
Site Characterization Work Plan (rev 1)

Town of Chili Fire Department NYSDEC Site No. P828219

3231 Chili Avenue
Rochester, New York

Prepared For
CHILI FIRE DEPARTMENT

October 2024

Town of Chili Fire Department
NYSDEC Site No. P828219

Site Characterization Work Plan

October 2024

Prepared For:
Chili Fire Department
3231 Chili Ave
Rochester, NY 14624

Prepared By:
Barton & Loguidice Environmental Engineering and Geology, PLLC
11 Centre Park
Suite 203
Rochester, NY 14614

Certification

I, Jeffrey J. Reed, PE, certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375] and that this 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).

083980

NYS Professional Engineer #

10/09/2024

Date


Signature

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1.0 INTRODUCTION

Barton & Loguidice Environmental Engineering & Geology, PLLC (B&L), on behalf of the Chili Fire Department, have prepared this Site Characterization Work Plan describing the proposed investigation at the Chili Fire Department (CFD) located at 3225 and 3231 Chili Avenue, Rochester, NY 14624 (Site) in support of the Order on Consent and Administrative Settlement, Index No. R8-20220921-64 (Consent Order) (Appendix A).

The Site comprises portions of two parcels in the Town of Chili, New York (Figure 1). The property was subdivided in September 2021, with the portion of the property containing a fire training facility, a bioretention basin, and a storm water pond transferred from the CFD (currently 3225 Chili Avenue) to the adjacent Town of Chili property (3231 Chili Avenue). The CFD recently completed the construction of a new fire hall building and the above referenced bioretention basin and storm water pond. A fire training area is located on the southern portion of the Site. The training facility consists of a three floor training tower with a Class A burn room located on the first floor, a newly built roof simulator, basement simulator, maze, and extrication pad. The fire training area surface includes both paved and gravel covered sections (about half the area within the training area's fence is paved). The Site is bordered by commercial/retail properties to the north and east. The Chili Town Senior Center is located to the west and Memorial Park, including recreation fields is located to the south.

As outlined in the records search and review as summarized in Section 2.0 of this work plan, sampling performed during physical plant expansion determined that per- and polyfluorinated alkyl substances (PFAS) are present at the site. Pursuant to the Consent Order, CFD plans to perform a Site Characterization to gather the information necessary to characterize whether site-related contamination requires further investigation or remedial action.

2.0 RECORDS SEARCH

In accordance with the requirements of Exhibit B of the Consent Order, this section summarizes the existing data collected to date at the Site and a concise summary of additional Site information

2.1. Previous Investigations

Sampling has been performed at the Site on two occasions. The first sampling was performed December 2020. This sampling was performed as a component of a Phase II Environmental Site Assessment to evaluate the potential presence of PFAS that may be present from use of aqueous film forming foam (AFFF) training operations at the Site. The results of this study, titled "Phase II Environmental Site Assessment Data Package", prepared by LaBella Associates, D.P.C. (LaBella) and dated March 24, 2021 were submitted to NYSDEC on March 28, 2021 and are attached as Exhibit 1. During this 2021 Phase II ESA study, LaBella collected five near surface soil samples and three groundwater samples for PFAS analysis by a modified EPA method 537 (Liquid Chromatography/Tandem Mass Spectrometry [LC/MS/MS] using Isotope Dilution). The sample locations are shown on Figure 2 of Exhibit 1. PFAS were found in all samples as shown on the copies of the 2021 Phase II ESA report tables

shown in Exhibit 1. For the 21 compounds reported by this analytical method, total PFAS concentrations in soil ranged from 920 to 11,900 nanograms/kilogram (ng/kg) and in groundwater ranged from 3,250 to 23,000 nanograms/liter (ng/L).

Labella performed additional soil and groundwater sampling in April and May 2021. This sampling was performed during the construction of a new 9,080 square foot (SF) bioretention pond and a 14,650 SF storm water management pond in the southeast corner of the site. The purpose of the sampling was to document the presence or absence of contamination in areas that would be covered with a geotextile liner and thus be inaccessible for sampling at a later date. The plan for the sampling and analysis was submitted to NYSDEC by Labella in a letter dated April 8, 2021.

The results of the April/May 2021 sampling are included as Exhibit 2. This study analyzed five near-surface (within five feet of ground surface) samples and three surface samples for the following parameters:

- Volatile Organic Compounds (VOCs)
- Semivolatile Organic Compounds (SVOCs)
- 1,4-dioxane
- Metals (USEPA Target Analyte List)
- Cyanide
- Polychlorinated Biphenyls (PCBs)
- Pesticides
- PFAS

The samples analyzed for VOCs were discrete samples, and the samples analyzed for the remaining compounds were discrete samples for the near surface samples, and composites of five aliquots for the surface samples.

The full results are presented in Exhibit 2. In brief, PFAS compounds were in all but one sample, and exceeded proposed Unrestricted Use Soil Cleanup Objectives (SCOs) in all surface composite samples and in two of the five near surface discrete samples (NYSDEC has proposed SCOs for only two PFAS compounds). For the 21 compounds reported by the analytical method, total PFAS concentrations ranged from non-detect to 78,200 ng/kg.

No compounds exceeding Unrestricted Use SCOs for any other analytical parameter with the following exceptions:

- Acetone @ 0.26 mg/kg in one near-surface sample (Unrestricted SCO is 0.05 mg/kg)
- 4,4'-DDE and 4,4'-DDT @ ~0.004 mg/kg in one surface composite sample (Unrestricted SCOs are 0.0033 mg/kg for each compound)

A sample of water that had collected in the under-construction retention pond prior to installation of the pond liner was also analyzed for the VOCs, SVOCs, metals, and PFAS. The VOC, SVOC, and metals results were compared to NYS Class GA standards, which apply to groundwater used as a drinking water source and thus are a conservative benchmark. No VOCs, SVOCs, or metals exceeded Class GA standards. For PFAS, 18 of the method's 21 target compounds were detected. PFAS surface water and groundwater standards have been proposed since the completion of this report.

2.2. Concise Summary of Site Information

The Site has been in operation as a fire station for over 90 years. In 2021, the existing fire station building was demolished and a new building constructed. The new construction included the establishment of a bioretention pond and stormwater pond. The southeast portion of the Site is a paved training area. CFD performed training exercises that included the use of Aqueous Film Forming Foam (AFFF) for approximately 15 to 20 years, ending in 2021. There are no records concerning the quantity of AFFF used during training exercises, but an estimated 5-10 gallons were used for training per year. The AFFF used by CFD prior to 2021 contained PFAS compounds and may be the source of the PFAS detected in prior investigations. No PFAS-containing AFFF remains stored at the CFD property. Per CFD, no other types of training occurred at the training area that had the potential to release other contaminants into the environment

2.3. Site Geology/Hydrogeology and Known Utility Information

As reported in the 2021 Phase II ESA (Exhibit 1), soils at the Site consist generally of brown fine to medium grained sands coupled with brown silt. Trace to some amounts of reddish to grey clay were seen throughout the site. Additionally, sub-rounded to sub-angular fine to coarse gravels were observed in all borings. The 2021 Phase II ESA borings encountered refusal at 13 to 15 feet below ground surface (bgs), which was interpreted to represent bedrock. The depth to groundwater was not reported in the 2021 Phase II ESA although groundwater samples were collected from wells with five-foot screens installed 6 to 10 feet bgs.

Buried utilities at the site include electric, water, storm sewer, and sanitary sewer lines. The locations of these utilities is shown on the as-built drawing for the new firehall, attached as Exhibit 3. As shown on this drawing, stormwater from the site flows into bioretention basin, from which it flows to the stormwater pond, which in turn discharges to a low area in the southeast portion of the property. There is a separate stormwater drainage that conveys water from low areas in the northeastern portion of the property to the southeastern low area.

2.4. Surface Water Impact Assessment

Surface is present in the site in the bioretention basin (following storm events) and the stormwater pond. As shown in the as-built drawing in Exhibit 3, the majority of the surface runoff from the site, other than from areas along the eastern edge, flows either overland towards these ponds, or is collected by storm sewers discharging to these ponds. The overflow from the stormwater pond discharges to a low area in the southeast of the property.

Stormwater along the eastern edge of the property flows to a 179-foot length of storm sewer that discharges to the same southeast low point. There are no surface water bodies that directly receive runoff from this low area (the surface water body east of the site is the stormwater retention pond for the shopping plaza located east of the CFD property, and is not hydraulically downgradient of the low area). There are no state regulated wetlands or inventoried surface water bodies on the site. The nearest inventoried water body is a minor tributary to Black Creek located 800 feet east of the southeast corner of the property.

3.0 TECHNICAL APPROACH

3.1. Selection of Sampling Location and Analytical Parameters

The goal of the SC is to gather the information necessary to characterize whether site-related contamination requires further investigation or remedial action. Sampling has previously been performed within the fire training area during the 2021 Phase II ESA. Groundwater in this area was documented to be contaminated with PFAS with well MW-03 containing 23,000 ng/L of total PFAS compounds. The soil sample collected from this boring contained a total of 12,000 ng/kg of total PFAS. The SC does not include further sampling within the AFFF as samples have already been collected and analyzed in this area.

Soils at the site downgradient of the training area have been excavated and moved within the site since training using AFFF ceased. The construction of the bioretention basin and the storm water pond involved the relocation of soil to create the new land surface contours for storm water control. This soil movement occurred after the collection and analysis of samples during the 2021 Phase II ESA, and the additional sampling performed in 2021. Therefore, the results of those analyses no longer represent current conditions. However, the 2021 sampling revealed the presence of total PFAS contamination ranging from non-detect up to 78,200 ng/kg indicating PFAS has migrated here from the fire training area.

The locations to where soil was moved during construction were recorded in the sampling report included in Appendix B. This initial phase of the SC will therefore comprise sampling to meet the following objectives:

1. Installation of three borings to below the water table for collection of subsurface soil samples and installation of monitoring wells to evaluate potential groundwater contamination,

2. Analysis of soil in the three locations to where soil was moved during construction, and
3. Analysis of surface soil in additional locations in the southern portion of the Site adjacent to the fire training area.
4. Analysis of soil/sediment near the discharge point of two stormwater drainage lines in the low area in the southeast portion of the property.

Each of these objectives will be met with the following sampling programs. Sampling locations are shown on Figure 2.

Groundwater and Subsurface Soil Sampling: Three borings will be installed in the locations shown on Figure 2 (B1, B2, and B3). The locations for these borings, which will be converted into groundwater wells, were selected to provide a distribution of locations that will enable calculation of the groundwater flow direction. Two of the locations are in the southern area of soil placement during construction. Discrete soils samples will be collected at two depths in each boring. As a default, the samples will be collected at as surface soils (0-2 inch interval below the vegetative cover) and from the subsurface. The subsurface soil samples will be collected from intervals where field evidence of contamination (staining, odor, and/or elevated PID readings) are observed. In the absence of observation of field evidence of contamination, the sample will be collected at the water table. Final sampling intervals are to be selected in coordination with the NYSDEC project manager.

Soil Relocation Area Sampling: Figure 2 shows the three locations to where soil was relocated during the 2021 construction. At each of these locations, it is assumed that the depth of soil placement is approximately five feet. For the northeastern (C2 series) and northwestern (C1 series) locations, three aliquots will be collected from each location and mixed to generate a composite sample for each location. Each aliquot will be collected via a shallow direct push sampling technique, and be recovered from a depth of 1-5 ft bgs. Two sets of discrete soil samples will have been collected from the southern location during boring for monitoring well installation. To complete coverage of the southern location, one additional discrete sample will be collected a depth of 1-5 ft bgs (S1). The proposed sample locations are shown on Figure 2.

The three borings (B1, B2, and B3) will be converted to monitoring wells as described in Section 3.2.4 of this work plan. Groundwater samples (GW1, GW2, and GW3) will be collected from these three wells.

Additional Relocated Surface Soil Sampling: To complete the areal distribution of sampling within the area where soil was redistributed during pond construction, three additional aliquots will be collected in the vicinity of the bioretention basin (C3 series). These aliquots will be composited to generate one additional sample for analysis. Each aliquot will be collected using direct push techniques and be recovered from a depth of 1-5 ft bgs.

Sediment Sampling: There exist two stormwater discharge pipes that discharge stormwater to a low point in the southwest portion of the property. At each of these two locations, a discrete sample will be collected from a 0-2 inch interval (no topsoil has been placed at these locations).

No surface water samples will be collected because the stormwater pond is lined with an impermeable geotextile liner. This liner eliminates contact between groundwater and any collected surface water. The presence of this liner also precludes collecting soil samples from the area immediately adjacent to the pond as the liner extends outwards from the pond to the anchor trench. To maintain the integrity of the liner, no borings will be installed through the liner.

A summary of the sampling and analysis is provided in the following Table 1.

TABLE 1				
Sample	Medium	Depth**	Type	aliquots
B1-A	Soil	0-2"	Discrete	
B1-B	Soil	1-5'	Discrete	
B2-A	Soil	0-2"	Discrete	
B2-B	Soil	1-5'	Discrete	
B3-A	Soil	0-2"	Discrete	
B3-B	Soil	1-5'	Discrete	
S1	Soil	1-5'	Discrete	
C1	Soil	1-5'	Composite*	C1A, C1B, C1C
C2	Soil	1-5'	Composite*	C2A, C2B, C2C
C3	Soil	1-5'	Composite*	C2A, C2B, C2C
Sed1	Soil/sediment	0-2"	Discrete	
Sed2	Soil/sediment	0-2"	Discrete	
GW-1	Groundwater	N/A	Discrete	
GW-2	Groundwater	N/A	Discrete	
GW-3	Groundwater	N/A	Discrete	

* For Volatile Organic Compounds (VOC) analysis, the individual aliquots will be analyzed, not the composite.

** Depths of 0-2" are depths below topsoil layer

In addition to these samples, the following quality control samples will be collected:

- One soil duplicate and one groundwater duplicate
- One soil Matrix Spike/Matrix Spike Duplicate (MS/MSD)
- One groundwater MS/MSD
- For sampling equipment in contact with groundwater samples, rinsate or equipment blank samples will be collected at a frequency of one per day.

3.2. Soil and Groundwater Sampling

3.2.1. Utility Clearance

Prior to the start of field work, B&L will contact UDig NY for utility location marking. Additionally, the location of the site utilities shown on the as-built drawing included in Exhibit 3 will be located using GPS whenever they are located within the vicinity of a sampling location to guide in selection of a final sampling location that avoids utilities.

3.2.2. Soil Borings

Soil borings will be installed using Geoprobe® direct push methods. The installation of soil borings will be supervised by a qualified field hydrogeologist(s). Subsurface soil samples will be collected continuously and characterized by color, texture, density, apparent moisture content, presence or absence of stratification, presence of sedimentary, brittle or secondary structures, and identified according to the Modified Burmister soil classification system and Unified Soil Classification System (USCS) methods. Soil borings will furthermore be evaluated for signs of contamination (odor, staining, and/or elevated PID readings).

B&L will log the soil borings describing and classifying soils using either: (i) New York State Department of Transportation Soil Description Procedure (NYSDOT Soil Mechanics Bureau STP-2 dated May 1, 1975, as amended), or unified soil classification system (USCS) which is set forth in ASTM 2488

3.2.3. Composite Sample Preparation

Composite samples will be generated from individual aliquots. Individual aliquots will be temporarily stored in glass jars until all samples for each composite are collected. Aliquots will be mixed in a precleaned stainless steel bowl using a precleaned stainless steel trowel until uniform mixing is achieved.

3.2.4. Monitoring Well Construction

Determination of where to screen each well to be able to collect representative groundwater samples will be based on existing subsurface data and observations made in the field. Final monitoring well screen intervals will be selected in consultation with the NYSDEC project manager. Construction of the monitoring wells will include the following:

- One-inch diameter, Schedule 40 PVC threaded riser pipe and factory constructed, non-solvent welded/bonded, continuous slot wire-wrap well screens, together with the necessary fittings, bottom plugs, centralizers, etc.
- Additional backfill materials to be provided for well construction, including: graded siliceous sand of various sizes for construction of the filter pack and “choke” sand around the well screen; pelleted or granular bentonite for construction of the well seal and grout; and Portland cement (with bentonite) for sealing of the annular space above the well seal.
- An approved concrete aggregate mixture will be used for constructing the surface seal.

During construction and installation of the monitoring wells, the field hydrogeologist's responsibilities will include, but are not limited to, the following:

- Direction and observation of the entire well assembly;
- Observation of sand pack, fine sand pack, pelleted or granular bentonite seal and grout backfill placements;
- Observation of the protective monitoring well cover and concrete surface seal construction.
- Final confirmation that the monitoring well produces groundwater and is monitorable.

A B&L QEP or staff member supervised by a QEP will prepare well construction and soil boring logs for inclusion in the final SC Report to be submitted to NYSDEC and NYSDOH for review and approval.

3.2.5. Well Development

Following construction of the monitoring wells, they will be developed using appropriate methods, such as hand-bailing and/or pumping. In order to provide sufficient time for the cement/bentonite grout to fully cure, each well will be left undisturbed for a minimum period of 48 hours before well development. During the well development process, water quality parameters (pH, temperature, specific conductivity, and turbidity) will be recorded to document improvement, if attainable. Development will be considered complete once stabilization of the field parameters has been observed and there is no visible increase in the clarity of the evacuated water, and when turbidity is at 50 Nephelometric Turbidity Units (NTU) or less.

3.2.6. Groundwater Sampling

Groundwater sampling will be completed at least one week after the well development activities to allow the monitoring wells to equalize. During the sampling event, recovery will be noted and compared to the initial water levels noted during well development. Samples will be collected from wells only if one foot or more of water has recharged in the monitoring well.

Groundwater samples will be collected using a PFAS-free disposable bailers at each monitoring location. Field sampling staff will don appropriate cotton clothing, change out nitrile gloves between each sampling interval, and use a new PFAS-free bailer at each monitoring location. All purge and decon water will be captured in a 55-gallon drum for appropriate disposal. SOPs for sampling are presented as appendices to the QAPP located in Appendix B.

Precautionary sampling measures will be adhered to due to the potential presence of PFAS in field sampling equipment, personal protective equipment (PPE), clothing, and many plastics. Field sampling equipment and methodology for collection of aqueous PFAS samples need to include special provisions to eliminate the potential for sampling contamination from PFAS containing materials. The presence of PFAS in certain sampling equipment/containers, pumps, and PPE can result in sample contamination (i.e., false positive) if not avoided during sampling.

3.3. Location and Elevation Survey

The location of each new monitoring well installed will be determined by a New York State-licensed surveyor. Locations will be reported in feet as horizontal coordinates referenced to the New York State plane coordinate system (NAD 1983), accurate to the nearest one-tenth (0.1) feet. Elevations will be reported in feet referenced to the USGS mean sea level datum; ground levels at wellheads will be accurate to at least one-tenth (0.1) feet, and the top rim of the PVC riser and the lid of the protective cover on each monitoring well will be accurate to one-hundredth (0.01) feet.

3.4. Water Level Monitoring

An electronic water level meter will be used to obtain accurate water level measurement to the nearest 0.01 foot. The probe will be lowered into the well until the meter indicates water is reached. The probe will be raised above the water level and slowly lowered again until water is indicated. The water level meter cable will be held against the side of the well riser at the point designated for water level measurements and a depth reading taken. This procedure will be followed three times or until a consistent value is obtained. The value will be recorded in a field notebook. The probe will be raised to the surface and together with the amount of cable that was wetted in the well, will be decontaminated with an alconox scrub followed by a distilled water rinse.

3.5. Sample Analysis

Soil and groundwater samples will be submitted to a selected analytical laboratory approved by the New York State Department of Health, per its Environmental Laboratory Approval Program (ELAP). All samples will be analyzed for the full suite of parameters required by DER-10. The parameters are:

- Target Compound List (TCL) VOCs and semivolatile VOCs (SVOCs) plus the 30 highest tentatively identified compounds (TICs), including 1,4-dioxane by Selective Ion Monitoring (SIM)
- Target Analyte List (TAL) metals
- TCL pesticides, herbicides, and polychlorinated biphenyls
- PFAS by EPA method 1633

A Quality Assurance Project Plan (QAPP) is presented in Appendix C. The purpose of the QAPP is to describe the project-specific quality assurance/quality control procedures that will be observed during this work.

In accordance with DER-10 the selected laboratory will be responsible for providing full Category B deliverables electronically. Data will be validated by a third-party validator (Alpha Geosciences), and a Data Usability Summary Report will be generated by a third-party data validator.

To support the data quality review, B&L will collect one duplicate, one Matrix Spike, and one Matrix Spike Duplicate for every twenty samples.

3.6. Investigation Derived Waste

All soil cuttings and purge water will be properly containerized and stored on site with appropriate labels pending disposal unless otherwise approved in writing by NYSDEC. Following receipt of the analytical data from the submitted soils, a licensed waste hauler will be utilized to dispose of the drummed waste.

3.7. Site Characterization Report

The Site Characterization report will follow the requirements of DER-10 Section 3.13 and will present a summary of the investigations performed and results of the data gathered, including a comparison to the proposed PFAS SCOs and recently promulgated PFAS groundwater guidance values. The presentation of the hydrogeologic information derived from this investigation will include a groundwater potentiometric map showing shallow groundwater flow through the Site. Figures depicting the distribution of PFAS concentrations will be developed. Data collected during this work will be submitted to NYSDEC's EQuIS database. The final SC Report will also include all waste disposal records/manifests, soil boring logs, monitoring well construction logs, field notes, and all relevant photographs.

3.8. Health and Safety

All work will be performed in accordance with the Health and Safety Plan presented in Appendix D.

3.9. Community Air Monitoring Program

B&L will perform air monitoring in accordance with the Community Air Monitoring Plan (CAMP) presented in Appendix E. All contractors and subcontractors will be responsible for taking action to reduce and mitigate dust generation and ambient air concentrations of total organic vapors if action levels in the CAMP are exceeded. The CAMP monitoring will be conducted to minimize the possibility that field personnel and the surrounding community will be exposed to site contaminants during boring activities; and soil excavation, stockpiling, and loading activities. Any exceedances and corrective actions taken during implementation of the CAMP will be reported to the NYSDEC and NYSDOH project managers immediately. Additionally, daily CAMP summary logs will be provided in the final SC Report.

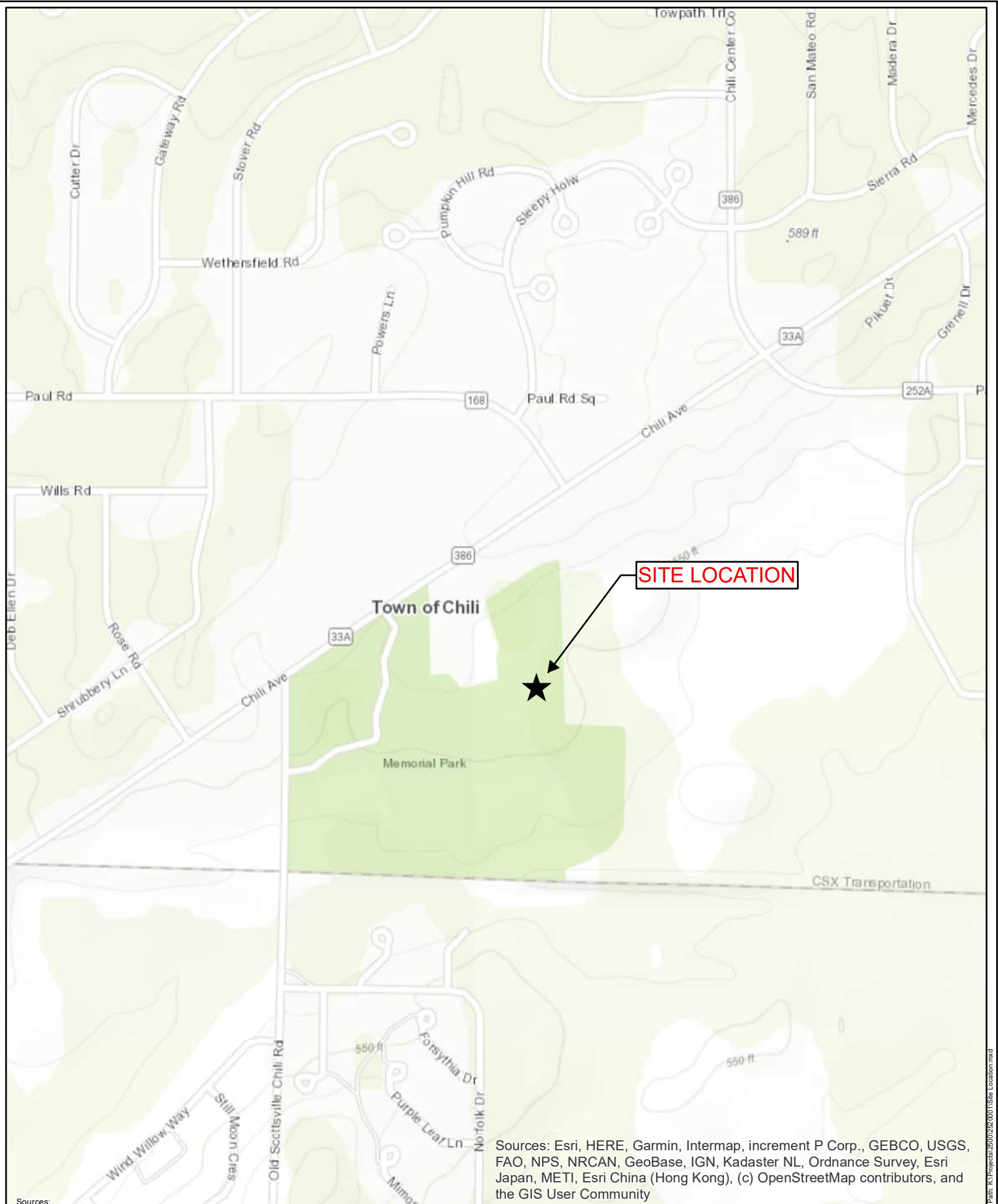
4.0 SCHEDULE

B&L will coordinate implementation of the field work upon NYSDEC's approval of the workplan. Table 2 provides a summary of the number of calendar days from notice to proceed until the completion of each task.

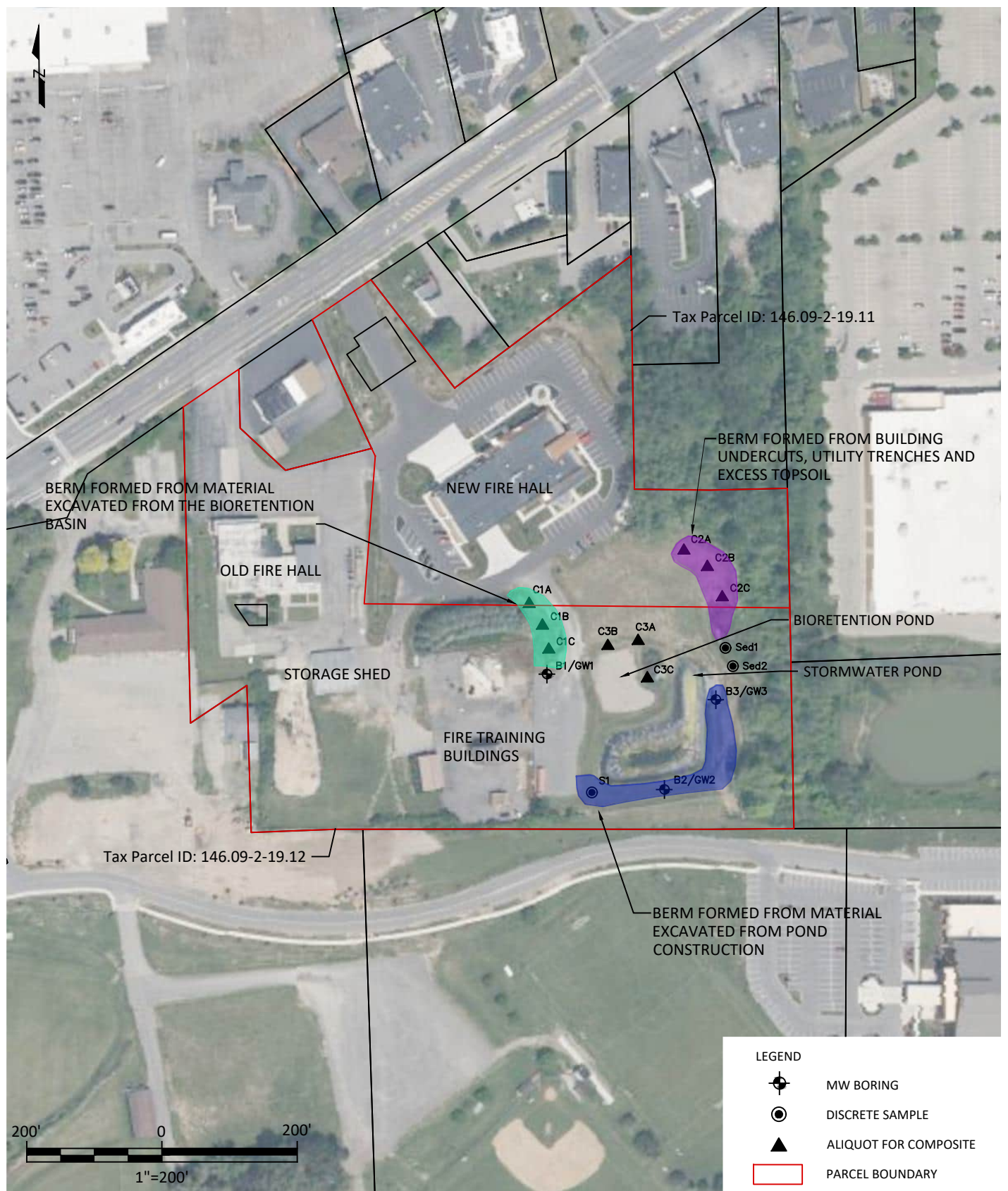
Table 2			
Task	Start	Duration	Finish
Workplan approval	0	0	0
Mobilization	0	21	21
Field Work	21	7	28
Analyses	28	14	42
Data validation	42	7	49
Report Preparation	49	28	77
NYSDEC Review	77	21	98
Report Finalization	98	13	111

NYSDEC and NYSDOH project managers will be provided with at least seven (7) days' notice prior to the beginning of any field work.

Figures



Plotted: Oct 04, 2024 - 12:06PM
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SYR BY: bas



11 Centre Park
Suite 203
Rochester, NY
14614

**B
&L**

Barton & Loguidice, D.P.C.

TOWN OF CHILI

CFD SITE CHARACTERIZATION SITE MAP

TOWN OF CHILI

MONROE COUNTY, NEW YORK

Figure Number

2

Project Number

2615.001.001

Date
OCTOBER 2024

Scale
AS SHOWN

Appendix A
Order on Consent and Administrative Settlement Index No. R8-20220921-64

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
STATE SUPERFUND PROGRAM
ECL §27-1301 *etseq.*

In the Matter a Remedial Program for

**ORDER ON CONSENT AND
ADMINISTRATIVE SETTLEMENT
Index No. R8-20220921-64**

DEC Site Name: Chili Fire Department
DEC Site No.: 828219
Site Address: 3231 and 3235 Chili Avenue
Rochester, NY 14624

Hereinafter referred to as "Site"

by: Chili Fire Department, Inc.

Hereinafter referred to as "Respondent"

1. A. The New York State Department of Environmental Conservation ("Department") is responsible for inactive hazardous waste disposal site remedial programs pursuant to Article 27, Title 13 of the Environmental Conservation Law ("ECL") and Part 375 of Title 6 of the Official Compilation of Codes, Rules and Regulations ("6 NYCRR") and may issue orders consistent with the authority granted to the Commissioner by such statute.

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

C. This Order is issued pursuant to the Department's authority under, *inter alia*, ECL Article 27, Title 13 and ECL 3-0301, and resolves Respondent's liability to the State as provided at 6 NYCRR 375-1.5(b)(5).

2. The Site is not currently listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State, and is instead identified as a "P" or potential site with a Site Number of 828219.

3. Respondent consents to the issuance of this Order without (i) an admission or finding of liability, fault, wrongdoing, or violation of any law, regulation, permit, order, requirement, or standard of care of any kind whatsoever; (ii) an acknowledgment that there has been a release or threatened release of hazardous waste at or from the Site; and/or (iii) an acknowledgment that a release or threatened release of hazardous waste at or from the Site constitutes a significant threat to the public health or environment.

4. Respondent and the Department agree that the primary goals of this Order are to appropriately characterize the contamination at the Site and provide a mechanism for Respondent to implement any necessary interim remedial measures and associated site management.

