	120
				p-Terphenyl-d14	1718-51-0				ug/L										60	148
Phenol-d5	4165-62-2				ug/L										22	120				
Surface Water Samples	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	8270D_SIM_MS_ID	3510C	1,4-Dioxane	123-91-1	0.200	0.100		ug/L	40	140	20	40	140	20					
				1,4-Dioxane-d8	17647-74-4				ug/L											
Surface Water Samples	Metals (ICP)	6010C	3005A_TOT	Aluminum	7429-90-5	0.200	0.0600		mg/L	80	120	20	75	125	20					
				Antimony	7440-36-0	0.0200	0.00679		mg/L	80	120	20	75	125	20					
				Arsenic	7440-38-2	0.0150	0.00555		mg/L	80	120	20	75	125	20					
				Barium	7440-39-3	0.00200	0.000700		mg/L	80	120	20	75	125	20					
				Beryllium	7440-41-7	0.00200	0.000300		mg/L	80	120	20	75	125	20					
				Cadmium	7440-43-9	0.00200	0.000500		mg/L	80	120	20	75	125	20					
				Calcium	7440-70-2	0.500	0.100		mg/L	80	120	20	75	125	20					
				Chromium	7440-47-3	0.00400	0.00100		mg/L	80	120	20	75	125	20					
				Cobalt	7440-48-4	0.00400	0.000630		mg/L	80	120	20	75	125	20					
				Copper	7440-50-8	0.0100	0.00160		mg/L	80	120	20	75	125	20					
				Iron	7439-89-6	0.0500	0.0193		mg/L	80	120	20	75	125	20					
				Lead	7439-92-1	0.0100	0.00300		mg/L	80	120	20	75	125	20					
				Magnesium	7439-95-4	0.200	0.0434		mg/L	80	120	20	75	125	20					
				Manganese	7439-96-5	0.00300	0.000400		mg/L	80	120	20	75	125	20					
				Nickel	7440-02-0	0.0100	0.00126		mg/L	80	120	20	75	125	20					
				Potassium	7440-09-7	0.500	0.100		mg/L	80	120	20	75	125	20					
				Selenium	7782-49-2	0.0250	0.00870		mg/L	80	120	20	75	125	20					
				Silver	7440-22-4	0.00600	0.00170		mg/L	80	120	20	75	125	20					
				Sodium	7440-23-5	1.00	0.324		mg/L	80	120	20	75	125	20					
				Thallium	7440-28-0	0.0200	0.0102		mg/L	80	120	20	75	125	20					
Vanadium	7440-62-2	0.00500	0.00150		mg/L	80	120	20	75	125	20									
Zinc	7440-66-6	0.0100	0.00150		mg/L	80	120	20	75	125	20									