5. Solely with regard to the matters set forth below, Respondent hereby waives any right to a hearing as may be provided by law, consents to the issuance and entry of this Order, and agrees to be bound by its terms. Respondent consents to and agrees not to contest the authority or jurisdiction of the Department to issue or enforce this Order, and agrees not to contest the validity of this Order or its terms or the validity of data submitted to the Department by Respondent pursuant to this Order.

NOW, having considered this matter and being duly advised, **IT IS ORDERED THAT:**

I. Real Property

The Site subject to this Order has been assigned number 828219, consists of approximately 12.7 acres, and is as follows:

Subject Property Description (A Map of the Site is attached as Exhibit "A")

Tax Map/Parcel No.: 146.09-2-19.11 and 146-2-19.12
3231 and 3235 Chili Avenue
Rochester, NY 14624
Owner: Chili Fire Department, Inc.

II. Initial Work Plan

A Site Characterization Work Plan shall be submitted to the Department by the Respondent within sixty (60) days after the effective date of this Order.

III. Payment of State Costs

Invoices shall be sent to Respondent at the following address:

Pat Quinn
Chili Fire Department, Inc.
3231 Chili Avenue
Rochester, NY 14624

In addition to the requirement to pay future State Costs which shall not exceed five thousand dollars (\$5,000) during each 12-month billing period (commencing on the effective date of this Consent Order) as set forth in Appendix "A", within forty-five (45) Days after the effective date of this Consent Order, Respondent shall pay to the

Department the sum set forth on Exhibit "C", which shall represent reimbursement for past State Costs incurred prior to the effective date of this Consent Order.

IV. Communications

A. All written communications required by this Consent Order shall be transmitted by United States Postal Service, by private courier service, by hand delivery, or by electronic mail.

1. Communication from Respondent shall be sent to:

Tasha Mumbrue, DEC Project Manager (1 hard copy (unbound for work plans) & 1 electronic copy)
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, Albany, N.Y. 12233
tasha.mumbrue@dec.ny.gov

Christine Vooris (electronic copy only)
New York State Department of Health
Bureau of Environmental Exposure Investigation
Empire State Plaza
Corning Tower Room 1787
Albany, N.Y. 12237
christine.vooris@health.ny.gov

Dudley Loew, DEC Project Attorney
New York State Department of Environmental Conservation
Office of General Counsel
6274 East Avon-Lima Road
Avon, NY 14414
dudley.loew@dec.ny.gov

2. Communication from the Department to Respondent shall be sent to:

Wendy Marsh, Esq.
Hancock Estabrook, LLP
1800 AXA Tower I
100 Madison St.
Syracuse, NY 13202
wmarsh@hancocklaw.com

B. The Department and Respondent reserve the right to designate additional or different addressees for communication on written notice to the other. Additionally, the Department reserves the right to request that the Respondent provide more than one paper copy of any work plan or report.

{H4814269.1}

C. Each party shall notify the other within ninety (90) days after any change in the addresses listed in this paragraph or in Paragraph I.

V. Certificate of Completion/No Further Action/Satisfactory Completion

Upon the Department's issuance of a Certificate of Completion as provided at 6 NYCRR 375-1.9 and 375-2.9, Respondent shall obtain the benefits conferred by such provisions, subject to the terms and conditions described therein. However, if, after the completion of any required investigations and/or interim remedial actions, the Department determines that the Site will not be listed in the *Registry of Inactive Hazardous Waste Disposal Sites in New York State*, the Department will not issue a Certificate of Completion but will issue a No Further Action/Satisfactory Completion Letter to Respondent reflecting the Department's determination that, other than implementation of a Site Management Plan if required, no further remedial action at the Site is presently necessary. The Letter's form and substance shall be materially similar to the attached Exhibit D.

VI. Miscellaneous

A. Appendix A - "Standard Clauses for All New York State, State Superfund Orders" is attached to and hereby made a part of this Order as if set forth fully herein.

B. In the event of a conflict between the main body of this Order (including any and all attachments thereto and amendments thereof) and the terms of Appendix A, the main body of this Order shall control.

C. The effective date of this Order is the 10th day after it is signed by the Commissioner or the Commissioner's designee.

DATED:

BASIL SEGGOS
COMMISSIONER
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

By:

Andrew Guglielmi, Director
Division of Environmental Remediation

CONSENT BY RESPONDENT
Index No. R8-20220921-64

Respondent hereby consents to the issuing and entering of this Consent Order, waives Respondent's right to a hearing herein as provided by law, and agrees to be bound by this Consent Order.

Chili Fire Department, Inc.

By: 

Title: President

Date: 4.5.2023

STATE OF NEW YORK)
) ss:
COUNTY OF)

On the 5th day of April in the year 20 23, before me, the undersigned, personally appeared Gerald Levey (full name) personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Acknowledgment by a corporation, in New York State:

On the 5th day of April in the year 20 23, before me, the undersigned, personally appeared Gerald Levey (full name) personally known to me who, being duly sworn, did depose and say that he/she/they reside at 2948 Un. ok St - Kockeys >34 b-li/Z (full mailing address) and that he/she/they is (are) the

President (president or other officer or director or attorney in fact duly appointed) of the

041 1\ PvO-g DEPARTMENT INC

(full legal name of corporation), the corporation described in and which executed the above instrument; and that he/she/they signed his/her/their name(s) thereto by the authority of the board of directors of said corporation.

PATRICK QUINN
Notary Public State of New York
No. oiqu503674o
Qualified in Monroe County
Commission Expires Dec. 5, 20 24


Notary Public, State of New York

EXHIBIT "A"

Map

{H4814269.1}



Chili Fire Department Site No. 828219



24,074.6 0 12,037.30 24,074.6 Feet

WGS 1984 Web Mercator Auxiliary Sphere

The information contained herein is provided for informational purposes only. Monroe County, New York and their mapping and software consultants provide this GIS data and metadata with no claim as to the completeness, usefulness, or accuracy of its content, positional or otherwise. Your use and browsing of information is at your own risk. In providing this data and application or access to it, Monroe County, New York, assumes no obligation to assist the user in the use of such data or in the development, use, or maintenance of any applications applied to or associated with the data or metadata.



Legend

Centerlines

- County Roads
- State Highway
- US Highway
- Parkway
- Interstate
- <all other values>

Other County Roads

- County Roads
- State Highway
- US Highway
- Parkway
- Interstate
- <all other values>

Trails

Railroad

Waterline

Buildings

Free Representation: Residential

Commercial

Waterbody

- Braddock Bay, Buck Pond, Cranbet
- Eastman Lake, Irondequoit Bay, Lit
- Round Pond
- <all other values>

Golf Course Features

BUNKER

Notes

3231 and 3235 Chili Avenue,
Rochester, NY 14624

EXHIBIT "B"

RECORDS SEARCH REPORT

1. Detail all environmental data and information within Respondent's or Respondent's agents' or consultants' possession or control regarding environmental conditions at or emanating from the Site.
2. A comprehensive list of all existing relevant reports with titles, authors, and subject matter, as well as a description of the results of all previous investigations of the Site and of areas immediately surrounding the Site which are or might be affected by contamination at the Site, including all available topographic and property surveys, engineering studies, and aerial photographs.
3. A concise summary of information held by Respondent and Respondent's attorneys and consultants with respect to:
 - (i) a history and description of the Site, including the nature of operations;
 - (ii) the types, quantities, physical state, locations, methods, and dates of disposal or release of hazardous waste at or emanating from the Site;
 - (iii) a description of current Site security (i.e. fencing, posting, etc.); and
 - (iii) the names and addresses of all persons responsible for disposal of hazardous waste, including the dates of such disposal and any proof linking each such person responsible with the hazardous wastes identified.

EXHIBIT "C"

Cost Summary

DIVISION OF ENVIRONMENTAL REMEDIATION
BUREAU OF PROGRAM MANAGEMENT

COST SUMMARY

SITE NAME: Chili Fire Department
SITE NO.: 828219
TIMEFRAME: DEC Life - 1/4/2023

COST CATEGORY	AMOUNTS	EXHIBIT NO.
DIRECT PERSONAL SERVICES	\$2,174.87	
FRINGE	\$1,360.60	
INDIRECT	<u>\$1,079.68</u>	
<i>PERSONAL SERVICES SUBTOTAL</i>	<i>\$4,615.15</i>	II
CONTRACTUAL	\$0.00	
TRAVEL	\$0.00	
OTHER NPS	\$0.00	
<i>NON-PERSONAL SERVICES SUBTOTAL</i>	<i>\$0.00</i>	
DEC TOTAL	\$4,615.15	
DOH TOTAL (NOT AVAILABLE)	N/A	
MINUS PREVIOUSLY REIMBURSED AMOUNT (IF APPLICABLE)	<u>N/A</u>	
<i>DEC & DOH TOTAL</i>	<i>\$4,615.15</i>	
COST CAP (IF APPLICABLE)	<u>N/A</u>	
GRAND TOTAL	\$4,615.15	

Cost Query - Ad Hoc

Criteria: Timecard Begin Date 3/4/2021 And Timecard End Date 1/4/2023 And Task Code 75540
Leave Charges: Included
Cost Indicator: Direct
Rate Type: Non-Federal
Download Excel Report
Print

Jump To Employee: All v

Pay Period	Pay Period Dates	Check Date	Cost Center	Variable	Budget Year	Employee	Title Description	Work Location Code	Work Location Description	Billable Hourly Rate	State Fringe	State Indirect	Hours	LT
Task: 75540 - CWIA HW - P Site 828219 - CHIL FIRE DEPARTMENT														
2020/26	03/18/2021 - 03/31/2021	04/14/2021	430386	1	2020	Mumbrue, Tasha	GEOLOGIST TRAINEE	24164	R8 - Avon - Regional HQ	36.95	161.42	131.34	7.00	268.72
2021/1	04/01/2021 - 04/14/2021	04/28/2021	430386	1	2020	Mumbrue, Tasha	GEOLOGIST TRAINEE	24164	R8 - Avon - Regional HQ	37.82	163.71	144.58	8.00	302.56
2021/7	06/10/2021 - 06/23/2021	07/07/2021	430386	1	2021	Mumbrue, Tasha	GEOLOGIST TRAINEE	24164	R8 - Avon - Regional HQ	37.00	156.00	142.00	8.00	302.56
2021/7	06/24/2021 - 07/07/2021	07/21/2021	430386	1	2021	Mumbrue, Tasha	GEOLOGIST TRAINEE	24164	R8 - Avon - Regional HQ	37.82	163.71	144.58	8.00	302.56
2021/22	01/20/2022 - 02/02/2022	02/16/2022	430386	1	2021	Mumbrue, Tasha	GEOLOGIST TRAINEE	24164	R8 - Avon - Regional HQ	37.82	163.71	144.58	8.00	302.56
2022/8	07/07/2022 - 07/20/2022	08/03/2022	430386	1	2022	Mumbrue, Tasha	GEOLOGIST TRAINEE	24164	R8 - Avon - Regional HQ	37.82	163.71	144.58	8.00	302.56
2022/13	09/15/2022 - 09/28/2022	10/12/2022	430386	1	2022	Mumbrue, Tasha	GEOLOGIST TRAINEE	24164	R8 - Avon - Regional HQ	37.82	163.71	144.58	8.00	302.56
2020/25	03/04/2021 - 03/17/2021	03/31/2021	685135	1	2020	Sowers, Franklin	PROFESSIONAL ENGINEER I (ENVIRONMENTAL)	24164	R8 - Avon - Regional HQ	63.63	416.84	339.16	110.50	668.12
2020/26	03/18/2021 - 03/31/2021	04/14/2021	685135	1	2020	Sowers, Franklin	PROFESSIONAL ENGINEER I (ENVIRONMENTAL)	24164	R8 - Avon - Regional HQ	63.63	416.84	339.16	110.50	668.12
2021/1	04/01/2021 - 04/14/2021	04/28/2021	685135	1	2020	Sowers, Franklin	PROFESSIONAL ENGINEER I (ENVIRONMENTAL)	24164	R8 - Avon - Regional HQ	63.63	416.84	339.16	110.50	668.12
Task 75540 Sub Total:										65.11	142.89	110.50	110.50	227.89
Report Total:										1,360.60	1,360.60	1,360.60	1,360.60	5,442.40

Close

State Indirect: \$1,079.68
State Fringe: \$1,360.60
State Direct: \$2,174.87
Total: \$4,615.15

Exhibit "D"

[date]

Pat Quinn
Chili Fire Department, Inc.
3231 Chili Avenue
Rochester, NY 14624

RE: Satisfactory Completion Letter/No Further Action Letter
Site No.: 828219
Site Name: Chili Fire Department

Dear Respondent:

This letter is sent to notify Respondent that it has satisfactorily completed the **Site Characterization/Interim Remedial Measure** of the remediation project that Respondent undertook under the Consent Order Index No. 828219 for 3121 Chili Avenue, Rochester, NY 14624 (Tax Map/Parcel No. 146-09-2-19-1) ("Site"). The New York State Department of Environmental Conservation ("Department") has determined, subject to the Department's reservation of rights outlined below, contained in the Consent Order, or existing at law, based upon our inspection of the above-referenced Site and upon our review of the documents you have submitted, that you completed the project in accordance with the terms and conditions of the above-referenced Order and no further remedial action (other than implementation of the Site Management Plan if required) is necessary. As a result, the Department is issuing this Satisfactory Completion/No Further Action Letter for the project.

Notwithstanding that the Department has determined that no further remedial action is necessary with the respect to the Site, the Department reserves any and all rights and authority, including rights concerning any claim for natural resource damages or the authority to engage in or require any further investigation or remediation the Department deems necessary. The Department retains all its respective rights concerning circumstances where Respondent, their lessees, sublessees, successors, or assigns cause or permit a Release or threat of Release at the site of any hazardous substance (as that term is defined at 42 DSC 9601[14]) or petroleum (as that term is defined in Navigation Law § 172[15]).

Additionally, with respect to the site, nothing contained in this letter shall be construed to:

- preclude the State of New York on behalf of the New York State Environmental Protection and Spill Compensation Fund from recovering a claim of any kind or nature against any party;

{H4814269.1}

- prejudice any rights of the Department to take any investigatory action or remediation or corrective measures it may deem necessary if Respondent fails to comply with the Order or if contamination other than contamination within the present knowledge of the Department is encountered at the Site;
- prohibit the Commissioner or his duly authorized representative from exercising any summary abatement powers.

In conclusion, the Department is pleased to be part of this effort to return the site to productive use and benefit to the entire community.

If you have any questions, please do not hesitate to contact Tasha Mumbroe, site project manager, at tasha.mumbroe@dec.ny.gov.

Sincerely,

Andrew Guglielmi
Director
Division of Environmental Remediation

ec: [list appropriate staff]

APPENDIX "A"

STANDARD CLAUSES FOR ALL NEW YORK STATE STATE SUPERFUND ORDERS

APPENDIX A

STANDARD CLAUSES FOR ALL NEW YORK STATE SUPERFUND ADMINISTRATIVE ORDERS

The parties to the State Superfund Order (hereinafter "Order") agree to be bound by the following clauses which are hereby made a part of the Order. The word "Respondent" herein refers to any party to the Order, other than the New York State Department of Environmental Conservation (hereinafter "Department").

I. Citizen Participation Plan

Within twenty (20) days after the Department places the site on the registry, Respondent shall submit for review and approval a written citizen participation plan prepared in accordance with the requirements of ECL §27-1417 and 6 NYCRR sections 375-1.10 and 375-3.10. Upon approval, the Citizen Participation Plan shall be deemed to be incorporated into and made a part of this Order.

II. Initial Submittal

Within thirty (30) days after the effective date of this Order, Respondent shall submit to the Department a Records Search Report prepared in accordance with Exhibit "B" attached to the Order. The Records Search Report can be limited if the Department notifies Respondent that prior submissions satisfy specific items required for the Records Search Report.

III. Development, Performance, and Reporting of Work Plans

A. Work Plan Requirements

All activities at the Site that comprise any element of an Inactive Hazardous Waste Disposal Site Remedial Program shall be conducted pursuant to one or more Department-approved work plans ("Work Plan" or "Work Plans") and this Order and all activities shall be consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300, as required under CERCLA, 42 U.S.C. § 9600 *et seq.* The Work Plan(s) under this Order shall address both on-Site and off-Site conditions and shall be developed and implemented in accordance with 6 NYCRR § 375-1.6(a), 375-3.6, and 375-6. All Department-approved Work Plans shall be incorporated into and become

enforceable parts of this Order. Upon approval of a Work Plan by the Department, Respondent shall implement such Work Plan in accordance with the schedule contained therein. Nothing in this Subparagraph shall mandate that any particular Work Plan be submitted.

The Work Plans shall be captioned as follows:

1. Site Characterization ("SC") Work Plan: a Work Plan which provides for the identification of the presence of any hazardous waste disposal at the Site;
2. Remedial Investigation/Feasibility Study ("RI/FS") Work Plan: a Work Plan which provides for the investigation of the nature and extent of contamination within the boundaries of the Site and emanating from such Site and a study of remedial alternatives to address such on-site and off-site contamination;
3. Remedial Design/Remedial Action ("RD/RA") Work Plan: a Work Plan which provides for the development and implementation of final plans and specifications for implementing the remedial alternative set forth in the ROD;
4. "IRM Work Plan" if the Work Plan provides for an interim remedial measure;
5. "Site Management Plan" if the Work Plan provides for the identification and implementation of institutional and/or engineering controls as well as any necessary monitoring and/or operation and maintenance of the remedy; or
6. "Supplemental" if additional work plans other than those set forth in Subparagraph III.A.1-5 of Appendix A of this Order are required to be prepared and implemented.

B. Submission/Implementation of Work Plans

1. Respondent may opt to propose one or more additional or supplemental Work Plans (including one or more IRM Work Plans) at any time, which the Department shall review for appropriateness and technical sufficiency.

2. Any proposed Work Plan shall be submitted for the Department's review and approval and shall include, at a minimum, a chronological description of the anticipated activities, a schedule for performance of those activities, and sufficient detail to allow the Department to evaluate that Work Plan.

i. The Department shall notify Respondent in writing if the Department determines that any element of a Department-approved Work Plan needs to be modified in order to achieve the objectives of the Work Plan as set forth in Subparagraph III.A or to ensure that the Remedial Program otherwise protects human health and the environment. Upon receipt of such notification, Respondent shall, subject to dispute resolution pursuant to Paragraph XV, modify the Work Plan.

ii. The Department may request, subject to dispute resolution pursuant to Paragraph XV, that Respondent submit additional or supplemental Work Plans for the Site to complete the current remedial phase within thirty (30) Days after the Department's written request.

3. A Site Management Plan, if necessary, shall be submitted in accordance with the schedule set forth in the IRM Work Plan or Remedial Work Plan.

4. During all field activities conducted under a Department-approved Work Plan, Respondent shall have on-Site a representative who is qualified to supervise the activities undertaken in accordance with the provisions of 6 NYCRR 375-16(a)(3).

5. A Professional Engineer licensed and registered in New York State must stamp and sign all Work Plans other than SC or RI/FS Work Plans.

C. Submission of Final Reports and Periodic Reports

1. In accordance with the schedule contained in a Work Plan, Respondent shall submit a final report as provided at 6 NYCRR 375-1.6(b) and a final engineering report as provided at 6 NYCRR 375-1.6(c).

2. Any final report or final engineering report that includes construction activities shall

include "as built" drawings showing any changes made to the remedial design or the IRM.

3. In the event that the final engineering report for the Site requires Site management, Respondent shall submit an initial periodic report by in accordance with the schedule in the Site Management Plan and thereafter in accordance with a schedule determined by the Department. Such periodic report shall be signed by a Professional Engineer or by such other qualified environmental professional as the Department may find acceptable and shall contain a certification as provided at 6 NYCRR 375-1.8(h)(3). Respondent may petition the Department for a determination that the institutional and/or engineering controls may be terminated. Such petition must be supported by a statement by a Professional Engineer that such controls are no longer necessary for the protection of public health and the environment. The Department shall not unreasonably withhold its approval of such petition.

4. Within sixty (60) days of the Department's approval of a Final Report, Respondent shall submit such additional Work Plans as is required by the Department in its approval letter of such Final Report. Failure to submit any additional Work Plans within such period shall be a violation of this Order.

D. Review of Submittals

1. The Department shall make a good faith effort to review and respond in writing to each submittal Respondent makes pursuant to this Order within sixty (60) Days. The Department's response shall include, in accordance with 6 NYCRR 375-1.6(d), an approval, modification request, or disapproval of the submittal, in whole or in part.

i. Upon the Department's written approval of a Work Plan, such Department-approved Work Plan shall be deemed to be incorporated into and made a part of this Order and shall be implemented in accordance with the schedule contained therein.

ii. If the Department modifies or requests modifications to a submittal, it shall specify the reasons for such modification(s). Within fifteen (15) Days after the date of the Department's written notice that Respondent's submittal has been disapproved, Respondent shall notify the Department of its election in accordance with 6 NYCRR 375-1.6(d)(3). If Respondent elects to modify or accept

the Department's modifications to the submittal, Respondent shall make a revised submittal that incorporates all of the Department's modifications to the first submittal in accordance with the time period set forth in 6 NYCRR 375-1.6(d)(3). In the event that Respondent's revised submittal is disapproved, the Department shall set forth its reasons for such disapproval in writing and Respondent shall be in violation of this Order unless it invokes dispute resolution pursuant to Paragraph XV and its position prevails. Failure to make an election or failure to comply with the election is a violation of this Order.

iii. If the Department disapproves a submittal, it shall specify the reasons for its disapproval. Within fifteen (15) Days after the date of the Department's written notice that Respondent's submittal has been disapproved, Respondent shall notify the Department of its election in accordance with 6 NYCRR 375-1.6(d)(4). If Respondent elects to modify the submittal, Respondent shall make a revised submittal that addresses all of the Department's stated reasons for disapproving the first submittal in accordance with the time period set forth in 6 NYCRR 375-1.6(d)(4). In the event that Respondent's revised submittal is disapproved, the Department shall set forth its reasons for such disapproval in writing and Respondent shall be in violation of this Order unless it invokes dispute resolution pursuant to Paragraph XV and its position prevails. Failure to make an election or failure to comply with the election is a violation of this Order.

2. Within thirty (30) Days after the Department's approval of a final report, Respondent shall submit such final report, as well as all data gathered and drawings and submittals made pursuant to such Work Plan, in an electronic format acceptable to the Department. If any document cannot be converted into electronic format, Respondent shall submit such document in an alternative format acceptable to the Department.

E. Department's Issuance of a ROD

1. Respondent shall cooperate with the Department and provide reasonable assistance, consistent with the Citizen Participation Plan, in soliciting public comment on the proposed remedial action plan ("PRAP"), if any. After the close of the public comment period, the Department shall select a final remedial alternative for the Site in a ROD. Nothing in this Order shall be construed to abridge any rights of Respondent, as provided by law, to judicially challenge the Department's ROD.

{ H4814269.1 }

2. Respondent shall have 60 days from the date of the Department's issuance of the ROD to notify the Department in writing whether it will implement the remedial activities required by such ROD. If the Respondent elects not to implement the required remedial activities, then this order shall terminate in accordance with Paragraph XIV.A. Failure to make an election or failure to comply with the election is a violation of this Order.

F. Institutional/Engineering Control Certification

In the event that the remedy for the Site, if any, or any Work Plan for the Site, requires institutional or engineering controls, Respondent shall submit a written certification in accordance with 6 NYCRR 375-1.8(h)(3) and 375-3.8(h)(2).

IV. Penalties

A. 1. Respondent's failure to comply with any term of this Order constitutes a violation of this Order, the ECL, and 6 NYCRR 375-2.11(a)(4). Nothing herein abridges Respondent's right to contest any allegation that it has failed to comply with this Order.

2. Payment of any penalties shall not in any way alter Respondent's obligations under this Order.

B. 1. Respondent shall not suffer any penalty or be subject to any proceeding or action in the event it cannot comply with any requirement of this Order as a result of any Force Majeure Event as provided at 6 NYCRR 375-1.5(b)(4). Respondent must use best efforts to anticipate the potential Force Majeure Event, best efforts to address any such event as it is occurring, and best efforts following the Force Majeure Event to minimize delay to the greatest extent possible. "Force Majeure" does not include Respondent's economic inability to comply with any obligation, the failure of Respondent to make complete and timely application for any required approval or permit, and non-attainment of the goals, standards, and requirements of this Order.

2. Respondent shall notify the Department in writing within five (5) Days of the onset of any Force Majeure Event. Failure to give such notice within such five (5) Day period constitutes a waiver of any claim that a delay is not subject to penalties. Respondent shall be deemed to know of any

circumstance which it, any entity controlled by it, or its contractors knew or should have known.

3. Respondent shall have the burden of proving by a preponderance of the evidence that (i) the delay or anticipated delay has been or will be caused by a Force Majeure Event; (ii) the duration of the delay or the extension sought is warranted under the circumstances; (iii) best efforts were exercised to avoid and mitigate the effects of the delay; and (iv) Respondent complied with the requirements of Subparagraph IV.B.2 regarding timely notification.

4. If the Department agrees that the delay or anticipated delay is attributable to a Force Majeure Event, the time for performance of the obligations that are affected by the Force Majeure Event shall be extended for a period of time equivalent to the time lost because of the force majeure event, in accordance with 375-1.5(4).

5. If the Department rejects Respondent's assertion that an event provides a defense to non-compliance with this Order pursuant to Subparagraph IV.B, Respondent shall be in violation of this Order unless it invokes dispute resolution pursuant to Paragraph XV and Respondent's position prevails.

V. Entry upon Site

A. Respondent hereby consents, upon reasonable notice under the circumstances presented, to entry upon the Site (or areas in the vicinity of the Site which may be under the control of Respondent) by any duly designated officer or employee of the Department or any State agency having jurisdiction with respect to matters addressed pursuant to this Order, and by any agent, consultant, contractor, or other person so authorized by the Commissioner, all of whom shall abide by the health and safety rules in effect for the Site, for inspecting, sampling, copying records related to the contamination at the Site, testing, and any other activities necessary to ensure Respondent's compliance with this Order. Upon request, Respondent shall (i) provide the Department with suitable work space at the Site, including access to a telephone, to the extent available, and (ii) permit the Department full access to all non-privileged records relating to matters addressed by this Order. Raw data is not considered privileged and that portion of any privileged document containing raw data must be provided to the Department. In the event Respondent is unable to obtain any authorization from third-party property owners necessary to perform its obligations under this Order,

{ H4814269.1 }

the Department may, consistent with its legal authority, assist in obtaining such authorizations.

B. The Department shall have the right to take its own samples and scientific measurements and the Department and Respondent shall each have the right to obtain split samples, duplicate samples, or both, of all substances and materials sampled. The Department shall make the results of any such sampling and scientific measurements available to Respondent.

VI. Payment of State Costs

A. Within forty-five (45) days after receipt of an itemized invoice from the Department, Respondent shall pay to the Department a sum of money which shall represent reimbursement for State Costs as provided by 6 NYCRR 375-1.5 (b)(3)(i). Failure to timely pay any invoice will be subject to late payment charge and interest at a rate of 9% from the date the payment is due until the date the payment is made.

B. Costs shall be documented as provided by 6 NYCRR 375-1.5(b)(3). The Department shall not be required to provide any other documentation of costs, provided however, that the Department's records shall be available consistent with, and in accordance with, Article 6 of the Public Officers Law.

C. Each such payment shall be made payable to the "Commissioner of NYSDEC" and shall be sent to:

Director, Bureau of Program Management
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7012

D. The Department shall provide written notification to the Respondent of any change in the foregoing addresses.

E. If Respondent objects to any invoiced costs under this Order, the provisions of 6 NYCRR 375-1.5 (b)(3)(v) and (vi) shall apply. Objections shall be sent to the Department as provided under subparagraph VI.C above.

F. In the event of non-payment of any invoice within the 45 days provided herein, the Department may seek enforcement of this provision pursuant to

Paragraph IV or the Department may commence an enforcement action for non-compliance with ECL '27-1423 and ECL 71-4003.

VII. Release and Covenant Not to Sue

Upon the Department's issuance of a Certificate of Completion as provided at 6 NYCRR 375-1.9 and 375-2.9, Respondent shall obtain the benefits conferred by such provisions, subject to the terms and conditions described therein.

VIII. Reservation of Rights

A. Except as provided at 6 NYCRR 375-1.9 and 375-2.9, nothing contained in this Order shall be construed as barring, diminishing, adjudicating, or in any way affecting any of the Department's rights or authorities, including, but not limited to, the right to require performance of further investigations and/or response action(s), to recover natural resource damages, and/or to exercise any summary abatement powers with respect to any person, including Respondent.

B. Except as otherwise provided in this Order, Respondent specifically reserves all rights and defenses under applicable law respecting any Departmental assertion of remedial liability and/or natural resource damages against Respondent, and further reserves all rights respecting the enforcement of this Order, including the rights to notice, to be heard, to appeal, and to any other due process. The existence of this Order or Respondent's compliance with it shall not be construed as an admission of liability, fault, wrongdoing, or breach of standard of care by Respondent, and shall not give rise to any presumption of law or finding of fact, or create any rights, or grant any cause of action, which shall inure to the benefit of any third party. Further, Respondent reserves such rights as it may have to seek and obtain contribution, indemnification, and/or any other form of recovery from its insurers and from other potentially responsible parties or their insurers for past or future response and/or cleanup costs or such other costs or damages arising from the contamination at the Site as may be provided by law, including but not limited to rights of contribution under section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B).

IX. Indemnification

Respondent shall indemnify and hold the Department, the State of New York, the Trustee of

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the State's natural resources, and their representatives and employees harmless as provided by 6 NYCRR 375-2.5(a)(3)(i).

X. Notice of Transfer

If Respondent proposes to transfer by sale or lease the whole or any part of Respondent's interest in the Site, or becomes aware of such transfer, Respondent shall, not fewer than forty-five (45) Days before the date of transfer, or within forty-five (45) Days after becoming aware of such conveyance, notify the Department in writing of the identity of the transferee and of the nature and proposed or actual date of the conveyance, and shall notify the transferee in writing, with a copy to the Department, of the applicability of this Order. However, such obligation shall not extend to a conveyance by means of a corporate reorganization or merger or the granting of any rights under any mortgage, deed, trust, assignment, judgment, lien, pledge, security agreement, lease, or any other right accruing to a person not affiliated with Respondent to secure the repayment of money or the performance of a duty or obligation.

XI. Change of Use

Respondent shall notify the Department at least sixty (60) days in advance of any change of use, as defined in 6 NYCRR 375-2.2(a), which is proposed for the Site, in accordance with the provisions of 6 NYCRR 375-1.11(d). In the event the Department determines that the proposed change of use is prohibited, the Department shall notify Respondent of such determination within forty-five (45) days of receipt of such notice.

XII. Environmental Easement

A. If a Record of Decision for the Site relies upon one or more institutional and/or engineering controls, Respondent (or the owner of the Site) shall submit to the Department for approval an Environmental Easement to run with the land in favor of the State which complies with the requirements of ECL Article 71, Title 36, and 6 NYCRR 375-1.8(h)(2). Upon acceptance of the Environmental Easement by the State, Respondent shall comply with the requirements of 6 NYCRR 375-1.8(h)(2).

B. If the ROD provides for no action other than implementation of one or more institutional controls, Respondent shall cause an environmental easement to

be recorded under the provisions of Subparagraph XII. A.

C. If Respondent does not cause such environmental easement to be recorded in accordance with 6 NYCRR 375-1.8(h)(2), Respondent will not be entitled to the benefits conferred by 6 NYCRR 375-1.9 and 375-2.9 and the Department may file an Environmental Notice on the site.

XIII. Progress Reports

Respondent shall submit a written progress report of its actions under this Order to the parties identified in Subparagraph IV.A.1 of the Order by the 10th day of each month commencing with the month subsequent to the approval of the first Work Plan and ending with the Termination date as set forth in Paragraph XIV, unless a different frequency is set forth in a Work Plan. Such reports shall, at a minimum, include: all actions relative to the Site during the previous reporting period and those anticipated for the next reporting period; all approved activity modifications (changes of work scope and/or schedule); all results of sampling and tests and all other data received or generated by or on behalf of Respondent in connection with this Site, whether under this Order or otherwise, in the previous reporting period, including quality assurance/quality control information; information regarding percentage of completion; unresolved delays encountered or anticipated that may affect the future schedule and efforts made to mitigate such delays; and information regarding activities undertaken in support of the Citizen Participation Plan during the previous reporting period and those anticipated for the next reporting period.

XIV. Termination of Order

A. This Order will terminate upon the earlier of the following events:

1. Respondent's election in accordance with Paragraph III.E.2 not to implement the remedial activities required pursuant to the ROD. In the event of termination in accordance with this Subparagraph, this Order shall terminate effective the 5th Day after the Department's receipt of the written notification, provided, however, that if there are one or more Work Plan(s) for which a final report has not been approved at the time of Respondent's notification of its election not to implement the remedial activities in accordance with the ROD, Respondent shall complete the activities required by such previously

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approved Work Plan(s) consistent with the schedules contained therein. Thereafter, this Order shall terminate effective the 5th Day after the Department's approval of the final report for all previously approved Work Plans; or

2. The Department's written determination that Respondent has completed all phases of the Remedial Program (including Site Management), in which event the termination shall be effective on the 5th Day after the date of the Department's letter stating that all phases of the remedial program have been completed.

B. Notwithstanding the foregoing, the provisions contained in Paragraphs VI and IX shall survive the termination of this Order and any violation of such surviving Paragraphs shall be a violation of this Order, the ECL, and 6 NYCRR 375-2.11(a)(4), subjecting Respondent to penalties as provided under Paragraph IV so long as such obligations accrued on or prior to the Termination Date.

C. If the Order is terminated pursuant to Subparagraph XIV.A.1, neither this Order nor its termination shall affect any liability of Respondent for remediation of the Site and/or for payment of State Costs, including implementation of removal and remedial actions, interest, enforcement, and any and all other response costs as defined under CERCLA, nor shall it affect any defenses to such liability that may be asserted by Respondent. Respondent shall also ensure that it does not leave the Site in a condition, from the perspective of human health and environmental protection, worse than that which existed before any activities under this Order were commenced. Further, the Department's efforts in obtaining and overseeing compliance with this Order shall constitute reasonable efforts under law to obtain a voluntary commitment from Respondent for any further activities to be undertaken as part of a Remedial Program for the Site.

XV. Dispute Resolution

A. In the event disputes arise under this Order, Respondent may, within fifteen (15) Days after Respondent knew or should have known of the facts which are the basis of the dispute, initiate dispute resolution in accordance with the provisions of 6 NYCRR 375-1.5(b)(2).

B. All cost incurred by the Department associated with dispute resolution are State costs subject to reimbursement pursuant to this Order.

C. Nothing contained in this Order shall be construed to authorize Respondent to invoke dispute resolution with respect to the remedy selected by the Department in the ROD or any element of such remedy, nor to impair any right of Respondent to seek judicial review of the Department's selection of any remedy.

XVI. Miscellaneous

A. Respondent agrees to comply with and be bound by the provisions of 6 NYCRR Subparts 375-1 and 375-2; the provisions of such Subparts that are referenced herein are referenced for clarity and convenience only and the failure of this Order to specifically reference any particular regulatory provision is not intended to imply that such provision is not applicable to activities performed under this Order.

B. The Department may exempt Respondent from the requirement to obtain any state or local permit or other authorization for any activity conducted pursuant to this Order in accordance with 6 NYCRR 375-1.12(b), (c), and (d).

C. 1. Respondent shall use best efforts to obtain all Site access, permits, easements, approvals, institutional controls, and/or authorizations necessary to perform Respondent's obligations under this Order, including all Department-approved Work Plans and the schedules contained therein. If, despite Respondent's best efforts, any access, permits, easements, approvals, institutional controls, or authorizations cannot be obtained, Respondent shall promptly notify the Department and include a summary of the steps taken. The Department may, as it deems appropriate and within its authority, assist Respondent in obtaining same.

2. If an interest in property is needed to implement an institutional control required by a Work Plan and such interest cannot be obtained, the Department may require Respondent to modify the Work Plan pursuant to 6 NYCRR 375-1.6(d)(3) to reflect changes necessitated by Respondent's inability to obtain such interest.

D. The paragraph headings set forth in this Order are included for convenience of reference only

and shall be disregarded in the construction and interpretation of any provisions of this Order.

E. 1. The terms of this Order shall constitute the complete and entire agreement between the Department and Respondent concerning the implementation of the activities required by this Order. No term, condition, understanding, or agreement purporting to modify or vary any term of this Order shall be binding unless made in writing and subscribed by the party to be bound. No informal advice, guidance, suggestion, or comment by the Department shall be construed as relieving Respondent of Respondent's obligation to obtain such formal approvals as may be required by this Order. In the event of a conflict between the terms of this Order and any Work Plan submitted pursuant to this Order, the terms of this Order shall control over the terms of the Work Plan(s). Respondent consents to and agrees not to contest the authority and jurisdiction of the Department to enter into or enforce this Order.

2. i. Except as set forth herein, if Respondent desires that any provision of this Order be changed, Respondent shall make timely written application to the Commissioner with copies to the parties listed in Subparagraph IV.A.1.

ii. If Respondent seeks to modify an approved Work Plan, a written request shall be made to the Department's project manager, with copies to the parties listed in Subparagraph IV.A.1.

iii. Requests for a change to a time frame set forth in this Order shall be made in writing to the Department's project attorney and project manager; such requests shall not be unreasonably denied and a written response to such requests shall be sent to Respondent promptly.

F. 1. If there are multiple parties signing this Order, the term "Respondent" shall be read in the plural, the obligations of each such party under this Order are joint and several, and the insolvency of or failure by any Respondent to implement any obligations under this Order shall not affect the obligations of the remaining Respondent(s) under this Order.

2. If Respondent is a partnership, the obligations of all general partners (including limited partners who act as general partners) under this Order are joint and several and the insolvency or failure of any general partner to implement any obligations

under this Order shall not affect the obligations of the remaining partner(s) under this Order.

3. Notwithstanding the foregoing Subparagraphs XVI.F. 1 and 2, if multiple parties sign this Order as Respondents but not all of the signing parties elect to implement a Work Plan, all Respondents are jointly and severally liable for each and every obligation under this Order through the completion of activities in such Work Plan that all such parties consented to; thereafter, only those Respondents electing to perform additional work shall be jointly and severally liable under this Order for the obligations and activities under such additional Work Plan(s). The parties electing not to implement the additional Work Plan(s) shall have no obligations under this Order relative to the activities set forth in such Work Plan(s). Further, only those Respondents electing to implement such additional Work Plan(s) shall be eligible to receive the release and covenant not to sue referenced in Paragraph VII.

G. Respondent shall be entitled to receive contribution protection and/or to seek contribution to the extent authorized by ECL 27-1421(6) and 6 NYCRR 375-1.5(b)(5).

H. Unless otherwise expressly provided herein, terms used in this Order which are defined in ECL Article 27 or in regulations promulgated thereunder shall have the meaning assigned to them under said statute or regulations.

I. Respondent's obligations under this Order represent payment for or reimbursement of response costs, and shall not be deemed to constitute any type of fine or penalty.

J. Respondent and Respondent's successors and assigns shall be bound by this Order. Any change in ownership or corporate status of Respondent shall in no way alter Respondent's responsibilities under this Order.

K. This Order may be executed for the convenience of the parties hereto, individually or in combination, in one or more counterparts, each of which shall be deemed to have the status of an executed original and all of which shall together constitute one and the same

Appendix B

Quality Assurance Project Plan

**Town of Chili Fire Department
NYSDEC Site No. P828219**

3231 Chili Avenue
Rochester, New York

Prepared For
Chili Fire Department

October 2024

Town of Chili Fire Department
Town of Chili, Monroe County, New York

NYSDEC Region #8

Quality Assurance Project Plan

October 2024

Prepared For:

Chili Fire Department
3231 Chili Ave
Rochester, NY 14624

Prepared By:

Barton & Loguidice, D.P.C.
11 Centre Park
Suite 203
Rochester, NY 14614

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Attachments

Attachment 1 – Standard Operating Procedures

Attachment 2 – Portions of NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances, April 2023

1.0 Purpose

The purpose of this Quality Assurance Project Plan (QAPP) is to describe quality assurance and quality control (QA/QC) procedures that will be observed during completion of the activities described in the attached Site Characterization Work Plan (the Work Plan).

2.0 Quality Assurance Project Plan

This QAPP was prepared in accordance with New York State Department of Environmental Conservation (NYSDEC) DER-10 Section 2.4 and in Appendix A of NYSDEC's PFAS Sampling and Analysis guidance document.

2.1 Project Scope and Goals

A summary of the project objectives and a statement of how the activities described in this Site Characterization Work Plan relate to the overall site investigation or remediation strategy are presented in Section 3.0 of the Work Plan.

2.2 Project Organization

Barton & Loguidice, D.P.C.:

Project Manager: Jon Sundquist, Ph.D.

Project Quality Assurance Officer: Greg Lesniak, PG

Field Staff: Don Howe, Brian McGrath

Data Validator:

Don Anne, Alpha Geoscience

Town of Chili:

Project Contact: Gerard Levey

2.3 Sampling Procedures, Data Quality Usability Objectives and Equipment Decontamination Procedures

Drilling observation and sampling, monitoring well construction, and monitoring well development will be conducted as described in Section 3.2 of the Work Plan and in the associated Standard Operating Procedures (SOPs), provided in Attachment A.

Sampling will begin in areas where less contamination is anticipated and transition to more contaminated locations to reduce the potential for cross-contamination occurring. If analytical results from previous monitoring events are available for review this can easily be determined. Surface water, if planned contemporaneously with other sampling should be completed prior to sampling groundwater and/or sampling of other media.

All sources of water used for equipment decontamination or drilling will be verified in advance to be free of per- and polyfluoroalkyl substances (PFAS) through laboratory analysis or certification.

Soil sampling will be conducted in accordance with the applicable portions of Appendix B of the NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances

document dated April 2023. These portions are included as Attachment B.

Groundwater sampling and analysis will be conducted as described in Section 3.7 of the Work Plan. An SOP for groundwater sample collection is provided in Appendix A. Special precautionary sampling measures for PFAS sampling, pump and equipment types, decontamination procedures are summarized in Section 3.2 of the Work Plan and Appendix A. Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene.

The sampler should wear nitrile gloves while conducting field work and handling sample containers. Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times. Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen that does not contain PFAS should be used. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

2.4 Site Map Showing Sample Locations

A site plan depicting the locations of groundwater samples to be collected during this investigation is included as Figure 2 of the Site Characterization Work Plan.

2.5 Analytical Methods/Quality Assurance Summary

(1) Matrix type	Groundwater and Soil Samples
(2) Number or frequency of samples to be collected per matrix	3 samples plus QA/QC samples described below
(3) number of field and trip blanks per matrix	<ul style="list-style-type: none"> - 1 field blank per sample event - Equipment blanks will be submitted at a frequency of one equipment blank per day. A second equipment blank may be submitted on certain types of equipment (e.g., bladder pump) to evaluate the potential influence of components within the piece of equipment,
(4) Analytical parameters to be measured per matrix	PFAS
(5) Analytical methods to be used per matrix with minimum reporting requirements	PFAS by USEPA Method 1633
(6) Number and type of matrix spike (MS) and matrix spike duplicate (MSD) samples to be collected	One MS/MSD will be collected for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC. MS/MSD will be collected for both aqueous and soil samples.
(7) Number and type of duplicate samples to be collected	One field duplicate will be collected per analyte at a frequency of one per twenty samples (1:20), with a minimum of one field duplicate per day of sample collection. The duplicate shall consist of an additional sample at a given location and be submitted to the laboratory as "blind". Duplicates will be collected for both aqueous and soil samples.
(8) Sample preservation to be used per analytical method and sample matrix	- All samples are to be immediately placed in a cooler maintained at $4 \pm 2^{\circ}\text{C}$ using ice
(9) Sample container volume and type to be used per analytical method and sample matrix	<ul style="list-style-type: none"> - PFAS aqueous samples collected in 500 ml HDPE bottle - PFAS soil samples collected in 250 ml plastic bottle
(10) Sample holding time to be used per analytical method and sample matrix	- PFAS by USEPA Method 1633: 90 days

Attachment A
Standard Operating Procedures

SITE CHARACTERIZATION WORK PLAN - ATTACHMENT A

BARTON & LOGUIDICE, D.P.C. – STANDARD OPERATING PROCEDURE (SOP)

SOP #1 - MONITORING WELL SAMPLING

1.0 Objectives

The purpose of this Standard Operating Procedure (SOP) is to define the procedural requirements for monitoring well sampling. This procedure is followed in order to collect groundwater samples from monitoring wells while exerting minimum stress on the water-bearing formation and minimizing the disturbance of sediment in the well. The “low-flow” purging and sample collection technique follows the technique described within the USEPA document entitled “EPA Ground Water Issue: Low-flow (Minimal Drawdown) Ground-water Sampling Procedures” (EPA/540/S-95/504, April 1996) and the USEPA Region II document entitled “Ground water Sampling Procedure Low Stress (Low Flow) Purging and Sampling” (March 16, 1998). The general approach is to minimize the drawdown in the well during purging, thereby reducing disturbance prior to and during sampling. Typically this is accomplished by limiting the flow rate during purging and sampling to rates in the 100 to 500 ml/min range. The intended advantage of this procedure is the reduction in the turbidity and aeration of the samples; thereby producing samples which are more representative of the natural groundwater conditions.

2.0 Scope and Applicability

The procedures of this SOP are applicable to personnel involved in the planning, coordination, preparation, conducting and reporting related to monitoring well sampling.

3.0 Required Materials

- Project plans (work plan/health and safety plan)
- Personal protective equipment as specified in the site-specific health and safety plan
- Bound field log book
- Water level probe
- Measuring tape
- Decontamination supplies (5 gallon buckets, decontamination fluids, distilled (DI) water)
- Peristaltic pumps may be used in very shallow wells for inorganic sample collection unless there is concern for the potential effects of some increase in the dissolved oxygen (D.O.) in the sample due to possible generation of “microbubbles” during

purging and sampling. Adjustable rate, positive displacement groundwater sampling pumps, such as a bladder pump or small diameter electric submersible pump (e.g., Grundfos Redi-Flo2 or equivalent), is preferred when increased levels of D.O. is a concern in the collected groundwater sample.

- The discharge tubing shall be Teflon®, Teflon® lined polyethylene, PVC, Tygon, or polyethylene, dedicated to each well. For organic analyses, the tubing shall be Teflon® or Teflon® lined polyethylene.
- The length and diameter of the discharge tubing shall be minimized (e.g., 1/4 or 3/8 inch ID) to ensure that the tubing remains filled with water during sampling.
- Monitoring equipment during purging shall include field measuring devices for pH, turbidity, specific conductance, temperature, oxidation-reduction potential (ORP), and/or D.O. D.O. and ORP meters must be installed in-line and have continuous readout capability during the sampling event.
- Flow-rate measurement supplies such as graduated cylinders and stopwatch.
- Well construction data.
- Geologic data such as the depth to higher permeable zones within the screened interval.
- Data from prior monitoring events (e.g., water level, pH, ORP, temperature, D.O.).
- Any additional equipment discussed in section 5.0

4.0 Responsibilities

The site manager is responsible for ensuring that field personnel employ methods in accordance with this procedure and any other applicable SOPs. The site manager must also ensure the monitoring well sampling procedures meet the requirements of the site specific plans.

The field team leader is responsible for ensuring that field personnel follow methods in accordance with this procedure and other relevant procedures.

Note: Responsibilities may vary from site to site. All field team member responsibilities shall be defined in the field plan or site/quality assurance project plan (QAPP).

5.0 Methods

5.1 Preliminary Site Activities

- Start at the well known or believed to have the least contaminated groundwater and proceed sequentially to the well with the most contaminated groundwater.

- Remove well cap and identify the pre-established elevation reference point on top of inside well casing. If not present, make one by cutting a small “V” notch in the casing with a utility knife.
- Measure and record the depth to groundwater (static water level) to within the nearest 0.01 foot from the reference point in all wells to be sampled prior to commencing purging. Take care to minimize disturbance to the water column and avoid dislodging particulates attached to the sides of the well casing.
- In no cases should the well be sounded prior to sampling as this may mobilize sediment in the bottom of the well.
- If dedicated equipment such as bladder pumps are not used, consideration should be given to placing the pump in the well 24 hours prior to sampling to allow any sediments in the well to settle.

5.2 Sampling Procedures

- **Install Pump:** Slowly lower the pump (or intake hose, if using a peristaltic pump) and downhole monitoring device, as applicable into the well to a depth corresponding to the center of the screened interval. If a zone of high permeability is present within the screened interval, consideration should be given to vertically centering the intake hose within this zone. This decision should be made based on a review of site specific information. The intake should be kept at least two feet above the bottom of the well to prevent mobilization of sediment from the bottom. If less than two feet of water is present in the well prior to sampling, the intake shall be centered in the water column. For problematic monitoring wells, consideration should be given to installing the pump approximately 24 hours before initiating purging. The approved site-specific Field Sampling Plan/Quality Assurance Project Plan (QAPP) should be reviewed prior to the sampling event to determine the type of pump and other equipment to be used, as well as, the depth to which the pump intake should be lowered in each well. Record the depth to which the pump is lowered.
- If the saturated water column within the screened interval is > 10 feet two samples will be collected from the well corresponding to the approximate center of the top half of the saturated water column and the approximate bottom half of the saturated water column. If a zone of high permeability is present within the saturated water column, consideration should be given to collecting one sample from the center of this zone. This decision should be made based on a review of site specific information. The intake should be kept at least two feet above the bottom of the well to prevent mobilization of sediment from the bottom. Record the depth to which the pump is lowered for each sample collected within the saturated water column.
- **Re-Measure Groundwater Level:** Before starting the pump, measure the water level again with the pump in the well. Do not proceed until the water level has returned to within approximately 0.3 feet of the static level.

- Purging: Start pumping the well at approximately 200 milliliters per minute. The water level should be monitored as frequently as feasible immediately after the start of purging and then at least as frequent as every three to five minutes once the level has generally stabilized. Ideally, a steady flow rate should be maintained which results in a stabilized water level. The goal should be to not induce a drawdown in excess of approximately 0.3 feet (or approximately 2 percent of saturated thickness in low permeability formations). Pumping rates should, if needed, be reduced to the minimum capabilities of the pump to effect stabilization of the water level. However, care should be taken to maintain pump suction and to avoid entrainment of air in the tubing. The water level in the well should not drop below the top of the pump, therefore, pumping should cease before this occurs. If the recharge rate of the well is very low, care should be taken to avoid loss of pressure in the tubing line, cascading through the sand pack, or pumping the well dry. Record each adjustment made to the pumping rate, observation of changes in appearance of the water collected (e.g., increased turbidity or color) and the water level measured immediately after each adjustment.
- Monitor Indicator Parameters: During purging of the well, monitor the following field indicator parameters at the frequencies stated above; turbidity, temperature, specific conductance, pH, ORP and D.O. In line analyzers and continuous readout displays are recommended for all parameters so that the sample is not exposed to air prior to the measurement. However, if this is not feasible, temperature and/or ORP may be omitted from the list of in line parameters. Indicator parameters should be measured approximately every 3 to 5 minutes. The well is considered stabilized and ready for sample collection when three consecutive readings are within a maximum range (from minimum to maximum measurements) as follows: +0.1 for pH, 3% for specific conductance, +10% for D.O., +10 mV for ORP, and +10% for turbidity. Measurement of the indicator parameters should continue every three to five minutes until these measurements indicate stability in the water quality. If the parameters have not stabilized after about an hour, purge the well until a minimum of 3 well volumes have been removed and proceed to collect the samples. This alternate procedure should be noted on the field data sheet.
- Temperature and pH are commonly used as field indicator parameters; however, they are quite insensitive in distinguishing between formation water and stagnant casing water. These parameters are important parameters for data interpretation purposes, thus they should be measured (Puls and Barcleona, 1996). Temperature readings at the flow cell may differ from the downhole probe values by 3 to 5°C due to seasonal changes in air temperature (Barcelona et al, 1994).
- Collect Samples: Samples should be collected at flow rates of between 100 and 250 ml/min, or under flow conditions such that drawdown of the water level within the well is not induced beyond the tolerances specified above. If VOCs are to be analyzed, they should be collected first and discharged directly from the pump discharge tubing into pre preserved sample containers. Sample containers should be filled by allowing the

pump discharge to flow gently down the inside of the container with minimal turbulence.

- Remove Pump and Tubing: After collection of the samples, the pump's tubing, unless permanently installed, shall be properly discarded.
- Well Depth: Measure and record well depth.
- Close Down: Secure the well.

6.0 References

Barcelona, Michael J., H.A. Wehrmann, and M.D. Varljen, 1994. "Reproducible Well Purging Procedures and VOC Stabilization Criteria for Ground-Water Sampling." Ground Water. Vol. 32, No. 1, pp. 12-22.

Puls, R.W. and M.J. Barcelona, 1996, EPA Ground Water Issue Low-Flow (Minimal Drawdown) Ground-water Sampling Procedures, EPA/540/S-95/504.

United States Environmental Protection Agency – Region II, March 16, 1998, Ground water Sampling Procedure Low Stress (Low Flow) Purging and Sampling.

SOP # 1A - MONITORING WELL SAMPLING – PFAS

1.0 Objectives

The purpose of this Standard Operating Procedure (SOP) is to define the procedural requirements for the collection of groundwater samples from monitoring wells for laboratory analysis of polyfluoroalkyl substances (PFAS), such as perfluorooctanoic acid (PFOA-acid, Chemical Abstracts Service (CAS) No. 335-67-1), ammonium perfluorooctanoate (PFOA-salt, CAS No. 3825-26-1), perfluorooctane sulfonic acid (PFOS-acid, CAS No. 1763-23-1), and perfluorooctane sulfonate (PFOS-salt, CAS No. 2795-39-3). Due to the potential presence of PFAS in field sampling equipment, personal protective equipment (PPE), clothing, and many plastics, field sampling equipment and methodology for the collection of aqueous PFAS samples needs to include special provisions to eliminate the potential for sample contamination from PFAS containing materials.

2.0 Scope and Applicability

The procedures of this SOP are applicable to personnel involved in the planning, coordination, preparation, and sampling of PFAS in groundwater. This SOP is a supplement to the Monitoring Well Sampling SOP #1 and does not replace the equipment or methods specified unless where noted herein. Reporting limits required for PFAS are low (parts per trillion) and should be established as part of the quality assurance project plan (QAPP). The selected analytical laboratory shall have certification from the regulatory agency (e.g., New York State Department of Health (NYSDOH), or other federal/state agency) for analysis of PFAS with demonstrated proficiency using USEPA Method 1633 Modified, or method(s) required by the state regulatory agency, and any future modification to the approved analytical method.

3.0 Required Materials

- Materials and equipment as required per SOP #1 And project plans (work plan/health and safety plan)
- Personal protective equipment as specified in the site-specific health and safety plan and which does not contain potential PFAS materials as identified in Section 4.0

4.0 Potential PFAS Materials

The presence of PFAS in certain sampling equipment/containers, pumps, and PPE can result in sample contamination (i.e. false positive) if not avoided during sampling. Other materials, such as glass containers, may adsorb PFAS resulting in a loss of analyte from the sample prior to testing. The table below summarizes the items that should not be used and alternative/replacement items when sampling for PFAS.

Field Equipment/Pumps/Sample Containers/Materials	
Potential PFAS Containing/Interference	Alternative/Replacement
Teflon™ materials (PFTE)	HDPE and polypropylene
LDPE storage containers	Acetate liners
Teflon™ tubing, bailers, tape	Silicon, HDPE or LDPE, stainless steel
Sampling pumps with Teflon™ materials, passive diffusion bags	Peristaltic, Geotech SS Geosub, QED, Grundfos*
Plastic clipboards, binders or spiral hardcover notebooks	Aluminum field clipboards or with Masonite
Post-it Notes or Sharpies	Pens
Chemical (blue) ice packs	Regular ice
LDPE or glass containers	HDPE or polypropylene
Teflon™ lined sample container caps	Lined or unlined HDPE or polypropylene caps
Decon 90	Alconox® and/or Liquinox®
PPE and Field Clothing	
Potential PFAS Containing	Alternative/Replacement
New clothing or water resistant, waterproof, or stain-treated clothing, or with Gore-Tex™	Well-laundered clothing (washed 6 times) made of synthetic or natural fibers (cotton preferred).
Clothing laundered with fabric softener	No fabric softener
Boots containing Gore-Tex™	Boots made with polyurethane and PVC
Tyvek	Cotton Clothing
Waterproof or resistant rain gear	Tent
Cosmetics, moisturizers, hand cream, or other related products	

For other products, equipment and materials, the Project Manager should review the Safety Data Sheet (SDS)^B or manufacturer's information to determine if it contains PFAS and should not be used. Equipment with Viton Components need to be evaluated on a case by case basis, Viton contains PTFE, but may be acceptable if used in gaskets or O-rings that are sealed and will not come into contact with sample or sampling equipment.

5.0 Responsibilities

The project manager is responsible for ensuring that field personnel employ methods in accordance with this procedure and any other applicable SOPs. The project manager must also ensure the monitoring well sampling procedures for PFAS meet the requirements of the site specific plans.

The field team leader is responsible for ensuring that field personnel follow methods in accordance with this procedure and other relevant procedures.

Note: Responsibilities may vary from site to site. All field team member responsibilities shall be defined in the field sampling plan (FSP) or site/quality assurance project plan (QAPP).

6.0 Methods

Groundwater sampling from monitoring wells will follow sampling methodology as outlined in SOP #1, with modification to not use equipment/materials/products outlined in Table 1 and as specified below to avoid contamination from PFAS containing sources or cross-contamination during sampling. When also sampling for parameters other than PFAS, samples should be collected for PFAS first as bottleware for other analytes may contain PFAS.

6.1 Field Equipment

- Do not use Teflon™ containing materials (e.g., Teflon® tubing, bailers, tape, plumbing paste, or other Teflon™ materials) since Teflon™ contains fluorinated compounds.
- High-density polyethylene (HDPE), low-density polyethylene (LDPE), and silicon materials are acceptable for sampling. Samples should not be stored in containers made of LDPE materials.
- Where pumps are used for groundwater sample collection, use pumps with polyvinyl chloride (PVC) leads or other pumps for groundwater sample collection that are constructed with stainless steel and will minimize introductions of PFAS. Certain pumps such as bladder pumps, may also be used provided Teflon™ materials are a pump material/component or if testing by the manufacturer demonstrated that PFAS will not leach into groundwater. Submersible pumps (e.g., Grundfos RediFlo pump or similar) may be used due to the pumping limitations of stainless steel pumps.
- When using liners to collect soil samples during direct-push technology or during conventional drilling and sampling methodologies, acetate liners are to be used.

- Pens will be used when documenting field activities in the field log and on field forms as well as labeling sample containers and preparing the Chain of Custody.

6.2 Field Clothing and Personal Protective Equipment

- Do not wear water resistant, waterproof, or stain-treated clothing during the field program. Field clothing made of synthetic and natural fibers (preferably cotton) are acceptable. New clothing may contain PFAS related treatments.
- Do not wear clothing or boots containing Gore-Tex™ during the sampling program as it contains a PFAS membrane.
- Safety footwear will consist of steel-toed boots made with polyurethane and PVC, untreated leather boots, or well-worn leather boots. Newer leather boots may be worn if they are covered with polypropylene, polyethane, or PVC boot covers.
- Disposable nitrile gloves must be worn at all times. A new pair of nitrile gloves shall be donned prior to the following activities at each sample location:
 - Decontamination of re-usable sampling equipment;
 - Prior to contact with sample bottles or water containers;
 - Insertion of anything into the well (e.g., HDPE tubing, HydraSleeve bailer, etc.) or pump;
 - Completion of monitor well purging, prior to sample collection;
 - Handling of any quality assurance/quality control samples including field blanks and equipment blanks; and,
 - After the handling of any non-dedicated sampling equipment, contact with non- decontaminated surfaces, or when judged necessary by field personnel.
- Field sampling occurring during wet weather (e.g., rainfall and snowfall) should be conducted while wearing appropriate clothing that will not pose a risk for cross-contamination. Use rain gear made from polyurethane, vinyl, and wax or rubber-coated materials, and avoid synthetic gear that has been treated with water-repellant finishes containing PFAS.

- Teams should consider the use of a gazebo tent, which can be erected overtop of the sample location and provide shelter from the rain. It should be noted that the canopy material is likely a treated surface and should be handled as such; therefore, gloves should be worn when setting up and moving the tent, changed immediately afterwards and further contact with the tent should be avoided until all sampling activities have been finished and the team is ready to move on to the next sample location.

6.3 Sample Containers

- All samples should be collected in laboratory supplied polypropylene or HDPE bottles. The USEPA Method 1633 includes a preservative. Different laboratories may supply sample collection containers of varying sizes. The screw cap will be made of polypropylene or HDPE and may be lined or unlined. However, if lined, the liner may not be made of Teflon® or contain PFAS.
- Do not allow the sample bottle cap to touch any surfaces during sampling. Avoid contact with the inside of the cap.
- Use a pen to fill out the sample container label the after the caps have been placed back on each bottle.
- Glass sample containers are not to be used due to potential loss of analyte through adsorption.

6.4 Equipment Decontamination

- Field sampling equipment, including oil/water interface meters and water level indicators, and other downhole equipment used at each sample location, will require cleaning between uses. Alconox® and Liquinox® soap is acceptable for use since the Safety Data Sheets do not list fluoro-surfactants as an ingredient. However, Decon 90 will not be used during decontamination activities. Water used for the final rinse during decontamination of sampling equipment will be laboratory certified “PFAS-free” water.

6.5 Personnel Hygiene

- Cosmetics, moisturizers, hand cream, or other related products should not be used prior to or during sampling. These products may contain surfactants and represent a potential source of PFAS.

- Many manufactured sunblock and insect repellants contain PFAS and should not be used. Sunblock and insect repellants that are used on-site should consist of 100% natural ingredients, unless manufacturer's information is available to confirm they do not contain PFAS.

7.0 References

A number of sources were reviewed in developing this SOP including sampling guidelines from several laboratories certified in the analysis of PFAS, and publically available sampling procedures and methodologies implemented by government contractors at state and federal sites.

Attachment B

Portions of NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances, April 2023

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

General

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

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

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

Equipment

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

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

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

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

Equipment Decontamination

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

Sampling Techniques

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

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

Sample Identification and Logging

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

Quality Assurance/Quality Control

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

Documentation

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

Personal Protection Equipment (PPE)

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

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

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

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

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Appendix C

Health and Safety Plan

Town of Chili Fire Department
NYSDEC Site No. P828219

3231 Chili Avenue
Rochester, New York

Prepared For
Chili Fire Department

3231 Chili Ave
Rochester, NY 14624

Rev 1. October 2024

Town of Chili Fire Department
Town of Chili, Monroe County, New York

NYSDEC Region 8

Health and Safety Plan

Rev 1. October 2024

Prepared For:

Chili Fire Department
3231 Chili Ave
Rochester, NY 14624

Prepared By:

Barton & Loguidice, D.P.C.
11 Centre Park
Suite 203
Rochester, NY 14614

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1.0 General Information**1.1 Introduction**

This Health and Safety Plan (HASP) was prepared by Barton & Loguidice, D.P.C., (B&L) for the Town of Chili Fire Department site to provide specific guidelines and establish procedures for the protection of personnel during future excavation activities at the site where the existing soils will be penetrated. The existing soils contain residual impacts from historic activities at the site. The Plan is based on the site information available at this time, and anticipated conditions to be encountered during the different phases of work. This Plan is subject to modification as data are collected and evaluated.

All personnel conducting activities on-site must be in compliance with all applicable Federal and State rules and regulations regarding safe work practices. Personnel conducting field activities must also be familiar with the procedures, requirements and provisions of this Plan. In the event of conflicting Plans and requirements, personnel must implement those safety practices that afford the highest level of protection.

This HASP is not intended to be used by any subcontractors, but it may be used as the basis for contractors to prepare their own plans. This HASP may not address the specific health and safety needs or requirements of subcontractors and should be viewed as the minimum requirement.

2.0 Project Information

2.1 Comprehensive Work Plan

This HASP is appended to the Site Characterization Work Plan prepared by Barton & Loguidice, D.P.C., which describes the investigation activities for the site.

2.2 Scope of Work

Remedial and/or development activities at the site may entail excavation into the existing in-place soils at the site.

2.3 Organization Structure

Barton & Loguidice, D.P.C.:
Program Manager – Jon Sundquist, Ph. D.
Site Manager – Donald Howe

Chili Fire Department:
Project Contact – Gerad Levey

The Site Manager is responsible for the day-to-day activities of the project and for coordinating between office and field personnel. The Site Manager will oversee the remedial activities. The Barton & Loguidice on-site field personnel will serve as the Site Safety and Health Coordinator (SSHC). The SSHC will establish operating standards and coordinate overall project safety and health activities for the site. The SSHC will review project plans and revisions to determine that safety and health procedures are maintained throughout the project. Specifically the responsibilities of the SSHC include:

- a. Aiding the selection of protective clothing and equipment.
- b. Periodically inspecting protective clothing and equipment.
- c. Maintaining proper storage of protective clothing and equipment.
- d. Monitoring the workers for signs of heat stress, cold stress, and fatigue.
- e. Monitoring on-site hazards and conditions.
- f. Conducting periodic surveillance to evaluate effectiveness of the Site-specific Health and Safety Plan.
- g. Having knowledge of emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.
- h. Providing handouts to all on-site personnel that contain directions to the hospital and the

telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.

i. Notifying, when necessary, local public emergency officials.

j. Coordinating emergency medical care.