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Hoosick Falls, New York

Analysis Group	Method Description	Method Code	Prep Method	Analyte Description	CAS Number	RL	MDL	LOD	Units	LCS - Low	LCS - High	LCS - RPD %	MS - Low	MS - High	MS - RPD %	Surrogate Low	Surrogate High			
Surface Water Samples	Mercury (CVAA)	7470A	7470A_Prep	Mercury	7439-97-6	0.000200	0.000120		mg/L	80	120	20	80	120	20					
Surface Water Samples	Organochlorine Pesticides (GC)	8081B	3510C_LVI	4,4'-DDD	72-54-8	0.0500	0.00920		ug/L	64	129	23	57	130	23					
				4,4'-DDE	72-55-9	0.0500	0.0116		ug/L	50	120	22	39	120	22					
				4,4'-DDT	50-29-3	0.0500	0.0110		ug/L	59	120	24	37	130	24					
				Aldrin	309-00-2	0.0500	0.00810		ug/L	40	125	25	39	125	25					
				alpha-BHC	319-84-6	0.0500	0.00770		ug/L	52	125	24	48	120	24					
				cis-Chlordane	5103-71-9	0.0500	0.0148		ug/L	52	120	23	44	120	23					
				beta-BHC	319-85-7	0.0500	0.0248		ug/L	51	120	24	49	120	24					
				delta-BHC	319-86-8	0.0500	0.0100		ug/L	51	120	24	50	120	24					
				Dieldrin	60-57-1	0.0500	0.00980		ug/L	66	128	24	56	130	24					
				Endosulfan I	959-98-8	0.0500	0.0110		ug/L	57	120	30	40	126	30					
				Endosulfan II	33213-65-9	0.0500	0.0120		ug/L	66	131	40	59	140	40					
				Endosulfan sulfate	1031-07-8	0.0500	0.0157		ug/L	66	136	24	60	134	24					
				Endrin	72-20-8	0.0500	0.0138		ug/L	65	135	24	54	135	24					
				Endrin aldehyde	7421-93-4	0.0500	0.0163		ug/L	61	134	28	50	142	28					
				Endrin ketone	53494-70-5	0.0500	0.0120		ug/L	71	133	26	57	138	26					
				gamma-BHC (Lindane)	58-89-9	0.0500	0.00800		ug/L	56	120	24	50	120	24					
				trans-Chlordane	5103-74-2	0.0500	0.0110		ug/L	54	120	24	42	120	24					
				Heptachlor	76-44-8	0.0500	0.00850		ug/L	58	120	25	56	120	25					
				Heptachlor epoxide	1024-57-3	0.0500	0.00740		ug/L	65	125	23	58	125	23					
				Methoxychlor	72-43-5	0.0500	0.0141		ug/L	50	150	26	40	150	26					
Toxaphene	8001-35-2	0.500	0.120		ug/L															
DCB Decachlorobiphenyl	2051-24-3				ug/L											20	120			
Tetrachloro-m-xylene	877-09-8				ug/L											44	120			
Surface Water Samples	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	8082A	3510C_LVI_1YR	PCB-1016	12674-11-2	0.500	0.176		ug/L	62	130	50	28	150	50					
				PCB-1221	11104-28-2	0.500	0.176		ug/L											
				PCB-1232	11141-16-5	0.500	0.176		ug/L											
				PCB-1242	53469-21-9	0.500	0.176		ug/L											
				PCB-1248	12672-29-6	0.500	0.176		ug/L											
				PCB-1254	11097-69-1	0.500	0.250		ug/L											
				PCB-1260	11096-82-5	0.500	0.250		ug/L	56	123	50	25	131	50					
				DCB Decachlorobiphenyl	2051-24-3				ug/L										19	120
Tetrachloro-m-xylene	877-09-8				ug/L										39	121				
Surface Water Samples	Cyanide, Total and/or Amenable	9012B	9012B_Prep	Cyanide, Total	57-12-5	0.0100	0.00500		mg/L	90	110	15	90	110	15					
Surface Water Samples	Organic Carbon, Total (TOC)	9060A	N/A	Total Organic Carbon	7440-44-0	1.00	0.434		mg/L	90	110	20	54	131	20					
				Total Organic Carbon - Duplicates	7440-44-0	1.00	0.434		mg/L	90	110	20	54	131	20					
				Total Organic Carbon - Quad	7440-44-0	1.00	0.434		mg/L	90	110	20	54	131	20					
				TOC Result 1	STL00338	1.00	0.434		mg/L	90	110	20	54	131	20					
				TOC Result 2	STL00339	1.00	0.434		mg/L	90	110	20	54	131	20					
				TOC Result 3	STL00340	1.00	0.434		mg/L	90	110	20	54	131	20					
				TOC Result 4	STL00341	1.00	0.434		mg/L	90	110	20	54	131	20					
Total Inorganic Carbon	STL00136	1.00	0.434		mg/L	90	110	20	54	131	20									