The Site Manager will be responsible for ensuring that the field personnel are familiar with the contents of this plan and the roles of the SSHC.

3.0 Health and Safety Risk Analysis

Table E-1 breaks down the hazard types that may be encountered for the site activities.

Table E-1 Activity Hazard Evaluation						
Activity	Hazard Type					
	Mechanical	Electrical	Chemical	Physical	Biological	Temperature
Excavation of Impacted Soils	Accidental injury from excavation equipment. Accidental injury from contact with excavated materials.	Overhead power lines.	Accidental inhalation, ingestions, skin absorption or eye contact with contaminants. Inhalation of equipment exhaust gases.	Collapse of excavation structure. Puncture from buried objects/nails. Excessive noise. Fall hazards. Falling objects.	Rodents, Bees and wasps.	Heat stress and frost bite.

3.1 Physical Hazards

Physical hazards associated with the site are:

1. Slip, Trip, and Fall During All Activities (uneven terrain)

Construction sites may contain numerous potential safety hazards such as pits, broken glass, slippery surfaces and fire debris. The work itself may be a potential safety hazard. Site personnel should constantly look out for potential safety hazards and should immediately inform the SSHC of any new hazards.

2. Excavation Debris

Excavation projects pose potential safety hazards from materials falling from the excavator as they are removed from the working excavation. The excavation work is a potential safety hazard and the SSHC will provide oversight during demolition activities.

3. Moving Parts of Heavy Equipment

Heavy equipment poses dangers through moving parts. Where feasible, access to moving parts will be guarded and equipment will be equipped with backup alarms.

4. Noise from Heavy Equipment

Work around large equipment often creates excess noise. Engineering controls and personal protective equipment will be used to protect employees' hearing.

5. *Electrical Hazards*

As in all site work, overhead power lines, buried power lines, electrical wires and cables, site electrical equipment, and lightning also pose a potential hazard to site workers. Site personnel should constantly look out for potential safety hazards and should immediately inform the SSHC of any new hazards.

6. *Biological Hazards (insects, poison ivy, etc.)*

Other biological hazards that may be present at the site include rodents and insects. PPE can reduce the potential for exposure. The SSHC can assist in determining the correct PPE for the hazard present.

3.2 Heat and Cold Stress

Workers will be routinely observed by the SSHC for symptoms of heat stress or cold exposure, as dictated by the weather conditions and work being conducted. Heat stress and cold exposure can be avoided by periodic, regular rest breaks.

Heat stress may be a potential hazard for personnel wearing PPE, particularly working in hot and humid conditions. Workers should take regular rest breaks within a shaded area, removing their PPE, and drink electrolyte replacing liquids and/or water. The SSHC is responsible for scheduling the amount of time each individual can work under the existing site conditions, and how often and how long they will break. Workers will be required to take their breaks in the clean zone after going through the decontamination area, or they may undergo partial decontamination and rest in a clean area within the decontamination area. Please refer to Section 7.2 (Site Control) of this HASP for a detailed description of the above referenced clean zone and decontamination area.

3.3 Confined Space Entry

Excavations do pose a potential confined space entry area. When an excavation becomes a confined space entry area (greater than 4 feet deep), then permit-required confined space entry procedures will be followed should the excavation need to be entered. In addition, air monitoring for oxygen deficiency, LEL, and organic vapors will be performed should the excavation be greater than 4 feet deep. Attempts will be made to collect samples from the excavation without entering the excavation (i.e., from excavator bucket, sampling rods, etc.).

4.0 Medical Surveillance Program

4.1 General

Respirator protection and medical surveillance is not required for this site based on the known conditions and planned work. The remainder of this section is provided for reference purposes only.

OSHA in 29 CFR 1910.120, the Hazardous Waste Operations regulations and in 1910.134, the Respiratory Protection regulations, requires medical examinations. The examination may include the OSHA required Medical Questionnaire, Respirator Suitability Form, a Medical Examination, Audiology Test, Pulmonary Function Test, and testing for complete blood count and chemistry profile.

These medical examinations and procedures are performed by or under the supervision of a licensed physician. The medical monitoring is provided to workers free of cost, without loss of pay and at a reasonable time and place. In addition, the need to implement a more comprehensive medical surveillance program will be re-evaluated after an apparent over-exposure incident.

Employees who wear, or may wear, respiratory protection will be provided respirators as regulated by 29 CFR 1910.134 before performing designated duties. Prior to issuance of a respirator, a medical professional must have medically certified the individual's ability to wear respiratory protection. Where the medical requirements of 29 CFR 1910.120 overlap those of 29 CFR 1910.134, the more stringent of the two will be enforced. It is not anticipated the respirator use will be required at the site.

4.2 Frequency

1. *Baseline Examinations*

Individuals who are assigned temporarily or permanently to fieldwork at hazardous waste sites or the use of a respirator will receive a baseline examination prior to job assignment.

2. *Periodic Examinations*

Individuals who are assigned temporarily or permanently to fieldwork at hazardous waste sites or the use of a respirator will receive periodic examinations as required.

3. *Termination Examinations*

Field employees permanently leaving the company who were in the medical surveillance program will receive an exit examination.

4. Possible Exposure Examinations

As soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards, or that an employee has been injured or exposed above the permissible exposure limits in an emergency situation, that employee will be required to receive medical attention.

4.3 Examination Results

A letter must be received from the attending physician stating the parameters of the examination and whether or not the individual is able to work with or without restriction. This letter will be filed in the employee's file and a copy distributed to the employee. The examining physician makes a report to B&L of any medical condition that would place B&L employees at increased risk when wearing a respirator or other personal protective equipment. B&L maintains the medical records of personnel, as regulated by 29 CFR 1910.120 and 29 CFR 1910.1020, where applicable.

5.0 Training Program

5.1 Hazardous Waste Operations Health and Safety Training

Because this site meets the definition of a hazardous waste site, employees who work during field activities are required to have completed HAZWOPER initial and refresher training.

Employees who are assigned to perform duties on hazardous waste sites will receive the OSHA initial 40-hour health and safety training prior to on-site activities, in accordance with 29 CFR 1910.120 (e). In addition, upon request, such personnel provide documentation of having received three (3) days of supervised field experience applicable to this site, or receive three (3) days of supervised field experience at this site. Only employees with current 40-hour HAZWOPER initial training and current 8-hour annual HAZWOPER refresher training certificates will be permitted to perform work at this site.

On-site managers and supervisors who are directly responsible for or who supervise workers engaged in hazardous waste operations work must obtain, in addition to the appropriate level of worker HAZWOPER training described above, eight (8) additional hours of specialized supervisory training, in compliance with 29 CFR 1910.120(e)(4). Current certificates must be provided for any applicable on-site managers and supervisors as described above.

5.2 Additional Training

As site activities change, supplemental training will be provided to employees to address changes in identified hazards, risks, operations procedures, emergency response, site control, and personal protective equipment. Specialty training will be provided as determined by task and responsibility.

Site-specific training will be provided to each employee and will be reviewed at safety briefings. Specialized training will be provided as dictated by the nature of site activities. Specialized training will be provided for activities such as the handling of unidentified substances. Employees involved in these types of activities will be given off-site instruction regarding the potential hazards involved with such activities and the appropriate health and safety procedures to be followed. Off-site instruction is meant to include any areas where employees will not be exposed to site hazards.

5.3 Other Potentially Applicable Training

Other training that may be required by workers, that is in addition to required training described above, is detailed below:

- Hazard communication, in accordance with 29 CFR 1910.1200

- Respirator use, in accordance with 29 CFR 1910.134
- Hearing conservation, in accordance with 29 CFR 1910.95
- Working safely around heavy equipment
- Heat and cold stress prevention
- Confined space entry, in accordance with 289 CFR 1910.146

5.4 Pre-Entry Briefing

A site-specific briefing will be provided to all individuals, including site visitors, who enter this site beyond the site entry point. For visitors, the site-specific briefing provides information about site hazards, the site lay-out including work zones and places of refuge, the emergency alarm system and emergency evacuation procedures, and other pertinent safety and health requirements as applicable and appropriate.

The SSHC will brief personnel as to the potential hazards likely to be encountered. Topics will include:

- Availability of this HASP.
- General site hazards and specific hazards in the work areas, including those attributable to the chemicals present.
- Selection, use, testing and care of the body, eye, hand and foot protection being worn, with the limitations of each.
- Decontamination procedures for personnel, their personal protective equipment, and other equipment used on the site.
- Emergency response procedures and requirements.
- Emergency alarm systems and other forms of notification, and evacuation routes to be followed.
- Methods to obtain emergency assistance and medical attention.

5.5 Training Records

Written certification of the successful completion of applicable training requirements for each worker will be maintained on-site during the course of the site remedial and/or development activities. Offsite electronic records are acceptable assuming adequate internet access is available at the site to review such records remotely, otherwise copies of records shall be maintained at the site. Written certificates have been given to each

person so certified. Additionally, each worker shall review a copy of this HASP and understands its contents prior to commencing work at the site.

6.0 Health and Safety Field Implementation

6.1 Personal Protective Equipment Requirements

Table E-2 Personal Protective Equipment (PPE) Requirements								
Job Tasks	Level of Protection	PPE						
		Suit	Gloves	Feet	Head	Eye	Ear	Respirator
All on-site	Modified D	Std.	Neoprene or Nitrile	Steel + Booties	HH	Glasses/ Goggles	Plugs/ Muffs	N/A
Elevated PID Readings	C	PE Tyvek	Neoprene or Nitrile	Steel + Booties	HH	N/A	Plugs/ Muffs	Full APR w/OV& N100
Personal Protective Equipment SUIT: Std = Standard Work Clothes PE Tyvek = Polyethylene-coated Tyvek FEET: Steel = Steel-toe Boots Booties = PVC or Latex Booties HEAD: HH = Hard Hat EYE: Glasses = Safety Glasses w/side shields Goggles = Safety Goggles				Personal Protective Equipment EAR: Plugs = Ear Plugs Muffs = Ear Muffs RESPIRATOR: APR = Air-purifying respirator Full APR = Full-face APR OV = Organic vapor cartridge N100 = N100 particulate filters				

The requirements for personal protective equipment (PPE) are outlined in table E-2. Level D protection will initially be worn for excavation activities. Level C protection may be used, based upon a sustained (five (5) minutes or more) readings above five (5) parts per million (ppm) measured with the photoionization detector (PID). The emissions from gasoline or diesel-powered excavation equipment may affect PID readings. At the start of work (excavation equipment in operation, but prior to exposing contaminated soils), an ambient PID reading will be established. This ambient PID reading will be subtracted from subsequent readings to evaluate PPE usage.

The requirements for personal protective equipment (PPE) are outlined in table E-2. Level D protection will initially be worn for excavation activities. Level C protection may be used, based upon a sustained (five (5) minutes or more) readings above five (5) parts per million (ppm) measured with the photoionization detector (PID). The emissions from gasoline or diesel-powered excavation equipment may affect PID readings. At the start of work (excavation equipment in operation, but prior to exposing contaminated soils), an ambient PID reading will be established. This ambient PID reading will be subtracted from subsequent readings to evaluate PPE usage.

6.2 Decontamination Procedures

Depending on the specific job task, decontamination may include personnel themselves, tools, and/or heavy equipment. The specified level of protection for a task (A, B, C, or D) does not itself define the extent of personal protection or equipment decontamination. For instance, Level C without dermal hazards will require less decontamination than Level C with dermal hazards. Heavy equipment will always require decontamination to prevent cross-contamination. The following sections summarize general decontamination (a.k.a. decon) protocols.

6.2.1 Heavy Equipment

Heavy equipment will be decontaminated prior to personnel decontamination. Heavy equipment, drilling rods, augers and/or buckets will be steam cleaned after use at the designated decontamination area. In addition, containment systems will be set-up at the designated decontamination area for collection of decon fluids and materials.

6.2.2 Personnel

Personnel decontamination is not anticipated to be required for this project; however, personnel decon procedures are provided for reference purposes.

In general, decontamination involves scrubbing with a non-phosphate soap/water solution followed by clean water rinses. Disposable items will be disposed of in a dry container.

Reusable protection will be washed with soap and clean potable water and air-dried prior to storage. Dirt, oil, grease or other foreign materials that are visible will be removed from surfaces. Scrubbing with a brush may be required to remove materials that adhere to the surfaces. Certain parts of contaminated respirators, such as harness assemblies and leather or cloth components, are difficult to decontaminate. If grossly contaminated, they may be discarded in a designated container. Rubber components can be soaked in soap and water and scrubbed with a brush.

The following decontamination protocol will be used, as appropriate to the level of PPE being used:

- Drop hand tools and equipment in the designated decontamination area.
- Either wash outer rubber boots or dispose of booties.
- Rinse outer boots.
- Wash and rinse outer gloves.
- Remove outer boots and gloves, dispose gloves if necessary in the container designated for PPE waste.
- Replace cartridges if required.
- Remove and dispose Tyvek coverall in the designated PPE waste container.
- Remove respirator, dispose cartridges as required in the container designated for PPE waste.
- Personnel should wash their respirator at the end of each workday.

6.2.3 Decontamination Wastes and Investigation Derived Wastes

Decontamination wash and rinse waters and investigation derived wastes (IDW) will be managed according to applicable regulatory guidelines.

- Spent decon solutions may be required to be drummed and disposed of as hazardous waste and/or solvent solutions may be required to be segregated from water rinses.
- Decontamination shall be performed in a manner that minimizes the amount of waste generated.
- IDW may be required to be drummed and disposed of as hazardous waste.

7.0 Site Operating Procedures

These following guidelines comply with the established guidelines of the Barton & Loguidice, D.P.C., Corporate Health and Safety Program:

All site remedial and/or development activities must be coordinated through the Site Manager. During any activity conducted on-site in which a potential exists for exposure to hazardous materials, accident or injury, the Site Manager will assign at least two (2) persons to be present who are in constant communication with each other. At least two (2) persons must also be present during all demolition or excavation activities.

Samples obtained from areas known or suspected to contain contaminated substances or materials must be handled with appropriate personal protection equipment.

All equipment used to conduct site remedial and/or development activities must be properly decontaminated and maintained in good working order. Equipment must be inspected for signs of defects and/or contamination before and after each use.

The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated will result in the evacuation of the activity zone until a complete evaluation of the hazard can be performed.

7.1 Daily Operating Procedures

The following are the daily operating procedures that are to be followed by on-site personnel:

- Hold Tailgate Safety Meetings prior to work start and as needed thereafter (suggest daily; however, minimum of weekly).
- Use monitoring instruments and follow designated protocol and contaminant action levels.
- Use PPE as specified.
- Use hearing protection around heavy equipment.
- Remain upwind of operations and airborne contaminants, if possible.
- Establish a work/rest regimen when ambient temperatures and protective clothing create potential thermal hazards.
- Eating, drinking, applying cosmetics and smoking are prohibited in work areas.
- Refer to the SSHC for specific safety concerns for each individual site task.
- On-site personnel are encouraged to be alert to their own physical condition, as well as their co-workers.

- **All accidents, no matter how minor**, must be immediately reported to the SSHC.

7.2 Site Control

The purpose of site control is to minimize the exposure of site workers to potential contamination, protect the public from the site's hazards, and prevent vandalism. The degree of site control necessary depends on site characteristics and the surrounding community. At this time, there are no access restrictions to the site. During the field activities, Barton & Loguidice, D.P.C. (B&L), and the Owner are requesting that personnel, subcontractors and visitors report to the on-site B&L supervisor prior to entering the work area.

Since there are no access restrictions to the Site, particular attention will be placed on the condition of the site regarding three (3) main work zone areas. Based on the nature of the work, one or more of the three work zones may be combined and there will be no designations between work zones. The three main work zone types typically utilized are described below:

Activity Zone

This zone applies to the immediate work area and includes all materials, equipment, vehicles and personnel involved in the site activity. Site control measures will include flagging the perimeter of the activity zone to clearly mark the limits of work and to warn passers-by and visitors of the site activity. In addition, the site supervisor will maintain communication with site personnel as the location of this zone (and the type of work being performed) changes throughout the project.

The required level of PPE in the activity zone can vary according to job assignment. This will allow a flexible, effective, and less costly operation, while still maintaining a high degree of safety.

This area will be limited to authorized personnel from B&L, regulatory agencies, and contractors/subcontractors to the B&L and/or Owner. Personnel entering this area will be required to comply with their own HASP that is at least as stringent as this HASP.

Decontamination Zone

In order to prevent incidental contact with contaminants on equipment or in the wash water, activities within the decontamination area will be completed before subsequent site work or other activity begins. This includes:

- Complete removal of contaminants on all equipment used during the site remedial and/or development activities;
- Placement of the waste wash water and sediment in sealed drums;
- Storage of the drums in a secure and out-of-the-way place for future disposal;
- Proper labeling of drum contents;

- Cleanup (if necessary) of area outside of decontamination area; and

Support Zone

The support zone is the location of the administrative and other support functions needed to keep the operations in the activity and decontamination zone running smoothly. Any function that need not or cannot be performed in a hazardous atmosphere is performed here. Personnel may wear normal work clothes within this zone. Any potentially contaminated clothing, equipment and samples must remain in the decontamination zone until decontaminated. All emergency telephone numbers, evacuation route maps, and vehicle keys should be kept in the support zone.

The SSHC will establish a decontamination system and decontamination procedures appropriate to the site and the work that will prevent potentially hazardous materials from leaving the site. All personnel exiting the activity zone will be decontaminated prior to entering the support zone. The decontamination procedures will be reviewed at each daily safety briefing.

Personal hygiene facilities meeting at least the minimum requirements of 29 CFR Part 1910.120 will be provided nearby.

Upon completion of the day's activities, heavy machinery and equipment will be stored securely within the site, or at a location selected by the SSHC.

8.0 Emergency Response Procedures

8.1 Pre-Emergency Planning

Planning for emergencies is a crucial part of emergency response. The SSHC is responsible for training all employees in potential site hazards and the emergency response procedures.

8.2 Personnel Roles

The SSHC is responsible for responding to, or coordinating the response of, off-site personnel to emergencies. In the event of an emergency, the SSHC will direct all notification, response and follow-up actions. Contacts with outside response personnel (hospital, fire department, etc.) will be done at the direction of the SSHC.

Prior to the start of work on the site, the SSHC will:

1. Confirm that the following safety equipment is available: first aid supplies (provided in B&L Fleet Vehicles), and fire extinguisher (when drill rig is on site);
2. Have a working knowledge of the safety equipment available; and
3. Confirm directions to the hospital are prominently posted, or readily available if no job trailer, with the emergency telephone numbers.

Employees who will respond to emergencies involving hazardous materials will be trained in how to respond to such emergencies.

The SSHC will check daily to see that the above safety equipment is available at the site.

Only employees who are trained in how to respond to hazardous materials emergencies will respond to emergencies involving hazardous materials.

The SSHC will be responsible for directing notification, response and follow-up actions and for contacting outside response personnel (ambulance, fire department, or others) prior to and during an emergency. Upon notification of an exposure incident, the SSHC will call the hospital, fire, and police emergency response personnel as appropriate for recommended medical diagnosis, treatment, and if necessary, transportation to the hospital.

The SSHC must conduct an investigation of the incident as soon as possible. The SSHC will determine whether, and at what levels, exposure actually occurred, the cause of such exposure, and the means to prevent similar incidents from occurring. The resulting report must be accurate, objective, complete, and signed and dated.

8.3 Safe Distances and Places of Refuge

In case of an emergency, a designated area (may be onsite or offsite, depending on the site conditions and shall be determined at the onset of the project) will serve as the immediate place of refuge. For this project, the place of refuge shall be the new fire hall building. Personnel in the exclusion zone should evacuate through the decontamination zone to the refuge location, both for their own personal safety and to prevent hampering response/rescue efforts. Following an evacuation, the SSHC will account for on-site personnel. If evacuation from the work site is necessary, the project vehicles will be used to transport on-site personnel to the place of refuge.

8.4 Emergency Communications

There will be a cellular telephone located in either the Site Manager's and/or SSHC's vehicle for emergency use. Emergency telephone numbers are listed in Attachment 1 of this HASP. Depending on the project and site conditions, additional emergency signals such as air horns, walkie-talkies, and/or other audible emergency signals may be required which will be located within the exclusion zone and decontamination area to signal others of an emergency. The SSHC shall brief all personnel regarding audible emergency signals to be used during the site activities prior to starting the work, as applicable. Site personnel will use the following hand signals to inform others of emergencies:

- Hand gripping throat - out of air, cannot breathe.
- Grip partner's wrist or both hands around waist - leave area immediately.
- Hands on top of head - need assistance.
- Thumbs up - everything's OK, or I understand.
- Thumbs down – No.

8.5 Emergency Procedures

The nature of work at a contaminated, or potentially contaminated, work site makes emergencies a continual possibility. Although emergencies are unlikely and occur infrequently, a contingency plan is required to assure timely and appropriate response actions. The contingency plan is reviewed at tailgate safety meetings.

8.5.1 Incident Procedures

If an emergency incident occurs, the following actions will be taken:

1. Size-up the situation based upon available information.
2. Notify the SSHC.

3. Only respond to an emergency if personnel are sufficiently trained and properly equipped.
4. As appropriate, evacuate site personnel and notify emergency response agencies, e.g., police, fire, etc.
5. As necessary, request assistance from outside sources and/or allocate personnel and equipment resources for the response.
6. Consult the posted emergency telephone list and contact key project personnel.
7. Following the emergency event and response, prepare an incident report.

All site personnel should be aware of the location of firefighting equipment when fire risk is applicable to the site (i.e. when drill rig is on site). Personnel shall only extinguish minor fires. Large fires will require contacting the local fire department and allowing them to handle the fire. As appropriate, the local fire department will be contacted prior to initiating site activities to inform them of the potential hazardous materials that could be encountered in an emergency.

8.5.2 Medical Emergencies

In the event of an accident or injury, workers will immediately implement emergency decontamination and isolation measures to assist those who have been injured or exposed and to protect others from the hazards. Upon notification of an exposure incident, the SSHC will contact the emergency response personnel who can provide medical diagnosis and treatment. If necessary, immediate medical care will be provided by trained personnel competent in first aid procedures. Trained personnel competent in such matters will only provide other on-site medical and/or first aid response to an injury or illness.

8.6 Emergency Routes

Should an emergency signal be sounded, on-site personnel should immediately stop what they are doing, and return to the decontamination area. Personnel in the decontamination area and the support zone shall evaluate the emergency and contact the appropriate off site emergency personnel. Once on site personnel return to the decontamination area, there will be someone there to direct them as to what to do. It is imperative that the SSHC or designated alternate account for all site personnel. The SSHC will direct all personnel to the nearest safe refuge as appropriate.

The closest hospital to the site is Strong Memorial Hospital in Rochester, New York. **The hospital route is included as Attachment 2.**

If the emergency event threatens the surrounding community, it is important that the local police and fire departments be contacted immediately regarding the potential danger.

8.7 Spill Control

A major spill is not anticipated at the site. Should a spill of any type occur, the employee should report it immediately to the SSHC, who will make arrangements for the proper cleanup of the spill. These arrangements will include diking and ditching, as necessary, as well as the use of absorbents such as vermiculite or Speedi Dry. The emergency response personnel will be contacted immediately by SSHC in the event that on-site materials can not immediately contain the spill.

8.8 Personal Protective and Emergency Equipment

There will be suitable equipment on site for small emergency events such as additional PPE and first aid kits, and fire extinguishers (when fire risk exists while drill rig is on site). In the event of a major emergency event, off-site personnel will be contacted immediately.

8.9 Decontamination Procedures

The extent of emergency decontamination depends on the severity of the injury or illness and the nature of the contamination. Minimum decontamination will consist of detergent washing, rinsing, and removal of contaminated outer clothing and equipment. If time does not permit the completion of all of these actions, it is acceptable to remove the contaminated clothing without washing it. If the situation is such that the contaminated clothing cannot be removed, the person should be given required first aid treatment, and then wrapped in plastic or a blanket prior to transport to medical care. If heat stress is a factor in the victim's illness/injury, the outer protective garment will be removed immediately.

8.10 Evacuation Routes

Unless otherwise directed, evacuation will be made through the decon area to the designated refuge location for a head count.

8.11 Response Critique

Should an incident on-site occur, the SSHC will analyze the response efforts in order to continually improve on-site conditions and procedures. The SSHC must complete follow-up activities before on-site work is resumed following an emergency. Used emergency equipment must be recharged, refilled or replaced. Government agencies must be notified as required in their regulations.

ATTACHMENT 1**EMERGENCY CONTACTS
(To be posted)**

Contact	Person or Agency	Phone Number
Chili Fire Department	Gerad Levey	(585) 889-2873
NYSDEC Project Manager	Tasha Mumbrue	(585) 226-5459
Law Enforcement	(T) Chili Police Department	911 (585) 247-2262
Confined Space Rescue (Fire Department)	(T) Chili Fire Department	911 (585) 889-2873
Ambulance	(T) Chili Fire Department	911 (585) 889-2873
Hospital - Emergency	Strong Memorial Hospital	(585) 275-5830
B&L Project Manager	Jon Sundquist, Ph. D.	(315) 457-5200
B&L Site Manager/Site Safety Officer	Don Howe	(315) 457-5200
B&L Officer-in-Charge/Program Manager	Jeffrey J. Reed, P.E.	(315) 457-5200

ATTACHMENT 2

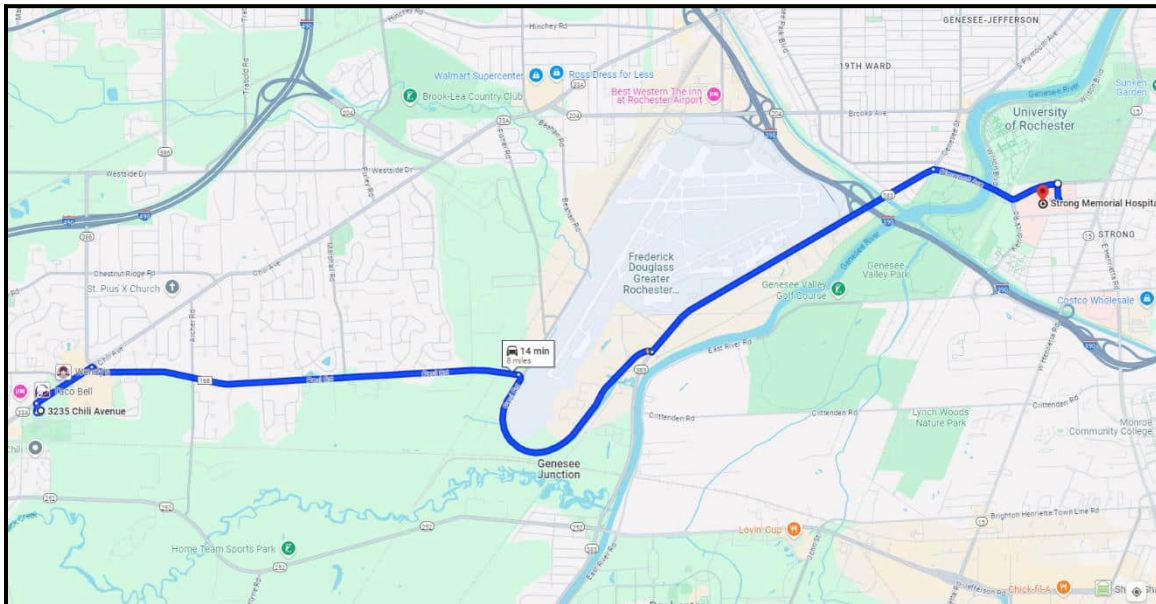
Hospital Route

From: 3235 Chili Ave, Chili, NY

To: Strong Memorial Hospital, 601 Elmwood Ave, Rochester, NY 14642

1. Turn right onto NY-33A E 0.4 miles
2. Turn right onto Paul Rd 2.7 miles
3. Turn right to stay on Paul Rd 1.7 miles
4. Turn left onto NY-383 N/Scottsville Rd 2.1 miles
5. Continue onto Elmwood Ave 0.8 miles
6. Turn right onto Thomas H Jackson Drive 0.1 miles

(This should be posted in several conspicuous locations at the site.)



Appendix D
Community Air Monitoring Plan

**Town of Chili Fire Department
NYSDEC Site No. 828219**

3231 Chili Avenue
Rochester, New York

Prepared For
Chili Fire Department

Chili Fire Department
3231 Chili Ave
Rochester, NY 14624

October 2024

Town of Chili Fire Department
Town of Chili, Monroe County, New York

NYSDEC Region #8

Community Air Monitoring Plan

October 2024

Prepared For:

Chili Fire Department
3231 Chili Ave
Rochester, NY 14624

Prepared By:

Barton & Loguidice, D.P.C.
11 Centre Park
Suite 203
Rochester, NY 14614

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1.0 Introduction

This Community Air Monitoring Plan (CAMP) was prepared by Barton & Loguidice, D.P.C., (B&L) for the Town of Chili Fire Department site to describe the procedures required to be performed during all intrusive activities to monitor for the presence of organic vapor or particulate releases to the atmosphere.

2.0 Monitoring Requirements

The Site Manager, as defined by the Health and Safety Plan (HASP) or designee will perform air monitoring in accordance with the New York State Department of Health (NYSDOH) Community Air Monitoring Plan. Direct reading instruments will be calibrated in accordance with manufacturer's requirements and the results of the calibration will be documented.

This Community Air Monitoring Plan (CAMP) sets forth the procedures for performing real-time monitoring for particulates (i.e., dust) at the downwind perimeter of each designated work area with respect to specific activities to be completed. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses, and on-site or nearby workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of remedial and/or development activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

Continuous monitoring will be required for all subsurface intrusive activities. Subsurface intrusive activities include, but are not limited to, soil boring activities, and soil excavation and handling.

All CAMP readings must be recorded and will be submitted to New York State Department of Environmental Conservation (NYSDEC) and NYSDOH personnel on a daily basis for review.

2.1 Volatile Organic Compound Monitoring

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

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area, or exclusion zone, exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic

vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities is permitted to resume with continued monitoring.

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

2.2 Particulate Monitoring

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone or work area. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period, or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level, and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work is permitted to resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

Appendix E

Principal Personnel

Chili Fire Department Contact

Gerad Levey
Chili Fire Department
3231 Chili Ave
Rochester, New York 14624
leveyg@chilifire.org

Engineering Consultant

Barton & Loguidice Environmental Engineering and Geology, PLLC
11 Centre Park Suite 203
Rochester, NY 14614

Project Manager: Jon Sundquist
jsundquist@bartonandloguidice.com

Engineer of Record: Jeffrey Reed PE
jreed@bartonandloguidice.com

Subcontractors

Drilling:

Nothnagle Drilling, Inc.
1821 Scottsville-Mumford Road
Scottsville, New York 14546

Analytical:

SGS North America Inc.
2235 Route 130
Dayton, NJ 08810

Surveying:

Popli Design Group
555 Penbrooke Drive
Penfield, NY 14526

Data Validation:

Alpha Geosciences
679 Plank Road
Clifton Park, New York 12065

Jon A. Sundquist, Ph.D.

Senior Project Engineer

jsundquist@bartonandloguidice.com



Years of Experience: 33

Education:

Ph.D., (Chemical Engineering), University of California, Berkley
B.S., (Chemical Engineering), Cornell University

Professional Affiliations:

Air and Waste Management Association, Niagara Frontier Section

Additional Training:

Hazardous Waste Operations Health & Safety (HAZWOPER)

Barton&Loguidice

Summary

As an Engineering Project Manager, Dr. Sundquist has 33 years of experience specializing in Environmental Remediation Projects for public and private clients. Dr. Sundquist has extensive experience in all phases of the environmental remediation process from initial site assessment, through remedial investigation, feasibility study, design, and remedial construction management. He has designed and implemented a variety of remedial technologies including in situ solidification/stabilization, in site electrical resistance heating, chemical oxidation, aerobic and anaerobic biological treatment, dual-phase extraction, and ex-situ treatment technologies. He implements site management plans including treatment system operation and maintenance.

Relevant Project Experience

Hempstead Former MGP Site

Dr. Sundquist managed the design, construction, and oversight of remedial work at a former MGP site in Hempstead, NY. Remedial activities included design and construction of oxygen injection systems to promote biodegradation of the downgradient dissolved plume, and in situ solidification of the source material. The groundwater treatment system comprised two separate injection lines and has increased oxygen concentrations in the groundwater to 45 mg/L promoting biodegradation and has shrunk the plume from over 3,000 feet in length to less than 400 feet in length. He managed review of the submittals and directed field inspectors to verify that the system was installed in accordance with the design.

For solidification, he oversaw treatability studies for selecting grout mixes to meet performance requirements and to evaluate the reductions in leachability achieved through solidification. Developed specifications for solidification using auger mixing. Developed bid items and measurement and payment descriptions to allow the client to manage costs while meeting regulatory requirements. Provided engineering services during construction of this 60 million dollar remedial action.

Williamsburg Former MGP Site

Dr. Sundquist managed the design, construction, and oversight of remedial work at a former MGP site in Williamsburg, Brooklyn, NY. Remedial activities included design and construction of NAPL recovery wells, in situ solidification of MGP waste and mass excavation within a shored excavation area. He developed performance specifications for solidification of holder contents, incorporating the results of treatability testing for specification of the grout mix. Managed the selection of support of excavation technique, selecting sheetpiling installed into a cement-bentonite slurry to minimize vibration impacts and to provide additional NAPL migration control. Provided engineering services during construction which included review and approval of contractor submittals, response to requests for information and issuance of field orders.

Amphenol Corporation Site Management

For an electrical connector manufacturer in Central New York, Dr. Sundquist developed site management plans, an operation and maintenance manual for a groundwater treatment system, and provided data reporting services required by regulators.

Tri-State Laundry Site Management

For a site in the New York State Brownfield Cleanup Program, Dr. Sundquist developed a site management plan. The SMP was accepted by NYSDEC and facilitated the site obtaining its certificate of completion.

Kliegman Bros. RI/FS/RD/RA/ Interim Remedial Measure (IRM)

Dr. Sundquist managed performance of an RI/FS/RD/RA and implementation of an IRM at a former PCE distributor in Glendale, Queens. Managed a phased groundwater characterization program to document groundwater concentrations up to 75 milligrams per liter (mg/L). Documented a completed vapor intrusion program and designed and installed sub-slab depressurization systems to reduce indoor air concentrations. Developed remedial alternatives through the FS process and drafted the Record of Decision (ROD). Designed and constructed an SVE system as an IRM to remove soil gas contamination acting as a source of the vapor intrusion problems. Managed the operation of the SVE IRM removing 5,000 pounds of PCE a month. Using these results, managed design of full scale SVE system. Designed a full scale ISCO system to treat PCE in groundwater via Fenton's reagent and permanganate, in sequence. Managed the procurement of a remedial contractor and oversaw the delivery of permanganate to reduce the size of the groundwater plume.

West Side Corporation In-Situ Treatment

Dr. Sundquist managed efforts including pilot scale treatability testing, remedial design, and construction management. Executed pilot scale treatability testing of in situ chemical oxidation (ISCO) and soil vapor extraction (SVE) to treat tetrachloroethene (PCE) contaminated soil and groundwater at an industrial site in New York City. SVE tests included constant rate and a stepped rate tests to estimate a radius of influence in the sandy vadose zone of 50 feet. Based on pilot testing results, selected in-situ thermal treatment as a primary source area treatment technology. He managed the design of an in-situ Electrical Resistance Heating (ERH) remedy for the saturated zone source soils and SVE for the more laterally extensive vadose zone contamination. Managed the construction implemented by a NYSDEC-contracted remediation firm, successfully removing PCE from the source area to non-detect levels. Managed Soil Vapor Intrusion Investigation for exposures in the residential area downgradient of the course, sampling approximately 100 structures, and installing several mitigation systems. Designed a permanganate treatment system to reduce the size of the downgradient plume.

Oser Ave In-Situ Treatment

Dr. Sundquist managed the design and construction inspection of in situ chemical oxidation with permanganate at an industrial facility in Long Island, NY. He completed treatment at the source area (Operable Unit 1) effectively eliminating the source except for some minor rebound in the original spill area. Designed the remedy for Operable Unit 2 (downgradient plume) to treat offsite PCE using oxidation by permanganate.

N. Meadow Street Dry Cleaner Sites, Ithaca, NY

Dr. Sundquist managed the investigations of two dry cleaner sites in Ithaca, NY where PCE releases have contaminated soil and groundwater. Managed installation of groundwater and soil gas wells, followed by the collection of air samples from dozens of residences, installing mitigation systems where levels exceed NYSDOH guidance values. Prepared Remedial Investigation reports documenting the extent of contamination in soil and groundwater and Feasibility Study to select a remedial technology. Designed an enhanced anaerobic biodegradation remedy using vegetable oil to provide electron acceptors for the reduction of chlorinated solvent contamination. Managed implementation of the remedy through three injections reducing the size of the groundwater plume.

Jeffrey J. Reed, P.E.

Vice President

jreed@bartonandloguidice.com



Years of Experience: 23

Education:

M.E., Agricultural and Biological Engineering, Cornell University, 2001

B.S., Agricultural and Biological Engineering, Cornell University, 1999

Professional Registrations:

40-Hour HAZWOPER Certification; Registered Professional Engineer – New York, 2006; NYS Class A/B UST Operator; NYSDOL Asbestos Designer

Barton&Loguidice

Summary

Mr. Reed's primary responsibilities are in the areas of air permitting and compliance reporting, air emission inventories, greenhouse gas emission inventories and reporting, noise assessments, environmental compliance audits, fleet fueling system design, petroleum and chemical bulk storage system design, spill prevention and control, solid and hazardous waste management, environmental site assessments, environmental remediation, and environmental compliance engineering. Mr. Reed currently serves as the environmental engineering program manager for air permitting, emission inventories and compliance, noise assessments, fleet fueling system and petroleum bulk storage, chemical bulk storage, spill prevention, environmental remediation, and environmental compliance programs. Mr. Reed also serves on B&L's corporate Health and Safety Committee.

Hazardous Waste Management and Compliance Reporting, Various Clients

Mr. Reed provides waste management compliance assistance and engineering services related to New York State Department of Environmental Conservation (NYSDEC) hazardous waste reporting for hazardous products generated by various facilities. Mr. Reed also assists clients with hazardous waste characteristic testing and records management. Reporting is thorough the NYSDEC Hazardous Waste Reporting system and many projects also require assistance with hazardous wastes subject to Special Assessments on the Generation, Treatment or Disposal of Hazardous Waste in New York State (NYS Tax Form TP-550). Mr. Reed often assists clients with proper characterization and disposal of various hazardous and non-hazardous waste streams, industrial wastes, universal waste, and non-hazardous wastes. Mr. Reed recently oversaw hazardous waste reporting for lead paint waste disposal project.

Contaminated Soils Remediation, Oswego City School District, Oswego, New York

B&L work with King + King Architects to assist the Oswego City School District (OCSD) with remediation of contaminated soils from one of the District's grass playing fields. B&L developed and implemented a pre-design soils investigation, performed waste characterization sampling to determine the extent and classification of materials to be removed, developed the soils remediation and restoration design plans which included the removal and treatment of XX,000 tons for impacted soils to non-hazardous levels for landfill disposal, excavation and removal of XX,000 tons of non-hazardous impacted soils for landfill disposal, and replacement of these soils with a 2-foot thick clean soil cap. B&L provided bidding assistance to the District. During the construction work related to the project, B&L provided technical assistance, answered contractor and District questions, construction contract administration assistance, submittal review, field observation of construction, provided disposal assistance for petroleum impacted materials, and assisted the District with review of contractor payment applications. B&L is currently completing the Construction Completion Report to document the remedial activities for the project.

Ogdensburg Brownfield Assessment Projects, Ogdensburg, New York

B&L has been providing Phase I and II ESAs at multiple sites in Ogdensburg, New York, with a focus on sites in the waterfront area for strategic redevelopment and revitalization planning. B&L's services have included remediation for PCB and metals-contaminated soil, petroleum bulk storage remediation/assessment, grant

assistance, and cleanup planning. Mr. Reed provided design assistance and engineering QA/QC review for these projects.

Supplemental Phase II ESAs, Three Industrial Sites, Cattaraugus County, New York

B&L prepared site redevelopment assessments and feasibility studies for three abandoned industrial sites. The goal was to return the obsolete and abandoned manufacturing facilities to a condition that will support new use, private investment, job creation, and economic development throughout the County. B&L conducted subsequent environmental and structural investigations to close data gaps from the prior studies. Mr. Reed was project manager for this project, which included supplemental phase II sampling after a detailed review of past Phase I and II ESA reports, soil and groundwater sampling via direct-push drilling, remedial cleanup cost estimating, future owner environmental liability estimating, and asbestos and lead-based paint inspections. B&L presented project findings to county representatives at a public meeting. Mr. Reed served as project manager of a multi-disciplined team and provided engineering QA/QC review for the project.

Brownfield Site – Building 306 Mercury Remediation, Maxon Alco Holdings Schenectady, New York

Mr. Reed served as a QA/QC engineer on the B&L remedial team for a brownfield project which included a supplemental remedial investigation (RI), alternative analysis report (AAR), interim remedial measures (IRMs), remedial design and remedial action, and a final engineering report (FER). Site characterization work used in preparation of the RI included groundwater monitoring wells and soil borings, in order to evaluate remedial alternatives for the property, which had been a former locomotive manufacturing complex. Site preparation as part of the RI included demolition of the former manufacturing buildings, requiring preparation of demolition work plans, and construction completion reports. IRMs and remedial actions at this petroleum (diesel fuel) and hazardous trichloroethylene (TCE) site included source removal; tank removal and closure; in-situ chemical oxidation; pump and treat technologies for areas of free diesel product, resulting in a remedial design implementing soil and cover systems capping areas of low level impacts, natural attenuation for the toe of the chlorinated plume, and engineering and institutional controls for soil vapor monitoring and mitigation and site cover integrity. Throughout the project, Mr. Reed was responsible for review of the engineering design plans, site visits to review work, field engineer schedule coordination, review of work plans and reports, and design review for the remedial design documents. Following receipt of the COC for the site, the B&L team worked to implement, prepare and approve the PRR under the approved site management plan.

Former ALCO Site - Brownfield Clean-Up Project, Galesi Group

The 56-acre site of the former American Locomotive Company (ALCO) in Schenectady, NY was entered into the New York State Department of Environmental Conservation's Brownfield Clean-up Program (BCP) to conduct Site Investigations and Remedial Actions on the property. The Brownfield Clean-Up Project became a key vehicle for the transformation of the ALCO industrial site into a new modern mixed use development. B&L provided managing and engineering services for the remedial actions on the property. Mr. Reed was supervising environmental engineer, QA/QC and construction support. Project Cost: \$170,000.

BCP Project - Mud Creek and Upland Areas of Concern, Special Metals Corporation, New Hartford, New York

Mr. Reed managed the Special Metals Corporation (SMC) Brownfield Cleanup Program (BCP) project with separate consultants for the Creek Remedy (GHD) and Upland Areas of Concern (B&L) portions of the overall project. The project included remedies for upland areas of the plant site, and also the Mud Creek remedy for remediation of the Mud Creek, associated wetland areas, tributaries, and stormwater ditches from the project site. The project included creek bypass pumping during remediation activities to allow for remedial exaction and restoration within the creek and wetland areas. Responsibilities included primary point of contact with NYSDEC, weekly construction progress meetings and distribution of minutes, coordination of deliverables for the project, monthly BCP project progress reporting, project scheduling, and coordination of consultants, subconsultants, contractors, regulators, client and attorneys.

Exhibit 1
2021 Phase II ESA

Phase II Environmental Site Assessment Data Package

Location:

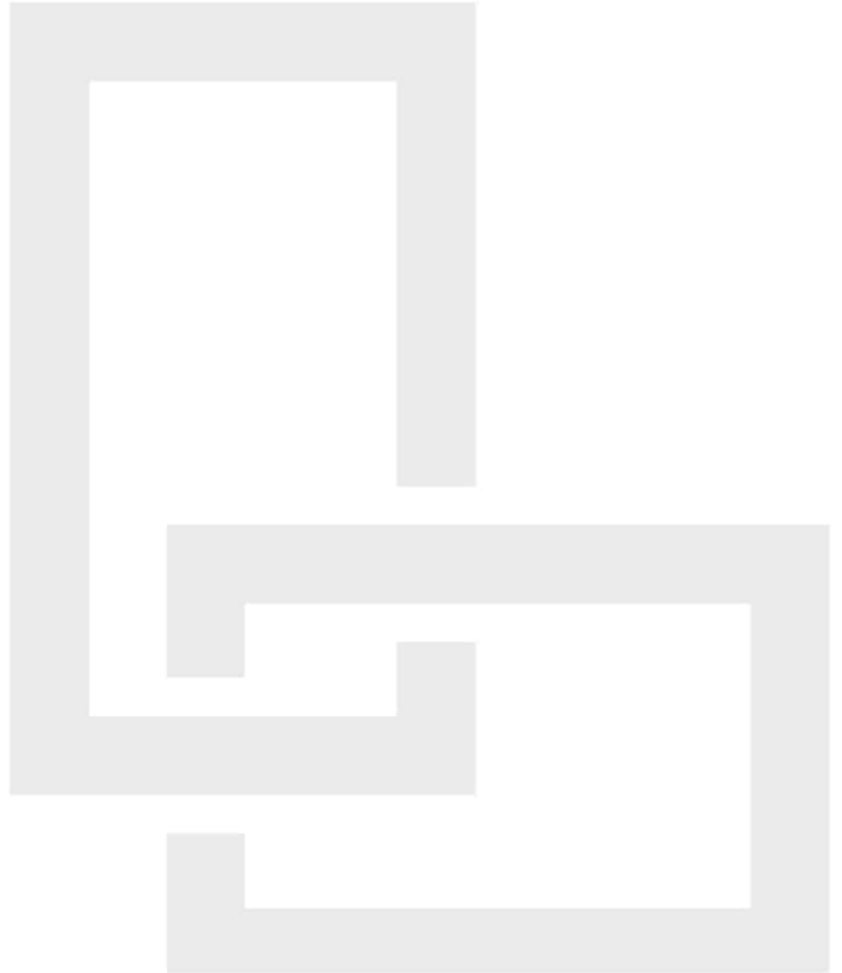
3231 Chili Avenue,
Chili, New York

Prepared for:

Chili Fire Department
3231 Chili Avenue
Chili, New York 14624

LaBella Project No. 2210426

March 24, 2021



300 State Street, Suite 201 | Rochester, NY 14614 | p 585-454-6110 | f 585-454-3066

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Appendix 2	Laboratory Report



1.0 INTRODUCTION

LaBella Associates, D.P.C. (“LaBella”) was retained by Tompkins Bank of Castile, to conduct a Phase II Environmental Site Assessment (ESA) for a portion of the property located at 3231 Chili Avenue in the Town of Chili, Monroe County, New York. This Phase II ESA Data Package provides a summary of the Phase II ESA findings. Figure 1 illustrates the overall parcel and Figure 2 illustrates the “Site”. This Phase II ESA has been performed in conformance with the scope and limitations of ASTM Practice E 1903-11.

1.1 Special Terms & Conditions

The findings of this Phase II ESA are based on the scope of work and project objectives as stated in LaBella Proposal number P2100411 dated December 10, 2020.

1.2 Limitations & Exceptions

Work associated with this Phase II ESA was performed in accordance with generally accepted environmental engineering and environmental contracting practices for this region. LaBella Associates, D.P.C., makes no other warranty or representation, either expressed or implied, nor is one intended to be included as part of its services, proposals, contracts or reports.

2.0 BACKGROUND

2.1 Site Description & Features

The overall parcel comprises approximately of 12.10 acres of land located to the south of Chili Avenue. The overall parcel is developed with a single story 13,534 square foot building constructed in 1962 and is occupied by the Chili Fire Department. The overall parcel also houses an approximate 450 square foot, slab-on-grade Bathroom that was constructed in 1969 and is currently not used and an approximate 530 square foot slab-on-grade Shed that was built in approximately 1994 that is currently used as a fire training, mock second story roof. The subject area (Site) for this Phase II ESA includes the eastern portion of the overall parcel. The Site boundary is shown on the attached Figure 2.

2.2 Physical Setting

The Site is located on 3231 Chili Avenue, in the Town of Chili, Monroe County, New York within a predominantly commercial area.

2.3 Site History & Land Use

Based on the historical records reviewed in the LaBella Phase I dated November 25, 2020, the overall parcel appears to have been undeveloped from at least 1872 until at least 1935. The northern portion of the parcel appears to have been first developed with a small structure in at least 1950 and was removed prior to 1969. The current Fire Hall, Bathroom, and Shed were developed in 1962, 1969, 1994 respectively. The parcel appears to have been occupied by the Chili Fire Department since at least 1965 to present day. Adjacent properties were historically utilized for commercial, residential, and undeveloped purposes.



2.4 Adjacent Property Use

The Site is bordered by the following properties:

Direction	Land Use
North	Chili Plaza (3240 Chili Avenue); Calnon & Cilano DDS PC (3220 Chili Avenue); Vail Agency, Inc. (3229 Chili Avenue); State Farm Insurance (3221 Chili Avenue); Vacant land (3219 Chili Avenue).
East	Town & Country Family Restaurant (3205 Chili Avenue); Verizon (3193 Chili Avenue); Target and CVS (3181 Chili Avenue); Wegmans (3175 Chili Avenue).
South	Chili Parks & Recreation (3235 Chili Avenue)
West	Chili Parks & Recreation (3235 Chili Avenue)

2.5 Summary of Previous Studies

LaBella recently completed a Phase I ESA for the overall parcel dated November 25, 2020. Based on planned construction activities, this Phase II ESA included evaluation of the following Recognized Environmental Condition (REC).

Historical Use of the Site and the Use of PFCs

The southern portion of the Site, addressed as 3231 Chili Avenue, appeared to be developed in at least 1962 and utilized as the town fire department and training facility since that time. Perfourinated compounds (PFCs) are used in firefighting foams manufactured in the United States prior to 2003 and are still used in firefighting foams manufactured in other countries. PFCs are classified as a hazardous substance by the New York State Department of Environmental Conservation (NYSDEC). According to a survey conducted by the NYSDEC on June 1, 2017, Class B fire suppression foam is currently stored and utilized for training purposes on the Site. In addition, fire suppression foam has been used in the past.

Based on the REC identified above, there is a potential for subsurface impacts. The purpose of this Phase II ESA is to further evaluate the fire training area and the area of potential development as part of a construction project to the north of the fire training area.

3.0 OBJECTIVE

The objective of this Phase II ESA was to evaluate the fire training portion of the site and the area to the north and east where redevelopment work is being planned. Specifically, LaBella understands that a building is being planned to be constructed north of the fire training area and a stormwater pond is proposed for the area east of the fire training area. LaBella also understands that the fire training area is currently planned to remain as-is.

4.0 SCOPE OF WORK

To achieve the project objectives the following Scope of Work was performed:

1. Prior to the initiation of subsurface work, an underground utility stake-out, via *Dig Safely New York*, was completed at the Site (ticket number 12100-000-675) to locate utilities in the areas where the subsurface assessment would take place.



2. A direct push soil boring and sampling program of the overburden at the Site was implemented. Soil borings were advanced with a track-mounted Geoprobe® Systems Model 6620DT direct-push sampling system. The use of direct-push technology allows for rapid sampling, observation, and characterization of overburden soils. The Geoprobe utilizes a 5-foot MacroCore® sampler with disposable polyethylene sleeves. Soil cores are retrieved in 5-foot sections and can be easily cut from the polyethylene sleeves for observation and sampling. The MacroCore® sampler was decontaminated between boring locations using an alconox and potable water solution. A total of twelve (12) soil borings were advanced at the Site to depths ranging from 11 to 15 feet (ft) below ground surface (bgs). Soil boring locations are depicted on Figure 2.
3. Soils from the borings were continuously assessed for visible impairment, olfactory indications of impairment, and/or indication of detectable volatile organic compounds (VOCs) with a photo-ionization detector (PID). Positive indications from any of these screening methods are collectively referred to as “evidence of impairment.”
4. Twelve (12) soil borings were converted to temporary overburden groundwater monitoring wells. Each well was completed with 5-ft of 0.010-slot well screen connected to an appropriate length of solid PVC well riser to complete the well. The annulus was sand packed with quartz sand to a nominal depth of 1 to 3-ft bgs. A 1 to 2-ft bentonite seal was placed above the sand pack.
5. Soil and groundwater samples were placed in a cooler on ice and sent under standard chain of custody procedures to Alpha Analytical in Westborough, MA, and Environmental Laboratory Accreditation Program (ELAP) certified laboratory. The following laboratory analysis was performed:

a. Soil

Sample ID	Exploration Location	Sample Depth (ft bgs)	Laboratory Analyses
SB-01 (0-1.5)	SB-01	0-1.5	PFAS
SB-03 (0-1.5)	SB-03	0-1.5	
SB-06 (0-1.5)	SB-06	0-1.5	
SB-09 (0.5-2)	SB-09	0.5-2	
SB-10 (2.5-3.5)	SB-10	2.5-3.5	

Notes:

1. United States Environmental Protection Agency (USEPA) PFAS method 537.1

b. Groundwater

Sample ID	Exploration Location	Screened Interval (ft bgs)	Laboratory Analyses
MW-01	SB-04	6.3-11.3	PFAS
MW-02	SB-07	9.6-14.6	
MW-03	SB-10	7-12	

Notes:

1. United States Environmental Protection Agency (USEPA) PFAS method 537.1



5.0 FINDINGS

5.1 Site Geology and Hydrology

A total of twelve (12) soil borings were advanced at the Site designated SB-01 through SB-12. The borings were advanced generally to equipment refusal which ranged from approximately 11 to 15-ft bgs.

Soils at the Site consisted generally of brown fine to medium grained sands coupled with brown silt. Trace to some amounts of reddish to grey clay were seen throughout the site. Additionally, sub-rounded to sub-angular fine to coarse gravels were observed in all borings.

All soil cores were continuously assessed by a LaBella Environmental Geologist for soil type and evidence of impairment. Elevated PID readings (i.e., greater than 1 part per million (ppm)) were not observed in any of the twelve (12) soil borings. Refer to Section 5.2 for additional information regarding field screening results.

Three (3) temporary overburden groundwater monitoring wells (designated as MW-01, MW-02, and MW-03) were installed at the Site within soil boreholes SB-04, SB-07, and SB-10 respectively. The wells were completed with 5-ft of 0.01-inch slotted screen below PVC risers, to total depths of 11.3-ft, 14.6-ft, and 12-ft bgs, respectively. The borehole annulus around the screen section and at least 1-ft. above the screen was filled with quartz sand and a bentonite seal was placed on top of the sand. Soil boring and monitoring well locations are shown on Figure 2. Copies of the Soil Boring and Monitoring Well Logs are included in Appendix 1.



5.2 Field Screening Results

The table below summarizes PID readings obtained at various depth intervals from the soil borings:

Test Boring/Well Summary and Soil PID Readings

Test Boring ID	Well Number	Sample Interval (ft bgs)							
		0-2	2-4	4-6	6-8	8-10	10-12	12-14	14-15
SB-01	--	0.7*	0.0	0.0	0.0	0.0	0.0	0.0	--
SB-02	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--
SB-03	--	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	--
SB-04	MW-01	0.0	0.0	0.0	0.0	0.0	0.0	--	--
SB-05	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--
SB-06	--	0.0*	0.0	0.0	0.0	0.0	0.0	--	--
SB-07	MW-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SB-08	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SB-09	--	0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SB-10	MW-03	0.0	0.0*	0.0	0.0	0.0	0.0	0.0	0.0
SB-11	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SB-12	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes:

1. All PID readings were collected utilizing a Minirae 3000 photoionization detector and are expressed in parts per million.
2. The PID screening is performed as a method of determining general presence of VOCs in soil, and to provide a basis for selecting samples for laboratory analysis. The readings obtained provide only an indication of the relative levels of VOC presence in the soil, and are not considered to be a direct quantization of actual soil VOC concentration.
3. "--" denotes boring not completed to above-listed depth or insufficient recovery occurred at specified depth.
4. "*" denotes a soil sample was submitted for laboratory analysis from this interval.

5.3 Laboratory Analytical Results

5.3.1 Soil

A total of five (5) soil samples were selected for laboratory analysis. One (1) soil sample each was collected from SB-01 (0-1.5 ft bgs), SB-03 (0-1.5 ft bgs), SB-06 (0-1.5 ft bgs), SB-09 (0.5-2 ft bgs) and SB-10 (2.5-3.5 ft bgs) and submitted for laboratory analysis of United States Environmental Protection Agency (USEPA) Method 537.1 for Poly- and perfluorinated compounds (PFAS). Results were compared to NYSDEC Soil Cleanup Objectives identified in the NYSDEC guidance document titled Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances dated January 2021 (hereinafter referred to as NYSDEC PFAS SCOs).

PFAS:

Five (5) soil samples were analyzed for PFAS. PFAS were detected in all the five (5) soil samples at concentrations above laboratory method detection limits (MDLs). The following summarizes the results based on the area being evaluated:

- **Building Development Area – North of Fire Training Area (SB-01 – SB-05):** Two soil samples, SB-01 (0-1.5 ft.) and SB-06 (0-1.5 ft.), were analyzed from the area of the planned building development area. PFAS concentrations were below the NYSDEC PFAS SCOs (Unrestricted Use, Commercial Use and Protection of Groundwater) in sample SB-03 (0-1.5



ft.). PFAS concentrations in sample SB-01 (0-1.5 ft) exceeded the Unrestricted Use SCO; however, the concentrations were below the Commercial Use and Protection of Groundwater SCOs.

- Stormwater Pond Development Area – East of Fire Training Area (SB-06 & SB-07): One soil sample, SB-06 (0-1.5 ft.), was analyzed from the area of the planned stormwater pond development area. PFAS concentrations in this sample were above the NYSDEC PFAS Unrestricted Use and Protection of Groundwater SCOs but were below the NYSDEC Commercial Use SCOs.
- Fire Training Area (SB-09 – SB-12): Two soil samples, SB-09 (0.5-2 ft.) and SB-10 (2.5-3.5 ft), were analyzed from this area. area of the planned building development area. PFAS concentrations were below the NYSDEC PFAS SCOs (Unrestricted Use, Commercial Use and Protection of Groundwater) in sample SB-09 (0.5-2 ft.). PFAS concentrations in sample SB-10 (2.5–3.5 ft) exceeded the Unrestricted Use and Protection of Groundwater SCOs; however, the concentrations were below the Commercial Use SCOs.

Refer to Table 1 for a summary of targeted PFAS in soil, the laboratory report is included as Appendix 2.

5.3.2 Groundwater

A groundwater sample was collected from MW-01 (future building area), MW-02 (future stormwater pond area), and MW-03 (fire training area). The samples were submitted for laboratory analysis of PFAS using USEPA Method 537.1. Results were compared to NYSDEC guidance document titled Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances dated January 2021 (hereinafter referred to as NYSDEC PFAS Guidelines).

PFAS:

- Building Development Area – North of Fire Training Area (SB-04/MW-1): The groundwater sample from this location detected low-levels of PFAS; however, the detected concentrations were below the NYSDEC PFAS Guidelines for groundwater. The total concentration of PFAS in this sample also was below the NYSDEC PFAS Guideline for total PFAS.
- Stormwater Pond Development Area – East of Fire Training Area (SB-07/MW-02): The groundwater sample from this location detected eleven (11) PFAS compounds above the method detection limits and six (6) of these were also above the NYSDEC PFAS Guidelines for groundwater. The total concentration of PFAS in this sample was 3,245.87 ng/L which exceeds the NYSDEC PFAS Guideline for total PFAS of 500 ng/L.
- Fire Training Area (SB-10/MW-03): The groundwater sample from this location detected thirteen (13) PFAS compounds above the method detection limits and eight (8) of these were also above the NYSDEC PFAS Guidelines for groundwater. The total concentration of PFAS in this sample was 23,024.96 ng/L which exceeds the NYSDEC PFAS Guideline for total PFAS of 500 ng/L.

Refer to Table 2 for a summary of targeted PFAS in groundwater, the laboratory report is included as Appendix 2.



6.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Report Prepared By:

Katherine Truong
Environmental Geologist

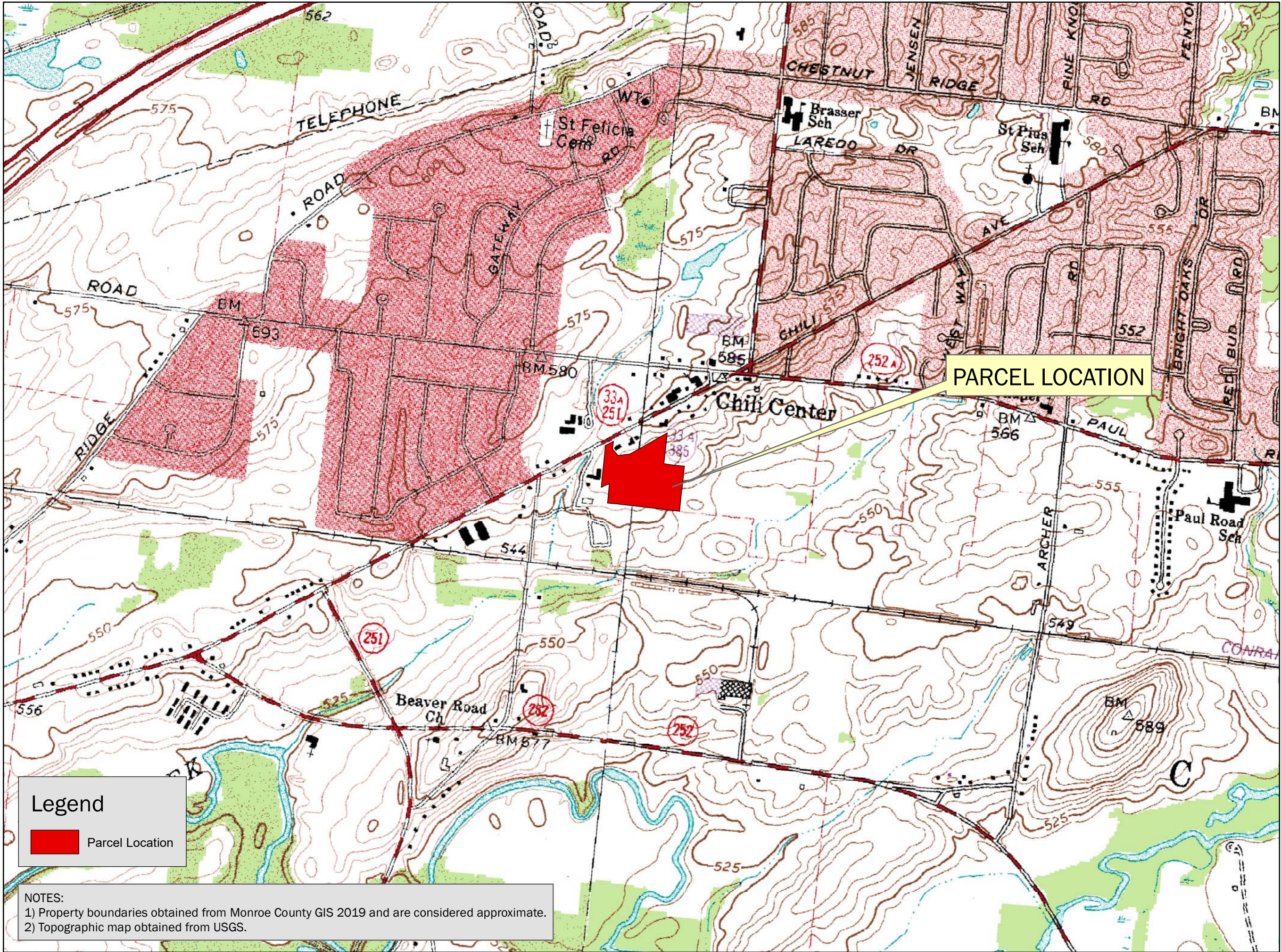
Report Reviewed By:

Daniel P. Noll, PE
Project Manager

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PACKAGE\RPT.2021.03.24.DATAPACKAGEREPORT_2210426.DOCX



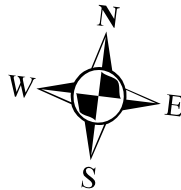
FIGURES



Legend

 Parcel Location

NOTES:
1) Property boundaries obtained from Monroe County GIS 2019 and are considered approximate.
2) Topographic map obtained from USGS.