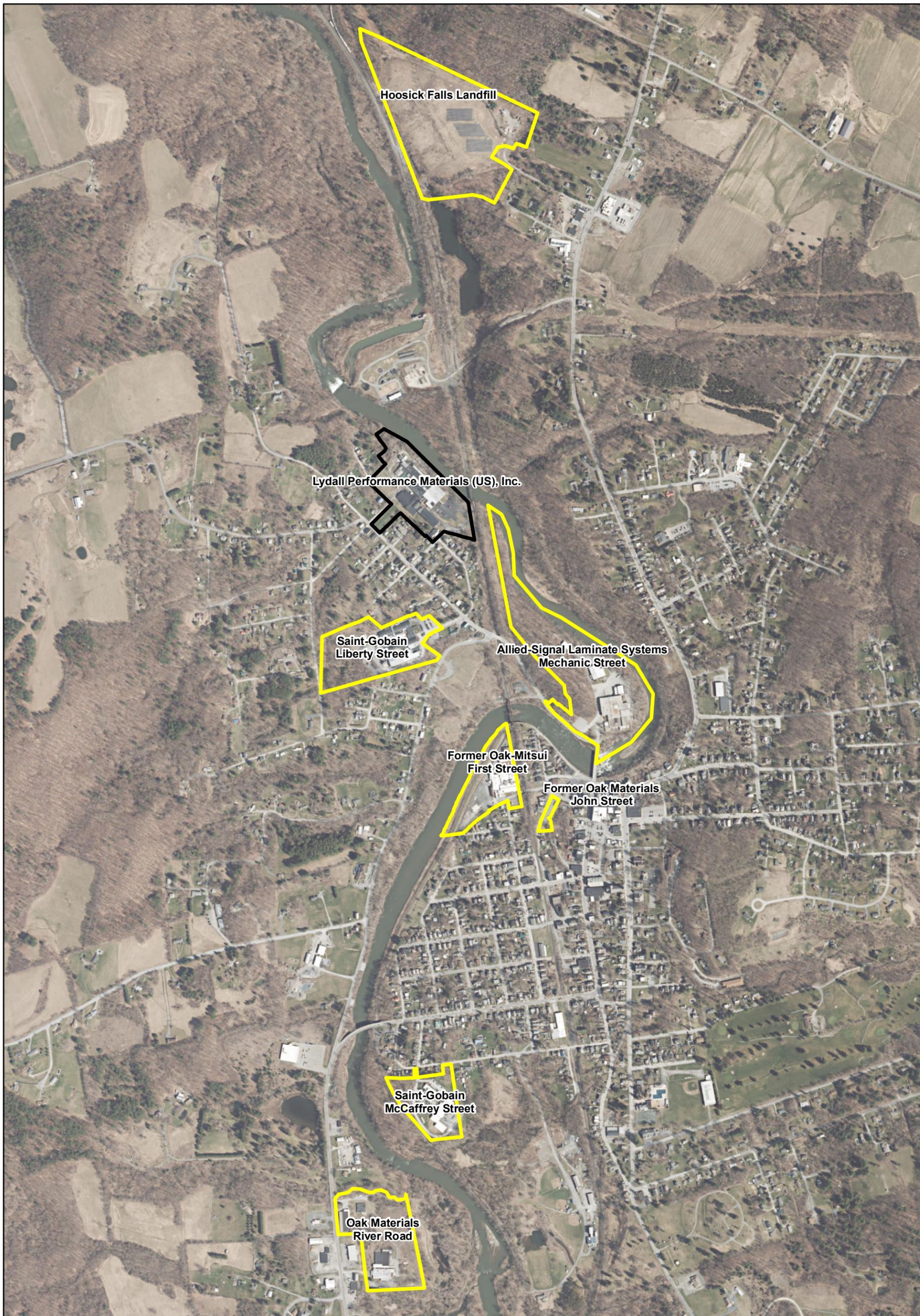
Table 4  
Reporting and Method Detection Limits for Specific Compounds and Matrices  
Lydall Performance Materials (US), Inc.  
Hoosick Falls, New York