0 1,000
Feet
1 inch = 1,000 feet

INTENDED TO PRINT AS: 11" X 17"

CLIENT:

**TOMPKINS BANK
OF CASTILE**

PROJECT:

**PHASE II ESA
3231 CHILI AVENUE,
CHILI, NY**

DRAWING NAME:

PARCEL LOCATION

PROJECT #/DRAWING #/ DATE

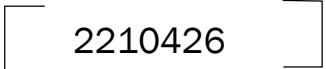



 2210426

 FIGURE 1

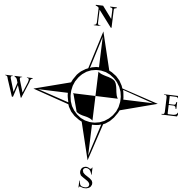
2/19/2021



Legend

-  Soil Boring
-  Monitoring Well
-  Parcel

NOTES:
1) Property boundaries obtained from Monroe County GIS 2019 and are considered approximate.
2) Testing locations are based on on-site measurements and are considered approximate.



0 70
Feet
1 inch = 75 feet

INTENDED TO PRINT AS: 11" X 17"

CLIENT:

**TOMPKINS BANK
OF CASTILE**

PROJECT:

**PHASE II ESA
3231 CHILI AVENUE,
CHILI, NY**

DRAWING NAME:

TESTING LOCATIONS

PROJECT #/DRAWING #/ DATE

2210426
FIGURE 2
2/19/2021



TABLES

Table 1
Phase II ESA
3231 Chili Avenue, Chili New York
Summary of Perfluorinated Alkyl Acids in Soil
LaBella Project # 2210426

SAMPLE ID:	Unrestricted Use Guidance Values (Jan. 2021)	Commercial Use Guidance Values (Jan. 2021)	Protection of Groundwater Guidance Values (Jan. 2021)	SB-01 (0-1.5)		SB-03 (0-1.5)		SB-06 (0-1.5)		SB-09(0.5-2)		SB-10 (2.5-3.5)	
LAB ID:				L2056540-01		L2056540-02		L2056540-03		L2056540-05		L2056540-04	
COLLECTION DATE:				12/16/2020		12/16/2020		12/16/2020		12/16/2020		12/16/2020	
SAMPLE DEPTH (FT BGS):				0 - 1.5		0 - 1.5		0 - 1.5		0.5 - 2		2.5 - 3.5	
SAMPLE MATRIX:				SOIL		SOIL		SOIL		SOIL		SOIL	
ANALYTE	ppb	ppb	ppb	Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION													
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	NL	NL	NL	<0.319	U	<0.319	U	<0.305	U	<0.336	U	<0.308	U
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	NL	NL	NL	<0.199	U	<0.199	U	<0.191	U	<0.210	U	0.386	JF
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	NL	NL	NL	<0.094	U	<0.094	U	<0.090	U	<0.099	U	<0.091	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	NL	NL	NL	<0.224	U	<0.224	U	<0.214	U	<0.236	U	<0.216	U
Perfluorobutanesulfonic Acid (PFBS)	NL	NL	NL	<0.043	U	<0.043	U	<0.041	U	<0.046	U	<0.042	U
Perfluorobutanoic Acid (PFBA)	NL	NL	NL	0.394	J	0.0394	J	0.337	J	<0.027	U	0.145	J
Perfluorodecanesulfonic Acid (PFDS)	NL	NL	NL	<0.170	U	<0.170	U	<0.163	U	<0.179	U	<0.164	U
Perfluorodecanoic Acid (PFDA)	NL	NL	NL	0.138	JF	<0.074	U	0.148	J	<0.079	U	0.348	J
Perfluorododecanoic Acid (PFDoA)	NL	NL	NL	<0.078	U	<0.078	U	<0.074	U	<0.082	U	<0.075	U
Perfluoroheptanesulfonic Acid (PFHpS)	NL	NL	NL	<0.152	U	<0.152	U	<0.145	U	<0.0160	U	<0.146	U
Perfluoroheptanoic Acid (PFHpA)	NL	NL	NL	0.315	J	0.165	J	0.332	J	<0.053	U	0.33	J
Perfluorohexanesulfonic Acid (PFHxS)	NL	NL	NL	0.094	J	<0.067	U	0.206	J	<0.071	U	1.16	
Perfluorohexanoic Acid (PFHxA)	NL	NL	NL	0.41	JF	0.374	J	0.312	J	<0.062	U	0.558	
Perfluorononanoic Acid (PFNA)	NL	NL	NL	0.829		0.132	J	0.767		0.119	J	0.622	
Perfluorooctanesulfonamide (FOSA)	NL	NL	NL	<0.109	U	<0.109	U	<0.104	U	<0.115	U	<0.105	U
Perfluorooctanesulfonic Acid (PFOS)	0.88	440	3.7	1.24	F	0.365	JF	3.76	F	0.689	F	6.42	F
Perfluorooctanoic Acid (PFOA)	0.66	500	1.1	0.53	JF	0.224	JF	0.677	F	<0.049	U	0.412	JF
Perfluoropentanoic Acid (PFPeA)	NL	NL	NL	0.702		0.726		0.817		<0.054	U	1.13	
Perfluorotetradecanoic Acid (PFTA)	NL	NL	NL	<0.06	U	<0.060	U	<0.057	U	<0.063	U	<0.058	U
Perfluorotridecanoic Acid (PFTTrDA)	NL	NL	NL	1.16		<0.227	U	0.577		<0.240	U	<0.219	U
Perfluoroundecanoic Acid (PFUnA)	NL	NL	NL	1.11		0.091	J	0.564		0.108	J	0.415	J
PFAS , Total	NL	NL	NL	6.922		2.1164		8.497		0.916		11.926	
PFOA/PFOS, Total	NL	NL	NL	1.77	J	0.589	J	4.44		0.689		6.83	J

NOTES:
PFAS analyzed by USEPA Method 537.1 and all values displayed in parts per billion (ppb).
"<" - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

Bold font indicates that the compound was detected at a concentration above its respective MDL

Yellow highlight indicates that the compound was detected at a concentration above its respective NYSDEC PFAS Guidance Value for Unrestricted Use

Single Underline indicates that the compound was detected at a concentration above its respective NYSDEC PFAS Guidance Value for Commercial Use

Bold italic font indicates that the compound was detected at a concentration above its respective NYSDEC PFAS Guidance Value for Protection of Groundwater

NL indicates Not Listed

J indicates an estimated value

U indicates the concentration was not detected above MDL

F indicates results are considered to be an estimated maximum concentration



Table 2
Phase II ESA
3231 Chili Avenue, Chili New York
Summary of Perfluorinated Alkyl Acids in Groundwater
LaBella Project # 2210426

ANALYTE	SAMPLE ID:	NYSDEC PFAS Guidelines (Jan. 2021)	MW-01		MW-02		MW-03		EQUIPMENT BLANK		FIELD BLANK	
	LAB ID:		L2056540-06		L2056540-07 R1		L2056540-08/D		L2056540-10		L2056540-09	
	COLLECTION DATE:		12/16/2020		12/16/2020		12/16/2020		12/16/2020		12/16/2020	
	SAMPLE MATRIX:		WATER		WATER		WATER		WATER		WATER	
	(ng/l)		Conc	Q	Conc	Q	Conc	Q	Conc	Q	Conc	Q
PERFLUORINATED ALKYL ACIDS BY ISOTOPE DILUTION												
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	100		<1.15	U	<1.7	U	132		<1.33	U	<1.4	U
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	100		<1.26	U	25.8	F	3,750	F	<1.46	U	<1.54	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	100		<0.764	U	<1.13	U	<0.825	U	<0.883	U	<0.931	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	100		<0.616	U	<0.91	U	<0.665	U	<0.711	U	<0.75	U
Perfluorobutanesulfonic Acid (PFBS)	100		1.82	J	22.2		16		<0.261	U	<0.276	U
Perfluorobutanoic Acid (PFBA)	100		23.1		275		2,040	E	<0.448	U	<0.472	U
Perfluorodecanesulfonic Acid (PFDS)	100		<0.931	U	<1.38	U	<1	U	<1.08	U	<1.14	U
Perfluorodecanoic Acid (PFDA)	100		<0.289	U	<0.427	U	36.5		<0.334	U	<0.352	U
Perfluorododecanoic Acid (PFDoA)	100		<0.353	U	<0.522	U	<0.382	U	<0.408	U	<0.431	U
Perfluoroheptanesulfonic Acid (PFHpS)	100		<0.654	U	5.17		3.16		<0.755	U	<0.797	U
Perfluoroheptanoic Acid (PFHpA)	100		0.604	J	399		701		<0.247	U	<0.261	U
Perfluorohexanesulfonic Acid (PFHxS)	100		0.562	J	164		83.7		<0.413	U	<0.436	U
Perfluorohexanoic Acid (PFHxA)	100		6.2		562		3,400	D	<0.36	U	<0.38	U
Perfluorononanoic Acid (PFNA)	100		<0.296	U	14.7		73.6		<0.342	U	<0.361	U
Perfluorooctanesulfonamide (FOSA)	100		<0.551	U	<0.815	U	<0.595	U	<0.637	U	<0.672	U
Perfluorooctanesulfonic Acid (PFOS)	10		<0.479	U	36	F	253		<0.553	U	<0.584	U
Perfluorooctanoic Acid (PFOA)	10		0.817	J	682	F	136		<0.259	U	<0.273	U
Perfluoropentanoic Acid (PFPeA)	100		23.8		1,060		12,400	D	<0.435	U	<0.459	U
Perfluorotetradecanoic Acid (PFTA)	100		<0.236	U	<0.348	U	<0.254	U	<0.272	U	<0.287	U
Perfluorotridecanoic Acid (PFTTrDA)	100		<0.311	U	<0.46	U	<0.336	U	<0.359	U	<0.379	U
Perfluoroundecanoic Acid (PFUnA)	100		<0.247	U	<0.365	U	<0.267	U	<0.285	U	<0.301	U
PFAS, Total	500		56.90		3,245.87		23,024.96		--		--	
PFOA/PFOS, Total	-		0.817	J	718		389		<0.259	U	<0.273	U

NOTES:

All values displayed in parts per trillion (ppt) or nanograms per liter (ng/L).

"<" - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).

Bold font indicates that the compound was detected at a concentration above its respective MDL

Yellow highlight indicates that the compound was detected at a concentration above its respective NYSDEC PFAS Guidelines level

PFAS analyzed by USEPA Method 537.1

NL indicates Not Listed

J indicates an estimated value

U indicates the concentration was not detected above MDL


F indicates results are considered to be an estimated maximum concentration





APPENDIX 1

Field Logs

 <p>LaBella Powered by partnership.</p> <p>300 STATE STREET, ROCHESTER, NY ENVIRONMENTAL ENGINEERING CONSULTANTS</p>			<p align="center">PROJECT</p> <p align="center">Phase II Environmental Site Assessment Location: 3231 Chili Avenue, Chili, New York Client: Tompkins Bank of Castile</p>			<p>BORING: SB-01</p> <p>SHEET 1 OF 1</p> <p>JOB: 2210426</p> <p>CHKD BY: D. Noll</p> <p>DATE: 12/16/2020</p>		
<p>CONTRACTOR: LaBella Env. LLC</p> <p>DRILLER:</p> <p>LABELLA REPRESENTATIVE: K. Truong</p>			<p>BORING LOCATION:</p> <p>GROUND SURFACE ELEVATION NA</p> <p>START DATE: 12/16/20 END DATE: 12/16/2020</p>			<p>TIME: 830 TO 916</p> <p>DATUM: NA</p> <p>WEATHER: °F,</p>		
<p>TYPE OF DRILL RIG: 6620</p> <p>AUGER SIZE AND TYPE: NA</p> <p>OVERBURDEN SAMPLING METHOD: Direct Push</p>			<p>DRIVE SAMPLER TYPE: Macrocore 5 foot</p> <p>INSIDE DIAMETER: 2"</p> <p>OTHER:</p>					
DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS		
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)					
0	43	Sampled at 0916 from 0-1.5 ft bgs	0.5	Top soil, brown, sandy SILT with organics, trace gravel	0			
1				Red-brown silty CLAY with some fine to coarse gravel, trace sand	0.7			
2			2		0.3			
3			3	Brown sandy SILT with some gravel	0			
4	44			Dark brown M to C SAND with silt and moist, poorly sorted sands - possibly native, little C to F gravel	0			
5					0			
6					0			
7					0			
8					0			
9	52		9		0			
10				0				
11				0				
12				Semi saturated soils - wet	0			
13			13.5		0			
			13.75	C GRAVEL, dark grey shale - possible bedrock				
14				Possible bedrock refusal at 13.75 ft BGS				
15								
16								
17								
18								
19								
20								

WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	NOTES: Sampled at 0916 from 0-1.5 ft bgs
DATE	TIME	ELAPSED TIME				
NA	NA	NA	NA	13.75 ft BGS	NA	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

BGS = Below Ground Surface

NA = Not Applicable

and = 35 - 50%

some = 20 - 35%

little = 10 - 20%

trace = 1 - 10%

C = Coarse

M = Medium

F = Fine

VF = Very Fine


R = Rounded


A = Angular


SR = Subrounded

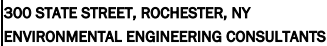
SA = Subangular

BORING: SB-01

 <p>LaBella Powered by partnership.</p> <p>300 STATE STREET, ROCHESTER, NY ENVIRONMENTAL ENGINEERING CONSULTANTS</p>			<p align="center">PROJECT</p> <p align="center">Phase II Environmental Site Assessment</p> <p align="center">Location: 3231 Chili Avenue, Chili, New York</p> <p align="center">Client: Tompkins Bank of Castile</p>			<p>BORING: SB-02</p> <p>SHEET 1 OF 1</p> <p>JOB: 2210426</p> <p>CHKD BY: D. Noll</p> <p>DATE: 12/16/2020</p>		
<p>CONTRACTOR: LaBella Env. LLC</p> <p>DRILLER:</p> <p>LABELLA REPRESENTATIVE: K. Truong</p>			<p>BORING LOCATION:</p> <p>GROUND SURFACE ELEVATION NA</p> <p>START DATE: 12/16/20 END DATE: 12/16/2020</p>			<p>TIME: 916 TO 933</p> <p>DATUM: NA</p> <p>WEATHER: °F,</p>		
<p>TYPE OF DRILL RIG: 6620</p> <p>AUGER SIZE AND TYPE: NA</p> <p>OVERBURDEN SAMPLING METHOD: Direct Push</p>			<p>DRIVE SAMPLER TYPE: Macrocore 5 foot</p> <p>INSIDE DIAMETER: 2"</p> <p>OTHER:</p>					
DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS		
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)					
0	32		0.5	Top soil, brown, sandy SILTwith organics, trace gravel	0			
1			1	Dark brown sandy SILT with CMF gravel	0			
2			2.5	Dark brown SANDS with CMF Gravel, trace Silt, saturated	0			
3					3		Light tan GRAVEL	0
4	58			Brown M, C SAND with F gravel, trace silt, moist, poor sorting	0			
5					0			
6					0			
7					0			
8					0			
9					0			
10	34		10	Saturation at 9ft BGS	0			
11				Brown M, C SAND and F gravel, trace silt, moist, poor sorting	0			
12					0			
13			13	Brown M, C SAND with F gravel, trace silt, moist, poor sorting	0			
14				Refusal at 13 ft BGS				
15								
16								
17								
18								
19								
20								
WATER LEVEL DATA			DEPTH (FT)		NOTES:			
			BOTTOM OF CASING	BOTTOM OF BORING			GROUNDWATER ENCOUNTERED	
DATE	TIME	ELAPSED TIME						
NA	NA	NA	NA	13ft BGS	9 ft BGS			
<p>GENERAL NOTES</p> <p>1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.</p> <p>2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER</p> <p>BGS = Below Ground Surface and = 35 - 50% C = Coarse R = Rounded</p> <p>NA = Not Applicable some = 20 - 35% M = Medium A = Angular</p> <p> little = 10 - 20% F = Fine SR = Subrounded</p> <p> trace = 1 - 10% VF = Very Fine SA = Subangular</p>								
						BORING: SB-02		

<div><div>LaBella Powered by partnership.</div></div> <div>300 STATE STREET, ROCHESTER, NY ENVIRONMENTAL ENGINEERING CONSULTANTS</div>			<div>PROJECT</div> <div>Phase II Environmental Site Assessment</div> <div>Location: 3231 Chili Avenue, Chili, New York</div> <div>Client: Tompkins Bank of Castile</div>			<div>BORING: SB-03</div> <div>SHEET 1 OF 1</div> <div>JOB: 2210426</div> <div>CHKD BY: D. Noll</div> <div>DATE: 12/16/2020</div>		
CONTRACTOR: LaBella Env. LLC			BORING LOCATION:			TIME: 933 TO 955		
DRILLER:			GROUND SURFACE ELEVATION NA			DATUM: NA		
LABELLA REPRESENTATIVE: K. Truong			START DATE: 12/16/20			END DATE: 12/16/2020		
TYPE OF DRILL RIG: 6620			DRIVE SAMPLER TYPE: Macrocore 5 foot			WEATHER: °F,		
AUGER SIZE AND TYPE: NA			INSIDE DIAMETER: 2"					
OVERBURDEN SAMPLING METHOD: Direct Push			OTHER:					
DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS		
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)					
0	42	Sampled at 0955 from 0-1.5 ft bgs	0.5	Top soil, brown, sandy SILTwith organics, trace gravel	0			
1				Brown sandy SILT with C M F sub angular gravel.	0			
2			2		0			
3					0			
4					0			
5	45			Dark brown SANDS with CMF Gravel, trace Silt, saturated	0			
6					0			
7					0			
8					0			
9					0			
10	33		10		0			
11			Saturated M to C brown SAND AND GRAVEL, some silt	0				
12				0				
13			13	C SANDS, native, some F gravel	0			
14				Refusal at 13 ft BGS				
15								
16								
17								
18								
19								
20								
			DEPTH (FT)			NOTES:		
WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED			
DATE	TIME	ELAPSED TIME						
NA	NA	NA	NA	13 ft BGS	10 ft BGS			
GENERAL NOTES								
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.								
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER								
BGS = Below Ground Surface and = 35 - 50% C = Coarse R = Rounded								
NA = Not Applicable some = 20 - 35% M = Medium A = Angular								
little = 10 - 20% F = Fine SR = Subrounded								
trace = 1 - 10% VF = Very Fine SA = Subangular								
						BORING: SB-03		

<div><div></div><div><div>LaBella</div><div>Powered by partnership.</div></div></div> <div>300 STATE STREET, ROCHESTER, NY</div> <div>ENVIRONMENTAL ENGINEERING CONSULTANTS</div>			<div>PROJECT</div> <div>Phase II Environmental Site Assessment</div> <div>Location: 3231 Chili Avenue,</div> <div>Chili, New York</div> <div>Client: Tompkins Bank of Castile</div>				<div>BORING: SB-04</div> <div>SHEET 1 OF 1</div> <div>JOB: 2210426</div> <div>CHKD BY: D. Noll</div> <div>DATE: 12/16/2020</div>	
CONTRACTOR: LaBella Env. LLC			BORING LOCATION:			TIME: 955 TO 1015		
DRILLER:			GROUND SURFACE ELEVATION NA			DATUM: NA		
LABELLA REPRESENTATIVE: K. Truong			START DATE: 12/16/20			END DATE: 12/16/2020		
TYPE OF DRILL RIG: 6620			DRIVE SAMPLER TYPE: Macrocore 5 foot					
AUGER SIZE AND TYPE: NA			INSIDE DIAMETER: 2"					
OVERBURDEN SAMPLING METHOD: Direct Push			OTHER:					
DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS		
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)					
0	35		0.5	Top soil - brown sandy SILT, organic rich	0			
1					Brown M to C SAND AND C, M, F gravel, some silt		0	
2							0	
3							0	
4							0	
4	4						GRAVE Seam	0
5	4.2		0					
6	55				Brown M to C SAND AND C, M, F gravel, some silt		0	
7							0	
8							0	
9							0	
10							0	
10	22		10	Saturated at 10 ft BGS	0			
11					Light tan M C SAND, some silt, possible native	0		
12	12	Refusal at 12 ft BGS				0		
13								
14								
15								
16								
17								
18								
19								
20								
			DEPTH (FT)		NOTES:			
WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	MW-01 installed		
DATE	TIME	ELAPSED TIME						
NA	NA	NA	11.3	12 ft BGS	10 ft BGS			
GENERAL NOTES								
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.								
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER								
BGS = Below Ground Surface and = 35 - 50% C = Coarse R = Rounded								
NA = Not Applicable some = 20 - 35% M = Medium A = Angular								
little = 10 - 20% F = Fine SR = Subrounded								
trace = 1 - 10% VF = Very Fine SA = Subangular								
						BORING: SB-04		



Phase II Environmental Site Assessment
Location: 3231 Chili Avenue,
Chili, New York
Client: Tompkins Bank of Castile

BORING:	SB-05		
SHEET	1	OF	1
JOB:	2210426		
CHKD BY:	D. Noll		
DATE:	12/16/2020		

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: K. Truong

BORING LOCATION:

GROUND SURFACE ELEVATION	NA
START DATE: 12/16/20	END DATE: 12/16/2020

TIME: 1015 TO 1025
 DATUM: NA
 WEATHER: °F,

TYPE OF DRILL RIG:	6620	DRIVE SAMPLER TYPE:	Macrocore 5 foot
AUGER SIZE AND TYPE:	NA	INSIDE DIAMETER:	2"
OVERBURDEN SAMPLING METHOD:	Direct Push	OTHER:	

DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS	
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)				
0	43		0.5	Top soil, brown, sandy SILTwith organics, trace gravel	0		
1			1	Brown SAND with Silt, moist	0		
2			3	Brown silty CLAY with trace fine gravel, breaks easily	0		
3				5	Red CLAY, dense		0
4					8		Brown CLAY, dense
5	10		Brown orange SAND with trace silt, SATURATED				0
6			14	Dark brown, grey C to M SAND, partly saturated, possibly native with fine gravel			0
7				34			0
8					0		
9			0				
10			0				
11			0				
12			0				
13			0				
14		0					
15				Equipment refusal at 14 ft BGS			
16							
17							
18							
19							
20							

			DEPTH (FT)			NOTES:
WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
DATE	TIME	ELAPSED TIME				
NA	NA	NA				

1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.

2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER


BGS = Below Ground Surface
NA = Not Applicable


- and = 35 - 50%
- some = 20 - 35%
- little = 10 - 20%
- trace = 1 - 10%


C = Coarse
M = Medium
F = Fine
VF = Very Fine


R = Rounded
A = Angular
SR = Subrounded
SA = Subangular


BORING: SB-05


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CONTRACTOR: LaBella Env. LLC			BORING LOCATION:			TIME: 1025 TO 1050		
DRILLER:			GROUND SURFACE ELEVATION NA			DATUM: NA		
LABELLA REPRESENTATIVE: K. Truong			START DATE: 12/16/20			END DATE: 12/16/2020		
TYPE OF DRILL RIG: 6620			DRIVE SAMPLER TYPE: Macrocore 5 foot			WEATHER: °F,		
AUGER SIZE AND TYPE: NA			INSIDE DIAMETER: 2"					
OVERBURDEN SAMPLING METHOD: Direct Push			OTHER:					
DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS		
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)					
0	37	Sampled at 1025 from 0-1.5 ft bgs	0.5	Top soil, brown, sandy SILTwith organics, trace gravel	0			
1				Brown SAND with C M F gravel, some silt	0			
2			2		0			
3					0			
4					0			
5	49			Brown M to C SAND, some fine gravel, trace silt, wet	0			
6				0				
7				0				
8				0				
9				0				
10			9		0			
			9.25	GRAVEL seam	0			
				C SAND, poorly sorted, similar to beach sands	0			
11	12			Brown M to C SAND, some fine gravel, trace silt, wet, appears more native	0			
12				Equipment refusal at 11 ft BGS				
13								
14								
15								
16								
17								
18								
19								
20								
			DEPTH (FT)			NOTES:		
WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Sampled at 1025 from 0-1.5 ft bgs		
DATE	TIME	ELAPSED TIME						
NA	NA	NA	NA	11.0	9			
GENERAL NOTES								
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.								
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER								
BGS = Below Ground Surface and = 35 - 50% C = Coarse R = Rounded								
NA = Not Applicable some = 20 - 35% M = Medium A = Angular								
little = 10 - 20% F = Fine SR = Subrounded								
trace = 1 - 10% VF = Very Fine SA = Subangular								
						BORING: SB-06		


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CONTRACTOR: LaBella Env. LLC			BORING LOCATION:			TIME: 1050 TO 1100		
DRILLER:			GROUND SURFACE ELEVATION NA			DATUM: NA		
LABELLA REPRESENTATIVE: K. Truong			START DATE: 12/16/20			END DATE: 12/16/2020		
TYPE OF DRILL RIG: 6620			DRIVE SAMPLER TYPE: Macrocore 5 foot			WEATHER: °F,		
AUGER SIZE AND TYPE: NA			INSIDE DIAMETER: 2"					
OVERBURDEN SAMPLING METHOD: Direct Push			OTHER:					
DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS		
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)					
0	42			Top soil, brown, sandy SILT with organics, trace gravel , some dark brown sandy silt	0			
1			1.5		0			
2					0			
3				Brown to orange SAND, with C M F gravel, trace silt, appears as beach sand	0			
4	42		4		0			
5					0			
6					0			
7			Brown to tan SAND with trace gravel, some silt, wet	0				
8	58		8		0			
9					0			
10					0			
11				0				
12			14.75	Brown to tan SAND with some gravel, some silt, wet	0			
13					0			
14					0			
15				Equipment Refusal at 14.75 ft BGS				
16								
17								
18								
19								
20								
WATER LEVEL DATA			DEPTH (FT)			NOTES: MW-02 installed		
			BOTTOM OF	BOTTOM OF	GROUNDWATER			
DATE	TIME	ELAPSED TIME	CASING	BORING	ENCOUNTERED			
NA	NA	NA	14.6	14.75 ft BGS	NA			
GENERAL NOTES								
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.								
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER								
BGS = Below Ground Surface and = 35 - 50% C = Coarse R = Rounded								
NA = Not Applicable some = 20 - 35% M = Medium A = Angular								
little = 10 - 20% F = Fine SR = Subrounded								
trace = 1 - 10% VF = Very Fine SA = Subangular								
						BORING: SB-07		

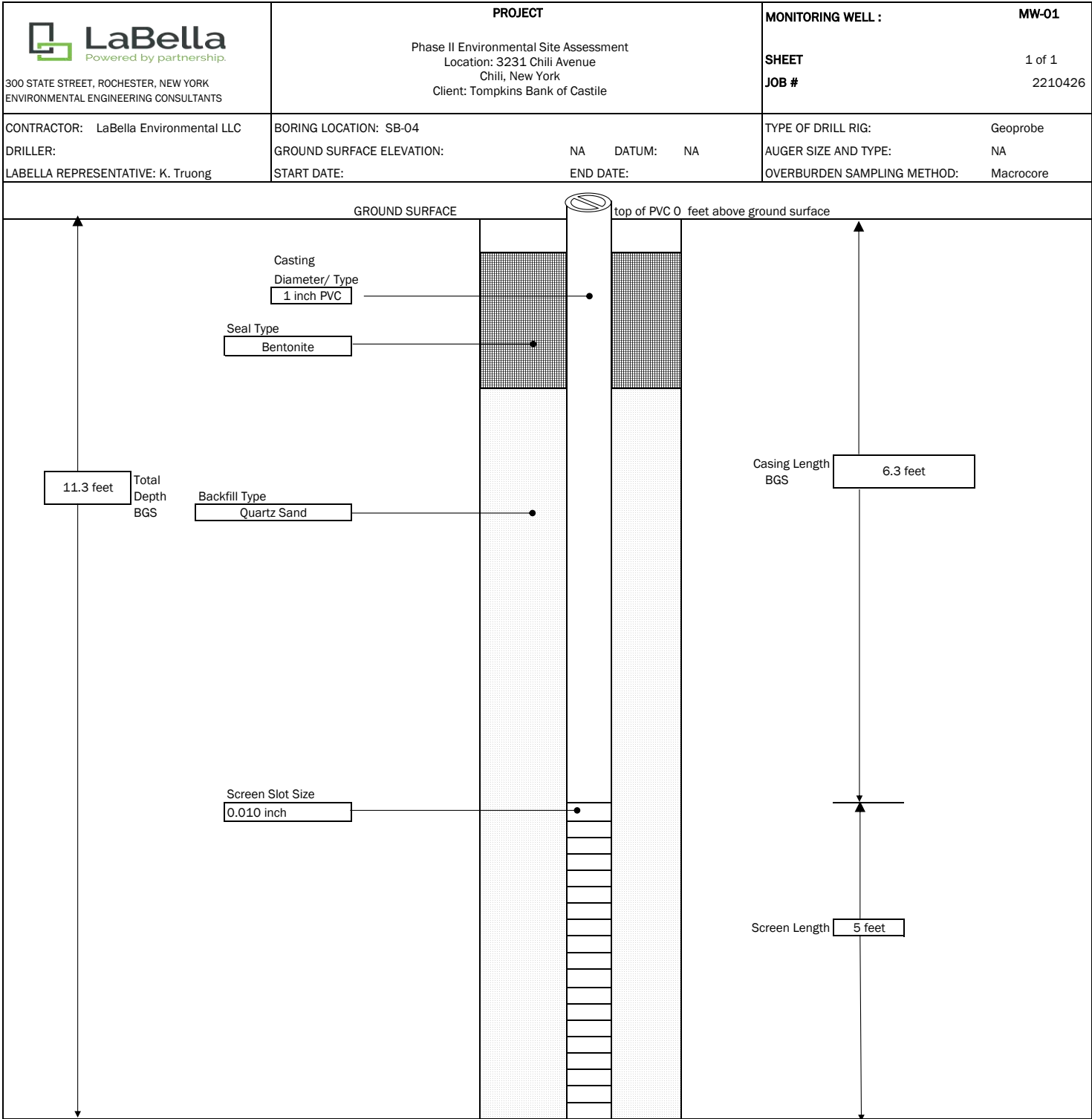
 <p>LaBella Powered by partnership.</p> <p>300 STATE STREET, ROCHESTER, NY ENVIRONMENTAL ENGINEERING CONSULTANTS</p>			<p align="center">PROJECT</p> <p align="center">Phase II Environmental Site Assessment Location: 3231 Chili Avenue, Chili, New York Client: Tompkins Bank of Castile</p>			<p>BORING: SB-08</p> <p>SHEET 1 OF 1</p> <p>JOB: 2210426</p> <p>CHKD BY: D. Noll</p> <p>DATE: 12/16/2020</p>		
<p>CONTRACTOR: LaBella Env. LLC</p> <p>DRILLER:</p> <p>LABELLA REPRESENTATIVE: K. Truong</p>			<p>BORING LOCATION:</p> <p>GROUND SURFACE ELEVATION NA</p> <p>START DATE: 12/16/20 END DATE: 12/16/2020</p>			<p>TIME: 1100 TO 1135</p> <p>DATUM: NA</p> <p>WEATHER: °F,</p>		
<p>TYPE OF DRILL RIG: 6620</p> <p>AUGER SIZE AND TYPE: NA</p> <p>OVERBURDEN SAMPLING METHOD: Direct Push</p>			<p>DRIVE SAMPLER TYPE: Macrocore 5 foot</p> <p>INSIDE DIAMETER: 2"</p> <p>OTHER:</p>					
DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS		
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)					
0	44			GRAVEL with ASPHALT SUB BASE	0			
1			1		0			
2				Brown SAND AND GRAVEL	0			
3			2.5		0			
4		3	Red CLAY, dense	0				
5	25			Brown sandy SILT, coarse, some grey to red gravel, poorly sorted	0			
6					0			
7					0			
8					0			
9	58				0			
10					0			
11					0			
12					0			
13					0			
14			14		0			
15			15	Grey sandy SILT with gravel	0			
16				Equipment refusal at 15 ft BGS				
17								
18								
19								
20								
WATER LEVEL DATA			DEPTH (FT)		NOTES:			
			BOTTOM OF CASING	BOTTOM OF BORING			GROUNDWATER ENCOUNTERED	
DATE	TIME	ELAPSED TIME						
NA	NA	NA	NA	15 ft BGS	NA			
<p>GENERAL NOTES</p> <p>1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.</p> <p>2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER</p> <p>BGS = Below Ground Surface and = 35 - 50% C = Coarse R = Rounded NA = Not Applicable some = 20 - 35% M = Medium A = Angular little = 10 - 20% F = Fine SR = Subrounded trace = 1 - 10% VF = Very Fine SA = Subangular</p>								
						BORING: SB-08		

 300 STATE STREET, ROCHESTER, NY ENVIRONMENTAL ENGINEERING CONSULTANTS			PROJECT Phase II Environmental Site Assessment Location: 3231 Chili Avenue, Chili, New York Client: Tompkins Bank of Castile			BORING: SB-09 SHEET 1 OF 1 JOB: 2210426 CHKD BY: D. Noll DATE: 12/16/2020		
CONTRACTOR: LaBella Env. LLC			BORING LOCATION:			TIME: 1135 TO 1200		
DRILLER:			GROUND SURFACE ELEVATION NA			DATUM: NA		
LABELLA REPRESENTATIVE: K. Truong			START DATE: 12/16/20			END DATE: 12/16/2020		
TYPE OF DRILL RIG: 6620			DRIVE SAMPLER TYPE: Macrocore 5 foot			WEATHER: °F,		
AUGER SIZE AND TYPE: NA			INSIDE DIAMETER: 2"					
OVERBURDEN SAMPLING METHOD: Direct Push			OTHER:					
DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS		
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)					
0	39	Sampled at 1200 from 0-2 ft bgs	0.5	GRAVEL AND ASPHALT	0			
1				Brown sandy SILT, dense, trace fine gravel	0			
2		2			0			
3					0			
4					0			
5	39			Brown to red to orange SAND with trace silt and gravel, moist	0			
6					0			
7					0			
8			8		0			
9					0			
10				0				
11	39				Brown to red to orange SAND and Gravel with trace silt, moist		0	
12							0	
13							0	
14							0	
15					0			
16				Equipment refusal at 15 ft BGS				
17								
18								
19								
20								
WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	NOTES:		
DATE	TIME	ELAPSED TIME				Sampled at 1200 from 0-2 ft bgs		
NA	NA	NA	NA	15.0	8			
GENERAL NOTES								
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.								
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER								
BGS = Below Ground Surface and = 35 - 50% C = Coarse R = Rounded								
NA = Not Applicable some = 20 - 35% M = Medium A = Angular								
little = 10 - 20% F = Fine SR = Subrounded								
trace = 1 - 10% VF = Very Fine SA = Subangular								
						BORING: SB-09		

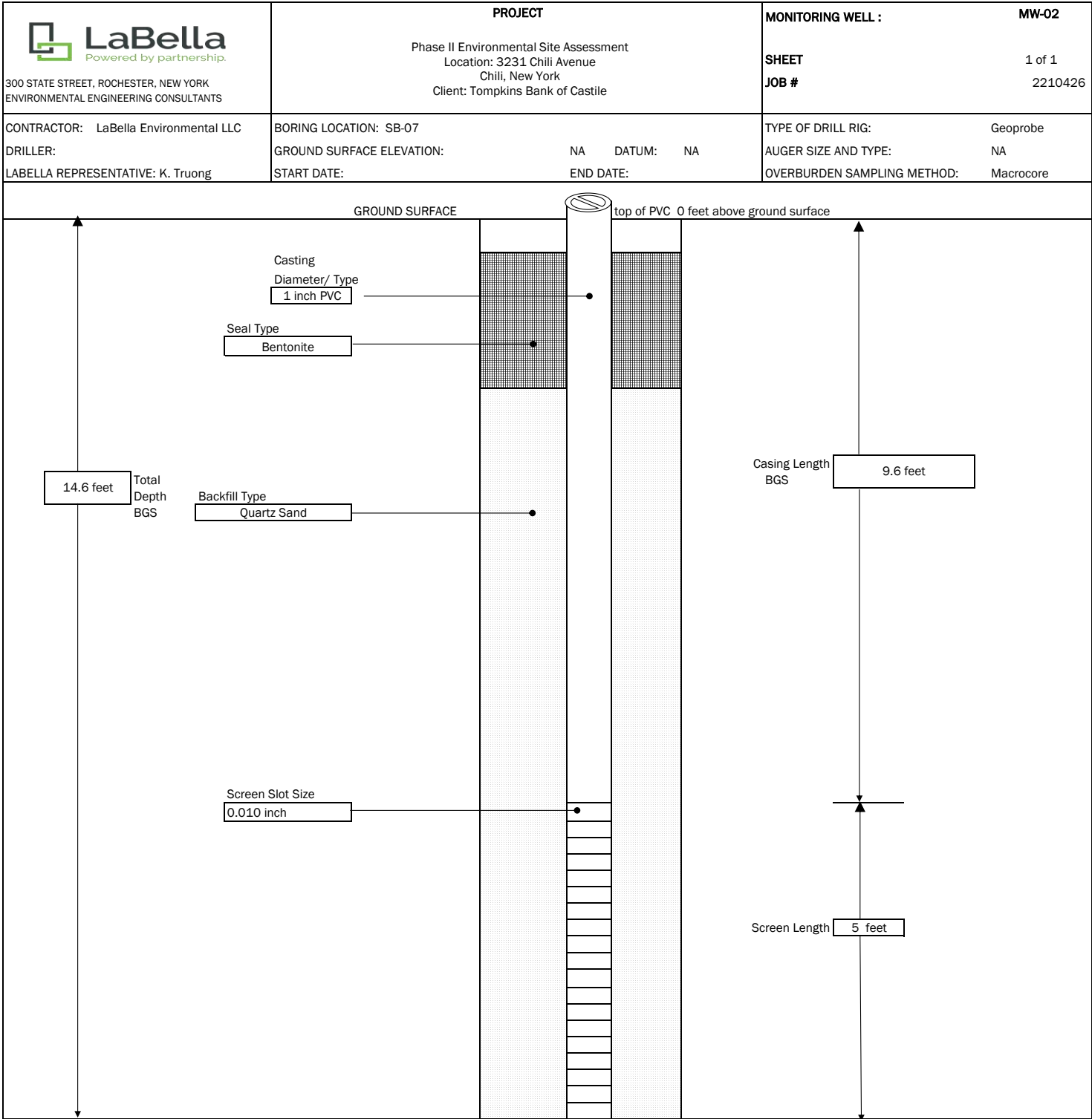
<div><div>LaBella Powered by partnership.</div></div> <div>300 STATE STREET, ROCHESTER, NY ENVIRONMENTAL ENGINEERING CONSULTANTS</div>			<div>PROJECT</div> <div>Phase II Environmental Site Assessment</div> <div>Location: 3231 Chili Avenue, Chili, New York</div> <div>Client: Tompkins Bank of Castile</div>			<div>BORING: SB-10</div> <div>SHEET 1 OF 1</div> <div>JOB: 2210426</div> <div>CHKD BY: D. Noll</div> <div>DATE: 12/16/2020</div>		
CONTRACTOR: LaBella Env. LLC			BORING LOCATION:			TIME: 1200 TO 1205		
DRILLER:			GROUND SURFACE ELEVATION NA			DATUM: NA		
LABELLA REPRESENTATIVE: K. Truong			START DATE: 12/16/20			END DATE: 12/16/2020		
TYPE OF DRILL RIG: 6620			DRIVE SAMPLER TYPE: Macrocore 5 foot			WEATHER: °F,		
AUGER SIZE AND TYPE: NA			INSIDE DIAMETER: 2"					
OVERBURDEN SAMPLING METHOD: Direct Push			OTHER:					
DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS		
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)					
0	35	Sampled at 1210 from 2.5-3.5 ft bgs		GRAVEL AND SILT	0			
1					0			
2					0			
3			2.5		0			
4					0			
5	36		5	Brown SAND, some silt, trace F gravel	0			
6					0			
7					0			
8					0			
9					0			
10	37		10	Light brown SAND AND SILT, trace gravel, wet	0			
11					0			
12					0			
13					0			
14					0			
15				C SAND (possible beach deposits), poorly sorted and Gravel, wet	0			
16					0			
17					0			
18					0			
19					0			
20				Equipment refusal at 15 ft BGS				
			DEPTH (FT)			NOTES:		
WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	MW-03 installed		
DATE	TIME	ELAPSED TIME						
NA	NA	NA	12	15.0	10			
GENERAL NOTES								
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.								
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER								
BGS = Below Ground Surface			and = 35 - 50%		C = Coarse	R = Rounded		
NA = Not Applicable			some = 20 - 35%		M = Medium	A = Angular		
			little = 10 - 20%		F = Fine	SR = Subrounded		
			trace = 1 - 10%		VF = Very Fine	SA = Subangular		
						BORING: SB-10		

 <p>LaBella Powered by partnership.</p> <p>300 STATE STREET, ROCHESTER, NY ENVIRONMENTAL ENGINEERING CONSULTANTS</p>			<p align="center">PROJECT</p> <p align="center">Phase II Environmental Site Assessment Location: 3231 Chili Avenue, Chili, New York Client: Tompkins Bank of Castile</p>			<p>BORING: SB-11</p> <p>SHEET 1 OF 1</p> <p>JOB: 2210426</p> <p>CHKD BY: D. Noll</p> <p>DATE: 12/16/2020</p>		
<p>CONTRACTOR: LaBella Env. LLC</p> <p>DRILLER:</p> <p>LABELLA REPRESENTATIVE: K. Truong</p>			<p>BORING LOCATION:</p> <p>GROUND SURFACE ELEVATION NA</p> <p>START DATE: 12/16/20 END DATE: 12/16/2020</p>			<p>TIME: 1205 TO 1215</p> <p>DATUM: NA</p> <p>WEATHER: °F,</p>		
<p>TYPE OF DRILL RIG: 6620</p> <p>AUGER SIZE AND TYPE: NA</p> <p>OVERBURDEN SAMPLING METHOD: Direct Push</p>			<p>DRIVE SAMPLER TYPE: Macrocore 5 foot</p> <p>INSIDE DIAMETER: 2"</p> <p>OTHER:</p>					
DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS		
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)					
0	40			GRAVEL AND ASPHALT	0			
1			1		0			
2			2.5	Brown sandy SILT, dense, trace Gravel	0			
3					0			
4	43			Light brown SAND, trace gravel, some Silt	0			
5					0			
6					0			
7					0			
8	58				0			
9					0			
10					0			
11					0			
12					0			
13					0			
14					0			
15					0			
16				Equipment refusal at 15 ft BGS				
17								
18								
19								
20								
WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	NOTES:		
DATE	TIME	ELAPSED TIME						
NA	NA	NA	NA	15.0	8			
<p>GENERAL NOTES</p> <p>1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.</p> <p>2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER</p> <p>BGS = Below Ground Surface and = 35 - 50% C = Coarse R = Rounded</p> <p>NA = Not Applicable some = 20 - 35% M = Medium A = Angular</p> <p> little = 10 - 20% F = Fine SR = Subrounded</p> <p> trace = 1 - 10% VF = Very Fine SA = Subangular</p>								
						<p>BORING: SB-11</p>		

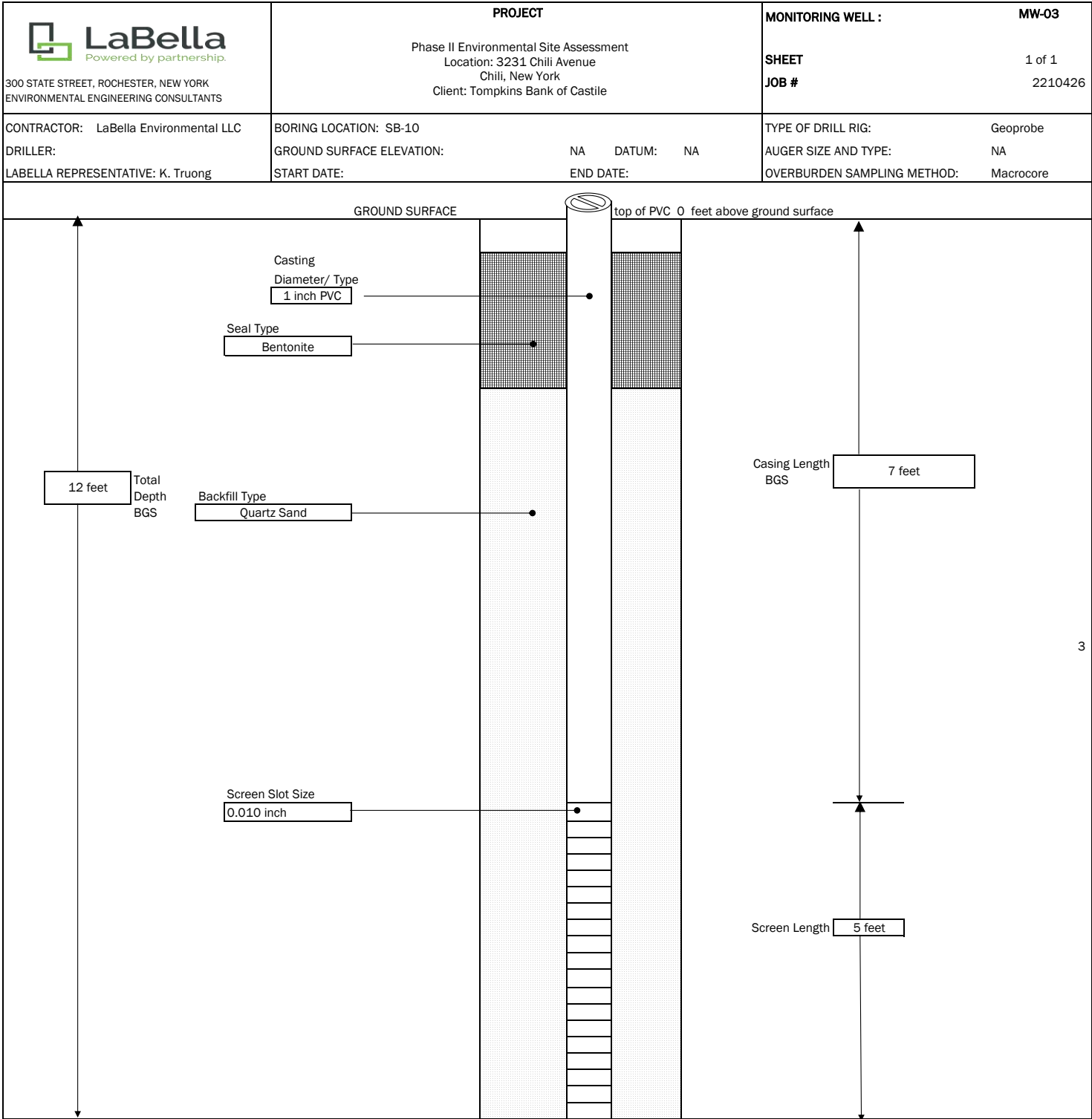
<div><div>LaBella Powered by partnership.</div></div> <div>300 STATE STREET, ROCHESTER, NY ENVIRONMENTAL ENGINEERING CONSULTANTS</div>			<div>PROJECT Phase II Environmental Site Assessment Location: 3231 Chili Avenue, Chili, New York Client: Tompkins Bank of Castile</div>			<div>BORING: SB-12 SHEET 1 OF 1 JOB: 2210426 CHKD BY: D. Noll DATE: 12/16/2020</div>		
CONTRACTOR: LaBella Env. LLC			BORING LOCATION:			TIME: 1215 TO 1235		
DRILLER:			GROUND SURFACE ELEVATION NA			DATUM: NA		
LABELLA REPRESENTATIVE: K. Truong			START DATE: 12/16/20			END DATE: 12/16/2020		
TYPE OF DRILL RIG: 6620			DRIVE SAMPLER TYPE: Macrocore 5 foot					
AUGER SIZE AND TYPE: NA			INSIDE DIAMETER: 2"					
OVERBURDEN SAMPLING METHOD: Direct Push			OTHER:					
DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS		
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)					
0	38		0.5	Black GRAVEL AND ASPHALT	0			
1			1	Sub base gravel	0			
2			3	Brown SAND AND GRAVEL, poorly sorted gravel	0			
3					0			
4	Red to brown sandy SILT, trace gravel	0						
5		0						
6		6	Brown Sands with some Silt, water logged	0				
7	0							
8	0							
9	9	Grey SANDs with some Silt, water logged	0					
10			0					
11			0					
12	17		0					
13			0					
14			0					
15				Equipment refusal at 15 ft BGS	0			
16								
17								
18								
19								
20								
			DEPTH (FT)			NOTES:		
WATER LEVEL DATA			BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED			
DATE	TIME	ELAPSED TIME						
NA	NA	NA	NA	15.0	6			
GENERAL NOTES								
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.								
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER								
BGS = Below Ground Surface and = 35 - 50% C = Coarse R = Rounded								
NA = Not Applicable some = 20 - 35% M = Medium A = Angular								
little = 10 - 20% F = Fine SR = Subrounded								
trace = 1 - 10% VF = Very Fine SA = Subangular								
						BORING: SB-12		



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE



GENERAL NOTES:
1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE



APPENDIX 2

Laboratory Reports



ANALYTICAL REPORT

Lab Number:	L2056540
Client:	LaBella Associates, P.C. 300 State Street Suite 201 Rochester, NY 14614
ATTN:	Dan Noll
Phone:	(585) 454-6110
Project Name:	PHASE II FSA-3231 CHILI AVE
Project Number:	P2100411
Report Date:	01/06/21

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2056540-01	SB-01 (0-1.5)	SOIL	CHILI, NY	12/16/20 09:16	12/16/20
L2056540-02	SB-03 (0-1.5)	SOIL	CHILI, NY	12/16/20 09:55	12/16/20
L2056540-03	SB-06 (0-1.5)	SOIL	CHILI, NY	12/16/20 10:50	12/16/20
L2056540-04	SB-10 (2.5-3.5)	SOIL	CHILI, NY	12/16/20 12:10	12/16/20
L2056540-05	SB-09(0.5-2)	SOIL	CHILI, NY	12/16/20 12:00	12/16/20
L2056540-06	MW-01	WATER	CHILI, NY	12/16/20 15:30	12/16/20
L2056540-07	MW-02	WATER	CHILI, NY	12/16/20 15:00	12/16/20
L2056540-08	MW-03	WATER	CHILI, NY	12/16/20 14:00	12/16/20
L2056540-09	FIELD BLANK	WATER	CHILI, NY	12/16/20 13:30	12/16/20
L2056540-10	EQUIPMENT BLANK	WATER	CHILI, NY	12/16/20 13:45	12/16/20

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Perfluorinated Alkyl Acids by Isotope Dilution

L2056540-04, -05, and -06: The MeOH fraction of the extraction is reported for the following compounds: Perfluorooctanesulfonamide (FOSA) due to better extraction efficiency of the Surrogates (Extracted Internal Standards).

L2056540-05, -07, -08, and -10: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

L2056540-07: The Extracted Internal Standard recovery is below the acceptance criteria for Perfluoro[13C8]Octanesulfonamide (M8FOSA) (less than 10%); however, re-extraction achieved a similar result.

L2056540-07: The reporting limit was raised on FOSA due to the poor recovery of the associated Extracted Internal Standard M8FOSA and confirmed by re-extraction.

L2056540-07RE: The reporting limit was raised on FOSA due to the poor recovery of the associated Extracted Internal Standard M8FOSA.

L2056540-08: The sample was re-analyzed on dilution in order to quantify the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L2056540-08: The 6:2FTS result is not reported because the quadratic fit of the curve does not allow for an estimated "E" flagged value. The sample was re-analyzed on dilution and the result within the calibration curve is reported for this compound.

The WG1450293-1 Method Blank, associated with L2056540-07, has concentrations above the reporting limits for PFNA. The sample was re-extracted with the method required holding time exceeded. The results of both extractions are reported, along with the re-extract QC. The original sample result is reported with a "B"

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Case Narrative (continued)


qualifier.

The WG1450293-1 Method Blank, associated with L2056540-06, -08, -09, and -10, has a concentration above the reporting limit for PFNA. Since the associated sample concentrations are either greater than 10x the blank concentration for this analyte or non-detect to the RL for this target analyte, no corrective action is required.

The WG1448038-2/-3 LCS/LCSD recovery, associated with L2056540-01 through -05, is above the acceptance criteria for perfluorotetradecanoic acid (pfta) (142%/147%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Elizabeth Porta

Title: Technical Director/Representative

Date: 01/06/21

ORGANICS

SEMIVOLATILES

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

SAMPLE RESULTS

Lab ID: L2056540-01
Client ID: SB-01 (0-1.5)
Sample Location: CHILI, NY

Date Collected: 12/16/20 09:16
Date Received: 12/16/20
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 134,LCMSMS-ID
Analytical Date: 12/23/20 19:44
Analyst: SG
Percent Solids: 84%

Extraction Method: ALPHA 23528
Extraction Date: 12/22/20 09:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.394	J	ug/kg	0.555	0.025	1
Perfluoropentanoic Acid (PFPeA)	0.702		ug/kg	0.555	0.051	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ug/kg	0.555	0.043	1
Perfluorohexanoic Acid (PFHxA)	0.410	JF	ug/kg	0.555	0.058	1
Perfluoroheptanoic Acid (PFHpA)	0.315	J	ug/kg	0.555	0.050	1
Perfluorohexanesulfonic Acid (PFHxS)	0.094	J	ug/kg	0.555	0.067	1
Perfluorooctanoic Acid (PFOA)	0.530	JF	ug/kg	0.555	0.047	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ug/kg	0.555	0.199	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ug/kg	0.555	0.152	1
Perfluorononanoic Acid (PFNA)	0.829		ug/kg	0.555	0.083	1
Perfluorooctanesulfonic Acid (PFOS)	1.24	F	ug/kg	0.555	0.144	1
Perfluorodecanoic Acid (PFDA)	0.138	JF	ug/kg	0.555	0.074	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ug/kg	0.555	0.319	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ug/kg	0.555	0.224	1
Perfluoroundecanoic Acid (PFUnA)	1.11		ug/kg	0.555	0.052	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ug/kg	0.555	0.170	1
Perfluorooctanesulfonamide (FOSA)	ND		ug/kg	0.555	0.109	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ug/kg	0.555	0.094	1
Perfluorododecanoic Acid (PFDoA)	ND		ug/kg	0.555	0.078	1
Perfluorotridecanoic Acid (PFTrDA)	1.16		ug/kg	0.555	0.227	1
Perfluorotetradecanoic Acid (PFTA)	ND		ug/kg	0.555	0.060	1
PFOA/PFOS, Total	1.77	J	ug/kg	0.555	0.047	1

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-01

Date Collected: 12/16/20 09:16

Client ID: SB-01 (0-1.5)

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		60-153
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	100		65-182
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	99		70-151
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	93		61-147
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	106		62-149
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	110		63-166
Perfluoro[13C8]Octanoic Acid (M8PFOA)	94		62-152
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	102		32-182
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	87		61-154
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	94		65-151
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	93		65-150
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	123		25-186
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	74		45-137
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	110		64-158
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	33		1-125
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	69		42-136
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	107		56-148
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	68		26-160

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-02

Date Collected: 12/16/20 09:55

Client ID: SB-03 (0-1.5)

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: ALPHA 23528

Analytical Method: 134,LCMSMS-ID

Extraction Date: 12/22/20 09:55

Analytical Date: 12/23/20 20:00

Analyst: SG

Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.390	J	ug/kg	0.555	0.025	1
Perfluoropentanoic Acid (PFPeA)	0.726		ug/kg	0.555	0.051	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ug/kg	0.555	0.043	1
Perfluorohexanoic Acid (PFHxA)	0.374	J	ug/kg	0.555	0.058	1
Perfluoroheptanoic Acid (PFHpA)	0.165	J	ug/kg	0.555	0.050	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ug/kg	0.555	0.067	1
Perfluorooctanoic Acid (PFOA)	0.224	JF	ug/kg	0.555	0.047	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ug/kg	0.555	0.199	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ug/kg	0.555	0.152	1
Perfluorononanoic Acid (PFNA)	0.132	J	ug/kg	0.555	0.083	1
Perfluorooctanesulfonic Acid (PFOS)	0.365	JF	ug/kg	0.555	0.144	1
Perfluorodecanoic Acid (PFDA)	ND		ug/kg	0.555	0.074	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ug/kg	0.555	0.319	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ug/kg	0.555	0.224	1
Perfluoroundecanoic Acid (PFUnA)	0.091	J	ug/kg	0.555	0.052	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ug/kg	0.555	0.170	1
Perfluorooctanesulfonamide (FOSA)	ND		ug/kg	0.555	0.109	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ug/kg	0.555	0.094	1
Perfluorododecanoic Acid (PFDoA)	ND		ug/kg	0.555	0.078	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ug/kg	0.555	0.227	1
Perfluorotetradecanoic Acid (PFTA)	ND		ug/kg	0.555	0.060	1
PFOA/PFOS, Total	0.589	J	ug/kg	0.555	0.047	1

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

SAMPLE RESULTS

Lab ID: L2056540-02
Client ID: SB-03 (0-1.5)
Sample Location: CHILI, NY

Date Collected: 12/16/20 09:55
Date Received: 12/16/20
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	106		60-153
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	113		65-182
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	114		70-151
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	108		61-147
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	122		62-149
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	127		63-166
Perfluoro[13C8]Octanoic Acid (M8PFOA)	108		62-152
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	110		32-182
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	101		61-154
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	107		65-151
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	107		65-150
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	140		25-186
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	91		45-137
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	127		64-158
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	59		1-125
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	80		42-136
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	125		56-148
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	81		26-160

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-03

Date Collected: 12/16/20 10:50

Client ID: SB-06 (0-1.5)

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: ALPHA 23528

Analytical Method: 134,LCMSMS-ID

Extraction Date: 12/22/20 09:55

Analytical Date: 12/23/20 20:17

Analyst: SG

Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.337	J	ug/kg	0.531	0.024	1
Perfluoropentanoic Acid (PFPeA)	0.817		ug/kg	0.531	0.049	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ug/kg	0.531	0.041	1
Perfluorohexanoic Acid (PFHxA)	0.312	J	ug/kg	0.531	0.056	1
Perfluoroheptanoic Acid (PFHpA)	0.332	J	ug/kg	0.531	0.048	1
Perfluorohexanesulfonic Acid (PFHxS)	0.206	J	ug/kg	0.531	0.064	1
Perfluorooctanoic Acid (PFOA)	0.677	F	ug/kg	0.531	0.045	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ug/kg	0.531	0.191	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ug/kg	0.531	0.145	1
Perfluorononanoic Acid (PFNA)	0.767		ug/kg	0.531	0.080	1
Perfluorooctanesulfonic Acid (PFOS)	3.76	F	ug/kg	0.531	0.138	1
Perfluorodecanoic Acid (PFDA)	0.148	J	ug/kg	0.531	0.071	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ug/kg	0.531	0.305	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ug/kg	0.531	0.214	1
Perfluoroundecanoic Acid (PFUnA)	0.564		ug/kg	0.531	0.050	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ug/kg	0.531	0.163	1
Perfluorooctanesulfonamide (FOSA)	ND		ug/kg	0.531	0.104	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ug/kg	0.531	0.090	1
Perfluorododecanoic Acid (PFDoA)	ND		ug/kg	0.531	0.074	1
Perfluorotridecanoic Acid (PFTrDA)	0.577		ug/kg	0.531	0.217	1
Perfluorotetradecanoic Acid (PFTA)	ND		ug/kg	0.531	0.057	1
PFOA/PFOS, Total	4.44		ug/kg	0.531	0.045	1

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-03

Date Collected: 12/16/20 10:50

Client ID: SB-06 (0-1.5)

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	102		60-153
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	108		65-182
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	110		70-151
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	101		61-147
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	115		62-149
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	124		63-166
Perfluoro[13C8]Octanoic Acid (M8PFOA)	102		62-152
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	108		32-182
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	95		61-154
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	102		65-151
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	103		65-150
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	134		25-186
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	84		45-137
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	117		64-158
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	32		1-125
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	67		42-136
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	118		56-148
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	66		26-160

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

SAMPLE RESULTS

Lab ID: L2056540-04
Client ID: SB-10 (2.5-3.5)
Sample Location: CHILI, NY

Date Collected: 12/16/20 12:10
Date Received: 12/16/20
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 134,LCMSMS-ID
Analytical Date: 12/23/20 20:33
Analyst: SG
Percent Solids: 85%

Extraction Method: ALPHA 23528
Extraction Date: 12/22/20 09:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	0.145	J	ug/kg	0.537	0.024	1
Perfluoropentanoic Acid (PFPeA)	1.13		ug/kg	0.537	0.049	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ug/kg	0.537	0.042	1
Perfluorohexanoic Acid (PFHxA)	0.558		ug/kg	0.537	0.056	1
Perfluoroheptanoic Acid (PFHpA)	0.330	J	ug/kg	0.537	0.048	1
Perfluorohexanesulfonic Acid (PFHxS)	1.16		ug/kg	0.537	0.065	1
Perfluorooctanoic Acid (PFOA)	0.412	JF	ug/kg	0.537	0.045	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	0.386	JF	ug/kg	0.537	0.193	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ug/kg	0.537	0.146	1
Perfluorononanoic Acid (PFNA)	0.622		ug/kg	0.537	0.081	1
Perfluorooctanesulfonic Acid (PFOS)	6.42	F	ug/kg	0.537	0.140	1
Perfluorodecanoic Acid (PFDA)	0.348	J	ug/kg	0.537	0.072	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ug/kg	0.537	0.308	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ug/kg	0.537	0.216	1
Perfluoroundecanoic Acid (PFUnA)	0.415	J	ug/kg	0.537	0.050	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ug/kg	0.537	0.164	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ug/kg	0.537	0.091	1
Perfluorododecanoic Acid (PFDoA)	ND		ug/kg	0.537	0.075	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ug/kg	0.537	0.219	1
Perfluorotetradecanoic Acid (PFTA)	ND		ug/kg	0.537	0.058	1
PFOA/PFOS, Total	6.83	J	ug/kg	0.537	0.045	1

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-04
 Client ID: SB-10 (2.5-3.5)
 Sample Location: CHILI, NY

Date Collected: 12/16/20 12:10
 Date Received: 12/16/20
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	80		60-153
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	84		65-182
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	85		70-151
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	79		61-147
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	90		62-149
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	96		63-166
Perfluoro[13C8]Octanoic Acid (M8PFOA)	80		62-152
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	89		32-182
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	76		61-154
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	81		65-151
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	81		65-150
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	100		25-186
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	55		45-137
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	94		64-158
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	42		42-136
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	93		56-148
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	50		26-160

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

SAMPLE RESULTS

Lab ID: L2056540-04
Client ID: SB-10 (2.5-3.5)
Sample Location: CHILI, NY

Date Collected: 12/16/20 12:10
Date Received: 12/16/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 134,LCMSMS-ID
Analytical Date: 12/27/20 16:11
Analyst: SG
Percent Solids: 85%

Extraction Method: ALPHA 23528
Extraction Date: 12/22/20 09:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ug/kg	0.537	0.105	1
Surrogate (Extracted Internal Standard)	% Recovery		Qualifier	Acceptance Criteria		
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	74			1-125		

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-05

Date Collected: 12/16/20 12:00

Client ID: SB-09(0.5-2)

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: ALPHA 23528

Analytical Method: 134,LCMSMS-ID

Extraction Date: 12/22/20 09:55

Analytical Date: 12/23/20 20:50

Analyst: SG

Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ug/kg	0.586	0.027	1
Perfluoropentanoic Acid (PFPeA)	ND		ug/kg	0.586	0.054	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ug/kg	0.586	0.046	1
Perfluorohexanoic Acid (PFHxA)	ND		ug/kg	0.586	0.062	1
Perfluoroheptanoic Acid (PFHpA)	ND		ug/kg	0.586	0.053	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ug/kg	0.586	0.071	1
Perfluorooctanoic Acid (PFOA)	ND		ug/kg	0.586	0.049	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ug/kg	0.586	0.210	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ug/kg	0.586	0.160	1
Perfluorononanoic Acid (PFNA)	0.119	J	ug/kg	0.586	0.088	1
Perfluorooctanesulfonic Acid (PFOS)	0.689	F	ug/kg	0.586	0.152	1
Perfluorodecanoic Acid (PFDA)	ND		ug/kg	0.586	0.079	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ug/kg	0.586	0.336	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ug/kg	0.586	0.236	1
Perfluoroundecanoic Acid (PFUnA)	0.108	J	ug/kg	0.586	0.055	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ug/kg	0.586	0.179	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ug/kg	0.586	0.099	1
Perfluorododecanoic Acid (PFDoA)	ND		ug/kg	0.586	0.082	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ug/kg	0.586	0.240	1
Perfluorotetradecanoic Acid (PFTA)	ND		ug/kg	0.586	0.063	1
PFOA/PFOS, Total	0.689		ug/kg	0.586	0.049	1

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

SAMPLE RESULTS

Lab ID: L2056540-05
Client ID: SB-09(0.5-2)
Sample Location: CHILI, NY

Date Collected: 12/16/20 12:00
Date Received: 12/16/20
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	99		60-153
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	105		65-182
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	100		70-151
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	100		61-147
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	113		62-149
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	116		63-166
Perfluoro[13C8]Octanoic Acid (M8PFOA)	99		62-152
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	100		32-182
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	99		61-154
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	97		65-151
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	99		65-150
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	127		25-186
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	39	Q	45-137
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	115		64-158
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	39	Q	42-136
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	114		56-148
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	58		26-160

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

SAMPLE RESULTS

Lab ID: L2056540-05
Client ID: SB-09(0.5-2)
Sample Location: CHILI, NY

Date Collected: 12/16/20 12:00
Date Received: 12/16/20
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 134,LCMSMS-ID
Analytical Date: 12/27/20 16:18
Analyst: SG
Percent Solids: 84%