Analysis Group	Method Description	Method Code	Prep Method	Analyte Description	CAS Number	RL	MDL	LOD	Units	LCS - Low	LCS - High	LCS - RPD %	MS - Low	MS - High	MS - RPD %	Surrogate Low	Surrogate High
Surface Water Samples	Fluorinated Alkyl Substances	PFC_IDA	3535_PFC	Perfluorobutanoic acid (PFBA)	375-22-4	2.00	0.350	1.50	ng/L	70	130	30	70	130	30		
				Perfluoropentanoic acid (PFPeA)	2706-90-3	2.00	0.490	1.50	ng/L	66	126	30	66	126	30		
				Perfluorohexanoic acid (PFHxA)	307-24-4	2.00	0.580	1.50	ng/L	66	126	30	66	126	30		
				Perfluoroheptanoic acid (PFHpA)	375-85-9	2.00	0.250	1.50	ng/L	66	126	30	66	126	30		
				Perfluorooctanoic acid (PFOA)	335-67-1	2.00	0.850	1.50	ng/L	64	124	30	64	124	30		
				Perfluorononanoic acid (PFNA)	375-95-1	2.00	0.270	1.50	ng/L	68	128	30	68	128	30		
				Perfluorodecanoic acid (PFDA)	335-76-2	2.00	0.310	1.50	ng/L	69	129	30	69	129	30		
				Perfluoroundecanoic acid (PFUnA)	2058-94-8	2.00	1.10	1.50	ng/L	60	120	30	60	120	30		
				Perfluorododecanoic acid (PFDoA)	307-55-1	2.00	0.550	1.50	ng/L	71	131	30	71	131	30		
				Perfluorotridecanoic acid (PFTriA)	72629-94-8	2.00	1.30	1.50	ng/L	72	132	30	72	132	30		
				Perfluorotetradecanoic acid (PFTeA)	376-06-7	2.00	0.290	1.50	ng/L	68	128	30	68	128	30		
				Perfluorobutanesulfonic acid (PFBS)	375-73-5	2.00	0.200	1.50	ng/L	73	133	30	73	133	30		
				Perfluorohexanesulfonic acid (PFHxS)	355-46-4	2.00	0.170	1.50	ng/L	63	123	30	63	123	30		
				Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	2.00	0.190	1.50	ng/L	68	128	30	68	128	30		
				Perfluorooctanesulfonic acid (PFOS)	1763-23-1	2.00	0.540	1.50	ng/L	67	127	30	67	127	30		
				Perfluorodecanesulfonic acid (PFDS)	335-77-3	2.00	0.320	1.50	ng/L	68	128	30	68	128	30		
				Perfluorooctanesulfonamide (FOSA)	754-91-6	2.00	0.350	1.50	ng/L	70	130	30	70	130	30		
				N-methylperfluorooctanesulfonamidoacetic acid	2355-31-9	20.0	3.10	10.0	ng/L	67	127	30	67	127	30		
				N-ethylperfluorooctanesulfonamidoacetic acid (N)	2991-50-6	20.0	1.90	10.0	ng/L	65	125	30	65	125	30		
				6:2 FTS	27619-97-2	20.0	2.00	10.0	ng/L	66	126	30	66	126	30		
				8:2 FTS	39108-34-4	20.0	2.00	10.0	ng/L	67	127	30	67	127	30		
				13C4 PFBA	STL00992				ng/L	25	150		25	150			
				13C5 PFPeA	STL01893				ng/L	25	150		25	150	30		
				13C2 PFHxA	STL00993				ng/L	25	150		25	150			
				13C4 PFHpA	STL01892				ng/L	25	150		25	150			
				13C4 PFOA	STL00990				ng/L	25	150		25	150			
				13C5 PFNA	STL00995				ng/L	25	150		25	150			
				13C2 PFDA	STL00996				ng/L	25	150		25	150			
				13C2 PFUnA	STL00997				ng/L	25	150		25	150			
				13C2 PFDoA	STL00998				ng/L	25	150		25	150			
				13C2 PFTeDA	STL02116				ng/L	25	150		25	150			
				13C3 PFBS	STL02337				ng/L	25	150		25	150			
				18O2 PFHxS	STL00994				ng/L	25	150		25	150			
13C4 PFOS	STL00991				ng/L	25	150		25	150							
13C8 FOSA	STL01056				ng/L	25	150		25	150							
d3-NMeFOSAA	STL02118				ng/L	25	150		25	150							
d5-NEtFOSAA	STL02117				ng/L	25	150		25	150							
M2-6:2 FTS	STL02279				ng/L	25	150		25	150							
M2-8:2 FTS	STL02280				ng/L	25	150		25	150							

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Hoosick Falls, New York

Analysis Group	Method Description	Method Code	Prep Method	Analyte Description	CAS Number	RL	MDL	LOD	Units	LCS - Low	LCS - High	LCS - RPD %	MS - Low	MS - High	MS - RPD %	Surrogate Low	Surrogate High			
Soil Gas Samples	Volatile Organic Compounds in Ambient Air	TO15_STD	Air_Summa_Can	1,1,1-Trichloroethane	71-55-6	1.09	0.164		ug/m3	72	127	25	70	130						
				1,1,2,2-Tetrachloroethane	79-34-5	1.37	0.233		ug/m3	74	126	25	70	130						
				1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	1.53	0.314		ug/m3	70	121	25	70	130						
				1,1,2-Trichloroethane	79-00-5	1.09	0.202		ug/m3	75	126	25	70	130						
				1,1-Dichloroethane	75-34-3	0.809	0.113		ug/m3	66	130	25	70	130						
				1,1-Dichloroethene	75-35-4	0.793	0.0396		ug/m3	68	120	25	70	130						
				1,2,4-Trichlorobenzene	120-82-1	14.8	0.252		ug/m3	50	150	25	70	130						
				1,2,4-Trimethylbenzene	95-63-6	0.983	0.0787		ug/m3	71	129	25	70	130						
				1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	1.4	0.364		ug/m3	71	141	25	70	130						
				1,2-Dichlorobenzene	95-50-1	1.2	0.108		ug/m3	68	129	25	70	130						
				1,2-Dichloroethane	107-06-2	0.809	0.21		ug/m3	68	135	25	70	130						
				1,2-Dichloropropane	78-87-5	0.924	0.162		ug/m3	69	128	25	70	130						
				1,3,5-Trimethylbenzene	108-67-8	0.983	0.0934		ug/m3	72	126	25	70	130						
				1,3-Dichlorobenzene	541-73-1	1.2	0.12		ug/m3	69	131	25	70	130						
				1,4-Dichlorobenzene	106-46-7	1.2	0.114		ug/m3	67	132	25	70	130						
				1,4-Dioxane	123-91-1	18	0.577		ug/m3	66	129	25	70	130						
				2-Butanone (MEK)	78-93-3	2.95	0.271		ug/m3	72	124	25	70	130						
				4-Methyl-2-pentanone (MIBK)	108-10-1	2.05	0.737		ug/m3	58	144	25	70	130						
				Acetone	67-64-1	11.9	1.64		ug/m3	54	154	25	70	130						
				Benzene	71-43-2	0.639	0.0926		ug/m3	73	119	25	70	130						
				Benzyl chloride	100-44-7	4.14	0.0932		ug/m3	60	136	25	70	130						
				Bromoform	75-25-2	2.07	0.258		ug/m3	53	149	25	70	130						
				Bromomethane	74-83-9	0.777	0.171		ug/m3	72	124	25	70	130						
				Carbon disulfide	75-15-0	1.56	0.0934		ug/m3	71	138	25	70	130						
				Carbon tetrachloride	56-23-5	1.26	0.0692		ug/m3	71	133	25	70	130						
				Chlorobenzene	108-90-7	0.921	0.0829		ug/m3	76	119	25	70	130						
				Dibromochloromethane	124-48-1	1.7	0.17		ug/m3	73	125	25	70	130						
				Chloroethane	75-00-3	2.11	0.161		ug/m3	68	130	25	70	130						
				Chloroform	67-66-3	0.977	0.186		ug/m3	73	124	25	70	130						
				Chloromethane	74-87-3	1.03	0.124		ug/m3	56	141	25	70	130						
				cis-1,2-Dichloroethene	156-59-2	0.793	0.119		ug/m3	72	121	25	70	130						
				cis-1,3-Dichloropropene	10061-01-5	0.908	0.132		ug/m3	74	125	25	70	130						
				Cyclohexane	110-82-7	1.72	0.0344		ug/m3	76	124	25	70	130						
				Bromodichloromethane	75-27-4	1.34	0.194		ug/m3	75	127	25	70	130						
				Dichlorodifluoromethane	75-71-8	2.47	0.277		ug/m3	61	142	25	70	130						
				Ethylbenzene	100-41-4	0.868	0.0868		ug/m3	74	122	25	70	130						
				1,2-Dibromoethane (EDB)	106-93-4	1.54	0.138		ug/m3	78	122	25	70	130						
				Hexachlorobutadiene	87-68-3	21.3	0.384		ug/m3	58	130	25	70	130						
				Hexane	110-54-3	2.82	0.0987		ug/m3	63	138	25	70	130						
				Isopropyl alcohol	67-63-0	12.3	0.369		ug/m3	53	142	25	70	130						
				Isopropylbenzene	98-82-8	3.93	0.0934		ug/m3	73	123	25	70	130						
				m-Xylene & p-Xylene	179601-23-1	3.47	0.109		ug/m3	76	121	25	70	130						
				Methyl tert-butyl ether	1634-04-4	3.61	0.0793		ug/m3	70	127	25	70	130						
				Methylene Chloride	75-09-2	1.74	0.417		ug/m3	59	137	25	70	130						
				Naphthalene	91-20-3	2.62	0.157		ug/m3	50	150	25	70	130						
o-Xylene	95-47-6	0.868	0.0782		ug/m3	73	123	25	70	130										
Styrene	100-42-5	0.852	0.0682		ug/m3	74	125	25	70	130										
Tetrachloroethene	127-18-4	1.36	0.203		ug/m3	70	125	25	70	130										
Tetrahydrofuran	109-99-9	14.7	0.531		ug/m3	60	149	25	70	130										
Toluene	108-88-3	0.754	0.0942		ug/m3	75	122	25	70	130										
trans-1,2-Dichloroethene	156-60-5	0.793	0.107		ug/m3	69	137	25	70	130										
trans-1,3-Dichloropropene	10061-02-6	0.908	0.118		ug/m3	74	128	25	70	130										
Trichloroethene	79-01-6	1.07	0.161		ug/m3	73	122	25	70	130										
Trichlorofluoromethane	75-69-4	1.12	0.253		ug/m3	70	129	25	70	130										
Vinyl acetate	108-05-4	17.6	0.292		ug/m3	59	149	25	70	130										
Vinyl bromide	593-60-2	0.875	0.0875		ug/m3	75	125	25	70	130										
Vinyl chloride	75-01-4	0.511	0.0665		ug/m3	61	135	25	70	130										

# FIGURES



**Legend**

 Lydall Performance Materials (US), Inc.

 Investigation Sites



0 820 Feet

**Hoosick Falls Area Investigation Sites**

Lydall Performance Materials (US), Inc.  
Hoosick Falls, New York

**B&B Engineers & Geologists**  
of new york, p.c.

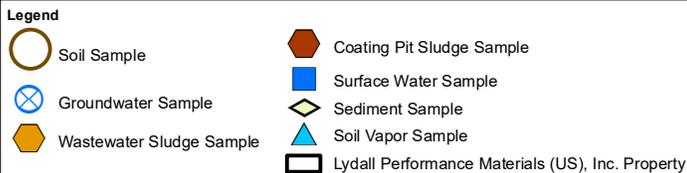
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Acton, MA

October 2019

**Figure**

**1**



**Notes:**  
 1. The proposed samples represent the first phase of the Site Characterization process. Subsequent characterization efforts may be proposed if the results from this phase indicate that the facility is the source of releases to the soil in the vicinity of the plant.  
 2. The Sample IDs will be assigned a unique alpha-numeric value (i.e. SS-1-\*\*\*\*) based on their installation sequence in the field.



**Proposed Site Characterization Samples**

Lydall Performance Materials (US), Inc.  
 Hoosick Falls, New York

**B&B Engineers & Geologists**  
 of new york, p.c.

*an affiliate of Geosyntec Consultants*

Acton, MA

October 2019

**Figure**

**2**