Extraction Method: ALPHA 23528
Extraction Date: 12/22/20 09:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ug/kg	0.586	0.115	1
Surrogate (Extracted Internal Standard)			% Recovery	Qualifier	Acceptance Criteria	
Perfluoro[13C8]Octanesulfonamide (M8FOSA)			74		1-125	

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

SAMPLE RESULTS

Lab ID: L2056540-06
Client ID: MW-01
Sample Location: CHILI, NY

Date Collected: 12/16/20 15:30
Date Received: 12/16/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/06/21 11:41
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 12/30/20 14:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.90	0.551	1
Surrogate (Extracted Internal Standard)			% Recovery	Qualifier	Acceptance Criteria	
Perfluoro[13C8]Octanesulfonamide (M8FOSA)			64		1-87	

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-06

Date Collected: 12/16/20 15:30

Client ID: MW-01

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: ALPHA 23528

Analytical Method: 134,LCMSMS-ID

Extraction Date: 12/30/20 14:40

Analytical Date: 12/31/20 15:20

Analyst: HT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	23.1		ng/l	1.90	0.388	1
Perfluoropentanoic Acid (PFPeA)	23.8		ng/l	1.90	0.376	1
Perfluorobutanesulfonic Acid (PFBS)	1.82	J	ng/l	1.90	0.226	1
Perfluorohexanoic Acid (PFHxA)	6.20		ng/l	1.90	0.312	1
Perfluoroheptanoic Acid (PFHpA)	0.604	J	ng/l	1.90	0.214	1
Perfluorohexanesulfonic Acid (PFHxS)	0.562	J	ng/l	1.90	0.357	1
Perfluorooctanoic Acid (PFOA)	0.817	J	ng/l	1.90	0.224	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.90	1.26	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.90	0.654	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.90	0.296	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.90	0.479	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.90	0.289	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.90	1.15	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.90	0.616	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.90	0.247	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.90	0.931	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.90	0.764	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.90	0.353	1
Perfluorotridecanoic Acid (PFTTrDA)	ND		ng/l	1.90	0.311	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.90	0.236	1
PFOA/PFOS, Total	0.817	J	ng/l	1.90	0.224	1

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-06

Date Collected: 12/16/20 15:30

Client ID: MW-01

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	99		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	114		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	122		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	106		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	101		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	105		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	98		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	142		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	100		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	112		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	93		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	150		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	89		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	113		40-144
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	94		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	100		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	85		33-143

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-07

Date Collected: 12/16/20 15:00

Client ID: MW-02

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: ALPHA 23528

Analytical Method: 134,LCMSMS-ID

Extraction Date: 12/30/20 14:40

Analytical Date: 12/31/20 15:37

Analyst: HT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	252		ng/l	2.11	0.430	1
Perfluoropentanoic Acid (PFPeA)	917		ng/l	2.11	0.418	1
Perfluorobutanesulfonic Acid (PFBS)	18.8		ng/l	2.11	0.251	1
Perfluorohexanoic Acid (PFHxA)	512		ng/l	2.11	0.346	1
Perfluoroheptanoic Acid (PFHpA)	358		ng/l	2.11	0.238	1
Perfluorohexanesulfonic Acid (PFHxS)	149		ng/l	2.11	0.396	1
Perfluorooctanoic Acid (PFOA)	554		ng/l	2.11	0.249	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	22.7	F	ng/l	2.11	1.40	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.58		ng/l	2.11	0.726	1
Perfluorononanoic Acid (PFNA)	13.3	B	ng/l	2.11	0.329	1
Perfluorooctanesulfonic Acid (PFOS)	32.1		ng/l	2.11	0.532	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.11	0.321	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.11	1.28	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.11	0.683	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.11	0.274	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.11	1.03	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	21.1	0.612	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.11	0.848	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.11	0.392	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.11	0.345	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.11	0.262	1
PFOA/PFOS, Total	586		ng/l	2.11	0.249	1

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-07

Date Collected: 12/16/20 15:00

Client ID: MW-02

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	100		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	103		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	135		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	99		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	96		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	104		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	99		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	145		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	110		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	109		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	94		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	158		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	77		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	105		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	0	Q	1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	70		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	91		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	80		33-143

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-07 RE

Date Collected: 12/16/20 15:00

Client ID: MW-02

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: ALPHA 23528

Analytical Method: 134,LCMSMS-ID

Extraction Date: 01/04/21 12:14

Analytical Date: 01/05/21 13:03

Analyst: SG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	275		ng/l	2.81	0.573	1
Perfluoropentanoic Acid (PFPeA)	1060		ng/l	2.81	0.556	1
Perfluorobutanesulfonic Acid (PFBS)	22.2		ng/l	2.81	0.334	1
Perfluorohexanoic Acid (PFHxA)	562		ng/l	2.81	0.461	1
Perfluoroheptanoic Acid (PFHpA)	399		ng/l	2.81	0.316	1
Perfluorohexanesulfonic Acid (PFHxS)	164		ng/l	2.81	0.528	1
Perfluorooctanoic Acid (PFOA)	682	F	ng/l	2.81	0.331	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	25.8	F	ng/l	2.81	1.87	1
Perfluoroheptanesulfonic Acid (PFHpS)	5.17		ng/l	2.81	0.966	1
Perfluorononanoic Acid (PFNA)	14.7		ng/l	2.81	0.438	1
Perfluorooctanesulfonic Acid (PFOS)	36.0	F	ng/l	2.81	0.708	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.81	0.427	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.81	1.70	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.81	0.910	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.81	0.365	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.81	1.38	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	28.1	0.815	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.81	1.13	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.81	0.522	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.81	0.460	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.81	0.348	1
PFOA/PFOS, Total	718		ng/l	2.81	0.331	1

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-07 RE

Date Collected: 12/16/20 15:00

Client ID: MW-02

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	86		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	94		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	98		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	91		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	94		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	101		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	84		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	114		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	89		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	83		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	77		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	109		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	76		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	84		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	1		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	55		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	72		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	47		33-143

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

SAMPLE RESULTS

Lab ID: L2056540-08
Client ID: MW-03
Sample Location: CHILI, NY

Date Collected: 12/16/20 14:00
Date Received: 12/16/20
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 12/31/20 15:53
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 12/30/20 14:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	1770	E	ng/l	2.05	0.419	1
Perfluoropentanoic Acid (PFPeA)	9600	E	ng/l	2.05	0.406	1
Perfluorobutanesulfonic Acid (PFBS)	16.0		ng/l	2.05	0.244	1
Perfluorohexanoic Acid (PFHxA)	2840	E	ng/l	2.05	0.336	1
Perfluoroheptanoic Acid (PFHpA)	701		ng/l	2.05	0.231	1
Perfluorohexanesulfonic Acid (PFHxS)	83.7		ng/l	2.05	0.386	1
Perfluorooctanoic Acid (PFOA)	136		ng/l	2.05	0.242	1
Perfluoroheptanesulfonic Acid (PFHpS)	3.16		ng/l	2.05	0.706	1
Perfluorononanoic Acid (PFNA)	73.6		ng/l	2.05	0.320	1
Perfluorooctanesulfonic Acid (PFOS)	253		ng/l	2.05	0.517	1
Perfluorodecanoic Acid (PFDA)	36.5		ng/l	2.05	0.312	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	132		ng/l	2.05	1.24	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.05	0.665	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.05	0.267	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.05	1.00	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.05	0.595	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.05	0.825	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.05	0.382	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.05	0.336	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.05	0.254	1
PFOA/PFOS, Total	389		ng/l	2.05	0.242	1

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-08

Date Collected: 12/16/20 14:00

Client ID: MW-03

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	87		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	39		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	105		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	44		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	65		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	79		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	88		36-149
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	104		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	106		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	84		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	315	Q	7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	85		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	108		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	25		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	71		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	92		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	79		33-143

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

SAMPLE RESULTS

Lab ID: L2056540-08 **D**
Client ID: MW-03
Sample Location: CHILI, NY

Date Collected: 12/16/20 14:00
Date Received: 12/16/20
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/06/21 12:24
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 12/30/20 14:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	2040		ng/l	41.0	8.37	20
Perfluoropentanoic Acid (PFPeA)	12400		ng/l	41.0	8.13	20
Perfluorohexanoic Acid (PFHxA)	3400		ng/l	41.0	6.73	20
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	3750	F	ng/l	41.0	27.3	20

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	102		16-173
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	99		21-145
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	193		1-244

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

SAMPLE RESULTS

Lab ID: L2056540-09
Client ID: FIELD BLANK
Sample Location: CHILI, NY

Date Collected: 12/16/20 13:30
Date Received: 12/16/20
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 12/31/20 16:10
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 12/30/20 14:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.32	0.472	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.32	0.459	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.32	0.276	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.32	0.380	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.32	0.261	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.32	0.436	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.32	0.273	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.32	1.54	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.32	0.797	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.32	0.361	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.32	0.584	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.32	0.352	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.32	1.40	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.32	0.750	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.32	0.301	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.32	1.14	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.32	0.672	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.32	0.931	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.32	0.431	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.32	0.379	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.32	0.287	1
PFOA/PFOS, Total	ND		ng/l	2.32	0.273	1

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-09

Date Collected: 12/16/20 13:30

Client ID: FIELD BLANK

Date Received: 12/16/20

Sample Location: CHILI, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	103		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	125		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	144		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	120		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	108		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	103		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	105		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	141		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	105		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	112		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	92		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	146		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	84		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	107		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	44		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	87		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	91		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	96		33-143

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**SAMPLE RESULTS**

Lab ID: L2056540-10
 Client ID: EQUIPMENT BLANK
 Sample Location: CHILI, NY

Date Collected: 12/16/20 13:45
 Date Received: 12/16/20
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 12/31/20 16:26
 Analyst: HT

Extraction Method: ALPHA 23528
 Extraction Date: 12/30/20 14:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.20	0.448	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.20	0.435	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.20	0.261	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.20	0.360	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.20	0.247	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.20	0.413	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.20	0.259	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.20	1.46	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.20	0.755	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.20	0.342	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.20	0.553	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.20	0.334	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.20	1.33	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.20	0.711	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.20	0.285	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.20	1.08	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.20	0.637	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.20	0.883	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.20	0.408	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.20	0.359	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.20	0.272	1
PFOA/PFOS, Total	ND		ng/l	2.20	0.259	1

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

SAMPLE RESULTS

Lab ID: L2056540-10
Client ID: EQUIPMENT BLANK
Sample Location: CHILI, NY

Date Collected: 12/16/20 13:45
Date Received: 12/16/20
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Surrogate (Extracted Internal Standard)	% Recovery		Qualifier	Acceptance Criteria		
Perfluoro[13C4]Butanoic Acid (MPFBA)	105			2-156		
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	125			16-173		
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	147			31-159		
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	119			21-145		
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	106			30-139		
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	107			47-153		
Perfluoro[13C8]Octanoic Acid (M8PFOA)	104			36-149		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	152			1-244		
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	107			34-146		
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	111			42-146		
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	101			38-144		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	172		Q	7-170		
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	82			1-181		
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	113			40-144		
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	47			1-87		
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84			23-146		
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	91			24-161		
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	101			33-143		

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 12/23/20 09:53
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 12/22/20 09:19

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-05 Batch: WG1448038-1					
Perfluorobutanoic Acid (PFBA)	ND		ug/kg	0.500	0.023
Perfluoropentanoic Acid (PFPeA)	ND		ug/kg	0.500	0.046
Perfluorobutanesulfonic Acid (PFBS)	ND		ug/kg	0.500	0.039
Perfluorohexanoic Acid (PFHxA)	ND		ug/kg	0.500	0.053
Perfluoroheptanoic Acid (PFHpA)	ND		ug/kg	0.500	0.045
Perfluorohexanesulfonic Acid (PFHxS)	ND		ug/kg	0.500	0.061
Perfluorooctanoic Acid (PFOA)	ND		ug/kg	0.500	0.042
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ug/kg	0.500	0.180
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ug/kg	0.500	0.136
Perfluorononanoic Acid (PFNA)	ND		ug/kg	0.500	0.075
Perfluorooctanesulfonic Acid (PFOS)	ND		ug/kg	0.500	0.130
Perfluorodecanoic Acid (PFDA)	ND		ug/kg	0.500	0.067
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ug/kg	0.500	0.287
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ug/kg	0.500	0.202
Perfluoroundecanoic Acid (PFUnA)	ND		ug/kg	0.500	0.047
Perfluorodecanesulfonic Acid (PFDS)	ND		ug/kg	0.500	0.153
Perfluorooctanesulfonamide (FOSA)	ND		ug/kg	0.500	0.098
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ug/kg	0.500	0.085
Perfluorododecanoic Acid (PFDoA)	ND		ug/kg	0.500	0.070
Perfluorotridecanoic Acid (PFTrDA)	ND		ug/kg	0.500	0.204
Perfluorotetradecanoic Acid (PFTA)	ND		ug/kg	0.500	0.054
PFOA/PFOS, Total	ND		ug/kg	0.500	0.042

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
 Analytical Date: 12/23/20 09:53
 Analyst: SG

Extraction Method: ALPHA 23528
 Extraction Date: 12/22/20 09:19

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-05 Batch: WG1448038-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	93		60-153
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	97		65-182
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	94		70-151
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	94		61-147
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	105		62-149
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	107		63-166
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92		62-152
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	89		32-182
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	91		61-154
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	91		65-151
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	93		65-150
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	119		25-186
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	86		45-137
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	108		64-158
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	12		1-125
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	70		42-136
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	105		56-148
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	65		26-160

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
 Analytical Date: 12/27/20 15:42
 Analyst: SG

Extraction Method: ALPHA 23528
 Extraction Date: 12/22/20 09:19

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-05 Batch: WG1448038-1					
Perfluorooctanesulfonamide (FOSA)	ND		ug/kg	0.500	0.098

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	84		1-125

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/06/21 11:19
Analyst: RS

Extraction Method: ALPHA 23528
Extraction Date: 12/30/20 14:40

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 06-10 Batch: WG1450293-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	67		1-87

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 12/31/20 14:30
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 12/30/20 14:40

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 06-10 Batch: WG1450293-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	0.284	J	ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	3.02		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
PFOA/PFOS, Total	0.284	J	ng/l	2.00	0.236

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 12/31/20 14:30
Analyst: HT

Extraction Method: ALPHA 23528
Extraction Date: 12/30/20 14:40

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 06-10 Batch: WG1450293-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	103		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	131		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	142		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	120		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	107		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	107		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	105		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	145		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	108		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	109		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	101		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	151		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	87		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	110		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	49		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	95		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	97		33-143

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/05/21 12:12
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 01/04/21 12:14

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 07 Batch: WG1451237-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	0.908	J	ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
PFOA/PFOS, Total	0.908	J	ng/l	2.00	0.236

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Method Blank Analysis Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 01/05/21 12:12
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 01/04/21 12:14

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 07 Batch: WG1451237-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	82		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	104		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	90		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	96		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	95		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	96		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	82		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	100		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	86		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	81		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	79		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	103		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	78		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	85		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	25		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	62		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	77		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	51		33-143

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
 Analytical Date: 01/06/21 11:48
 Analyst: RS

Extraction Method: ALPHA 23528
 Extraction Date: 01/04/21 12:14

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 07 Batch: WG1451237-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	67		1-87

Lab Control Sample Analysis **Batch Quality Control**

Project Name: PHASE II FSA-3231 CHILI AVE

Project Number: P2100411

Lab Number: L2056540

Report Date: 01/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-05 Batch: WG1448038-2 WG1448038-3								
Perfluorobutanoic Acid (PFBA)	109		109		71-135	0		30
Perfluoropentanoic Acid (PFPeA)	116		117		69-132	1		30
Perfluorobutanesulfonic Acid (PFBS)	110		111		72-128	1		30
Perfluorohexanoic Acid (PFHxA)	108		111		70-132	3		30
Perfluoroheptanoic Acid (PFHpA)	100		102		71-131	2		30
Perfluorohexanesulfonic Acid (PFHxS)	108		110		67-130	2		30
Perfluorooctanoic Acid (PFOA)	106		108		69-133	2		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	118		117		64-140	1		30
Perfluoroheptanesulfonic Acid (PFHpS)	115		120		70-132	4		30
Perfluorononanoic Acid (PFNA)	109		109		72-129	0		30
Perfluorooctanesulfonic Acid (PFOS)	121		122		68-136	1		30
Perfluorodecanoic Acid (PFDA)	108		109		69-133	1		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	119		115		65-137	3		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	84		99		63-144	16		30
Perfluoroundecanoic Acid (PFUnA)	110		105		64-136	5		30
Perfluorodecanesulfonic Acid (PFDS)	130		130		59-134	0		30
Perfluorooctanesulfonamide (FOSA)	101		99		67-137	2		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	105		106		61-139	1		30
Perfluorododecanoic Acid (PFDoA)	107		106		69-135	1		30
Perfluorotridecanoic Acid (PFTrDA)	98		101		66-139	3		30
Perfluorotetradecanoic Acid (PFTA)	142	Q	147	Q	69-133	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PHASE II FSA-3231 CHILI AVE

Project Number: P2100411

Lab Number: L2056540

Report Date: 01/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-05 Batch: WG1448038-2 WG1448038-3								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	104		96		60-153
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	111		102		65-182
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	109		99		70-151
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	107		97		61-147
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	120		110		62-149
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	122		112		63-166
Perfluoro[13C8]Octanoic Acid (M8PFOA)	106		98		62-152
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	111		98		32-182
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	106		97		61-154
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	101		92		65-151
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	105		98		65-150
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	135		116		25-186
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	103		82		45-137
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	119		113		64-158
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	40		33		1-125
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	79		71		42-136
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	121		110		56-148
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	76		70		26-160

Lab Control Sample Analysis**Batch Quality Control****Project Name:** PHASE II FSA-3231 CHILI AVE**Project Number:** P2100411**Lab Number:** L2056540**Report Date:** 01/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-05 Batch: WG1448038-2 WG1448038-3								
Perfluorooctanesulfonamide (FOSA)	99		101		67-137	2		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	95		91		1-125

Lab Control Sample Analysis

Batch Quality Control

Project Name: PHASE II FSA-3231 CHILI AVE

Project Number: P2100411

Lab Number: L2056540

Report Date: 01/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06-10 Batch: WG1450293-2 WG1450293-3								
Perfluorobutanoic Acid (PFBA)	91		93		67-148	2		30
Perfluoropentanoic Acid (PFPeA)	90		92		63-161	2		30
Perfluorobutanesulfonic Acid (PFBS)	88		90		65-157	2		30
Perfluorohexanoic Acid (PFHxA)	94		94		69-168	0		30
Perfluoroheptanoic Acid (PFHpA)	90		93		58-159	3		30
Perfluorohexanesulfonic Acid (PFHxS)	90		100		69-177	11		30
Perfluorooctanoic Acid (PFOA)	87		91		63-159	4		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	99		98		49-187	1		30
Perfluoroheptanesulfonic Acid (PFHpS)	93		93		61-179	0		30
Perfluorononanoic Acid (PFNA)	90		90		68-171	0		30
Perfluorooctanesulfonic Acid (PFOS)	90		92		52-151	2		30
Perfluorodecanoic Acid (PFDA)	95		93		63-171	2		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	109		99		56-173	10		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	89		102		60-166	14		30
Perfluoroundecanoic Acid (PFUnA)	91		91		60-153	0		30
Perfluorodecanesulfonic Acid (PFDS)	90		92		38-156	2		30
Perfluorooctanesulfonamide (FOSA)	90		82		46-170	9		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	106		93		45-170	13		30
Perfluorododecanoic Acid (PFDoA)	113		105		67-153	7		30
Perfluorotridecanoic Acid (PFTrDA)	117		115		48-158	2		30
Perfluorotetradecanoic Acid (PFTA)	96		99		59-182	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PHASE II FSA-3231 CHILI AVE

Project Number: P2100411

Lab Number: L2056540

Report Date: 01/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06-10 Batch: WG1450293-2 WG1450293-3

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	106		105		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	131		130		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	150		146		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	122		125		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	110		110		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	126		112		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	107		106		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	151		146		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	107		110		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	117		113		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	103		106		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	148		157		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	100		92		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	118		118		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	48		60		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	85		98		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	98		105		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	106		108		33-143

Lab Control Sample Analysis**Batch Quality Control****Project Name:** PHASE II FSA-3231 CHILI AVE**Project Number:** P2100411**Lab Number:** L2056540**Report Date:** 01/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 06-10 Batch: WG1450293-2 WG1450293-3								
Perfluorooctanesulfonamide (FOSA)	99		102		46-170	13		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	69		69		1-87

Lab Control Sample Analysis

Batch Quality Control

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 07 Batch: WG1451237-2 WG1451237-3								
Perfluorobutanoic Acid (PFBA)	105		107		67-148	2		30
Perfluoropentanoic Acid (PFPeA)	109		110		63-161	1		30
Perfluorobutanesulfonic Acid (PFBS)	108		112		65-157	4		30
Perfluorohexanoic Acid (PFHxA)	106		110		69-168	4		30
Perfluoroheptanoic Acid (PFHpA)	102		102		58-159	0		30
Perfluorohexanesulfonic Acid (PFHxS)	105		109		69-177	4		30
Perfluorooctanoic Acid (PFOA)	105		107		63-159	2		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	113		116		49-187	3		30
Perfluoroheptanesulfonic Acid (PFHpS)	111		114		61-179	3		30
Perfluorononanoic Acid (PFNA)	100		102		68-171	2		30
Perfluorooctanesulfonic Acid (PFOS)	113		115		52-151	2		30
Perfluorodecanoic Acid (PFDA)	107		107		63-171	0		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	119		139		56-173	16		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	90		90		60-166	0		30
Perfluoroundecanoic Acid (PFUnA)	109		113		60-153	4		30
Perfluorodecanesulfonic Acid (PFDS)	114		116		38-156	2		30
Perfluorooctanesulfonamide (FOSA)	96		100		46-170	4		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	102		107		45-170	5		30
Perfluorododecanoic Acid (PFDoA)	100		104		67-153	4		30
Perfluorotridecanoic Acid (PFTTrDA)	103		106		48-158	3		30
Perfluorotetradecanoic Acid (PFTA)	143		145		59-182	1		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 07 Batch: WG1451237-2 WG1451237-3								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	89		88		2-156
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	111		108		16-173
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	101		96		31-159
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	105		102		21-145
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	102		102		30-139
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	106		101		47-153
Perfluoro[13C8]Octanoic Acid (M8PFOA)	89		88		36-149
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	106		114		1-244
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	90		91		34-146
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92		89		42-146
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	85		85		38-144
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	115		102		7-170
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	84		83		1-181
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	88		86		40-144
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	35		37		1-87
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	66		65		23-146
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	85		82		24-161
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	55		53		33-143

Lab Control Sample Analysis**Batch Quality Control****Project Name:** PHASE II FSA-3231 CHILI AVE**Project Number:** P2100411**Lab Number:** L2056540**Report Date:** 01/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 07 Batch: WG1451237-2 WG1451237-3								
Perfluorooctanesulfonamide (FOSA)	100		102		46-170	6		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	70		72		1-87

INORGANICS & MISCELLANEOUS

Project Name: PHASE II FSA-3231 CHILI AVE**Project Number:** P2100411**Lab Number:** L2056540**Report Date:** 01/06/21**SAMPLE RESULTS****Lab ID:** L2056540-01**Client ID:** SB-01 (0-1.5)**Sample Location:** CHILI, NY**Date Collected:** 12/16/20 09:16**Date Received:** 12/16/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	83.6		%	0.100	0.100	1	-	12/21/20 12:16	121,2540G	ER



Project Name: PHASE II FSA-3231 CHILI AVE**Project Number:** P2100411**Lab Number:** L2056540**Report Date:** 01/06/21**SAMPLE RESULTS****Lab ID:** L2056540-02**Client ID:** SB-03 (0-1.5)**Sample Location:** CHILI, NY**Date Collected:** 12/16/20 09:55**Date Received:** 12/16/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	86.8		%	0.100	0.100	1	-	12/21/20 12:16	121,2540G	ER



Project Name: PHASE II FSA-3231 CHILI AVE**Project Number:** P2100411**Lab Number:** L2056540**Report Date:** 01/06/21**SAMPLE RESULTS****Lab ID:** L2056540-03**Client ID:** SB-06 (0-1.5)**Sample Location:** CHILI, NY**Date Collected:** 12/16/20 10:50**Date Received:** 12/16/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	89.6		%	0.100	0.100	1	-	12/21/20 12:16	121,2540G	ER



Project Name: PHASE II FSA-3231 CHILI AVE**Project Number:** P2100411**Lab Number:** L2056540**Report Date:** 01/06/21**SAMPLE RESULTS****Lab ID:** L2056540-04**Client ID:** SB-10 (2.5-3.5)**Sample Location:** CHILI, NY**Date Collected:** 12/16/20 12:10**Date Received:** 12/16/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	84.7		%	0.100	0.100	1	-	12/21/20 12:16	121,2540G	ER



Project Name: PHASE II FSA-3231 CHILI AVE**Project Number:** P2100411**Lab Number:** L2056540**Report Date:** 01/06/21**SAMPLE RESULTS****Lab ID:** L2056540-05**Client ID:** SB-09(0.5-2)**Sample Location:** CHILI, NY**Date Collected:** 12/16/20 12:00**Date Received:** 12/16/20**Field Prep:** Not Specified**Sample Depth:****Matrix:** Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	83.9		%	0.100	0.100	1	-	12/21/20 12:16	121,2540G	ER



Lab Duplicate Analysis
*Batch Quality Control***Project Name:** PHASE II FSA-3231 CHILI AVE**Project Number:** P2100411**Lab Number:** L2056540**Report Date:** 01/06/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1447715-1 QC Sample: L2056886-01 Client ID: DUP Sample						
Solids, Total	89.3	87.9	%	2		10

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2056540-01A	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		A2-TS(7)
L2056540-01B	Plastic 8oz unpreserved	A	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-02A	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		A2-TS(7)
L2056540-02B	Plastic 8oz unpreserved	A	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-03A	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		A2-TS(7)
L2056540-03B	Plastic 8oz unpreserved	A	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-04A	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		A2-TS(7)
L2056540-04B	Plastic 8oz unpreserved	A	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-05A	Plastic 2oz unpreserved for TS	A	NA		2.0	Y	Absent		A2-TS(7)
L2056540-05B	Plastic 8oz unpreserved	A	NA		2.0	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-06A	Plastic 250ml unpreserved	B	NA		3.6	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-06B	Plastic 250ml unpreserved	B	NA		3.6	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-07A	Plastic 250ml unpreserved	B	NA		3.6	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-07B	Plastic 250ml unpreserved	B	NA		3.6	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-08A	Plastic 250ml unpreserved	B	NA		3.6	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-08B	Plastic 250ml unpreserved	B	NA		3.6	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-09A	Plastic 250ml unpreserved	B	NA		3.6	Y	Absent		A2-NY-537-ISOTOPE(14)
L2056540-10A	Plastic 250ml unpreserved	B	NA		3.6	Y	Absent		A2-NY-537-ISOTOPE(14)

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Serial_No:01062116:05
Lab Number: L2056540
Report Date: 01/06/21

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSA's)		
Perfluorododecanesulfonic Acid	PFDoDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESA's)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCA's)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: PHASE II FSA-3231 CHILI AVE**Lab Number:** L2056540**Project Number:** P2100411**Report Date:** 01/06/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers



Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

Data Qualifiers

- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Project Name: PHASE II FSA-3231 CHILI AVE
Project Number: P2100411

Lab Number: L2056540
Report Date: 01/06/21

REFERENCES

- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.

ID No.:17873

Facility: **Company-wide**

Revision 17

Department: **Quality Assurance**

Published Date: 4/28/2020 9:42:21 AM

Title: **Certificate/Approval Program Summary**

Page 1 of 1

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg. **EPA 522.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1** Hg.**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.


 NEW YORK CHAIN OF CUSTODY Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193 Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288		Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page 1 of 1		Date Rec'd in Lab 12/17/20		ALPHA Job # L20 56540			
		Project Information Project Name: Phase 1 ESA - 3231 Chili Ave Project Location: Chili, NY Project # P2100411 (Use Project name as Project #) <input type="checkbox"/> Project Manager: Dan Noll ALPHAQuote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days:		Deliverables <input type="checkbox"/> ASP-A <input type="checkbox"/> ASP-B <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other		Billing Information <input type="checkbox"/> Same as Client Info PO #					
Client Information Client: Labella Associates Address: 300 State St, Suite 200 Rochester, NY 14614 Phone: 585-454-6110 Fax: Email: dnoll@labellapc.com		Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWO Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:							
These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments: cc: KThung@labellapc.com / There are 2 coolers Please specify Metals or TAL.						ANALYSIS		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do <input type="checkbox"/> Lab to do (Please Specify below) Sample Specific Comments			
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials		Total Bottles	
30540-01		SB-01(0.5-1)(0-1.5)		12/16/2020 0916		SW		RT		2	
-02		SB-03(0.5-1)(0-1.5)		12/16/2020 0915		SW		RT		2	
-03		SB-06(0.5-1)(0-1.5)		12/16/2020 1050		SW		RT		2	
-04		SB-10(0.5-1)(2.5-3.5)		12/16/2020 1210		SW		RT		2	
-05		SB-09(0.5-2)		12/16/2020 1200		SW		RT		2	
-06		MW-01		12/16/2020 1530		GW		RT		2	
-07		MW-02		12/16/2020 1500		GW		RT		2	
-08		MW-03		12/16/2020 1400		GW		RT		2	
-09		Field blank		12/16/2020 1330		GW		RT		2	
-10		Equipment blank		12/16/2020 1345		GW		RT		1	
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code: P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type		Preservative		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)	
Relinquished By:		Date/Time		Received By:		Date/Time					
[Signature]		12/16/2020 1700		[Signature]		12/16/201815					
[Signature]		12/16/20 1815		[Signature]		12/16/20 1500					
[Signature]		12/17/20 1530		[Signature]		12/17/20 1520					
[Signature]		12/17/20 1630		[Signature]		12/17/20 1130					

Exhibit 2
2021 Sampling Summary Letter



April 8, 2021

Frank Sowers, P.E.
New York State Department of Environmental Conservation (NYSDEC)
6274 East Avon-Lima Road
Avon, New York 14414

Re: Documentation Sampling and Mitigation Measures
3231 Chili Avenue
Rochester, New York
LaBella Project No. P2102055

Dear Mr. Sowers,

Thank you for taking the time to speak with us during two different conference calls on March 23rd and April 1st, 2021 relating to the low-level per- and polyfluoroalkyl substances ("PFAS") found at the Site in soil and groundwater which were provided to NYSDEC on March 11, 2021 and more fully described in the Phase II Data report provide on March 28, 2021.

As discussed, the Chili Fire Department is in the middle of the construction of the new volunteer Chili Fire Department building that provides emergency services to the Town of Chili, as shown on the plans forwarded to you on March 22, 2021.

As we discussed, this letter confirms that all soils excavated during construction at the Site have been retained within the confines of the property and in proximity to the fire training facility. Note, the construction team is documenting the location of all relocated soils and subsequent to completing the construction work, a figure documenting the location of all relocated soils will be provided to NYSDEC.

Based upon the concerns raised by NYSDEC, the Fire Department has decided to install a liner system to provide an impermeable barrier between groundwater and the pond surface water. Additionally, because the ponds will be generally inaccessible for sampling after construction, samples documenting the soil conditions will be collected prior to its installation.

This letter provides additional details on these planned activities.

STORMWATER POND LINER

The proposed liner system will extend across the area shown on Figure 1. Details on the liner system and installation are provided below and attached.

Liner Material

The stormwater pond liner will consist of a 60-mil high-density polyethylene (HDPE) liner manufactured by Solmax. A liner data sheet with details on the liner properties is included in Attachment 1. A geotextile cushioning layer (Mirafi E1200) will be installed beneath the liner in order to provide a protective layer between the liner and the soil. A data sheet for the geotextile is included in Attachment 2.

300 State Street, Suite 201 | Rochester, NY 14614 | p 585-454-6110 | f 585-454-3066

www.labellapc.com

Liner Placement and Anchoring

The stormwater pond liner will be installed per the manufacturer specifications which are provided in Attachment 3. An anchoring trench will be dug along the top of the liner to key the edge of the liner into the existing soil. This trench will be backfilled and compacted to anchor the liner system. If necessary, rip rap will be installed along the trench path to provide further liner anchoring.

DOCUMENTATION SAMPLING

LaBella will collect documentation sampling of subsurface conditions within the stormwater pond and bio-retention area. This task will include the following work:

SUBSURFACE SOIL SAMPLING

1. A *Dig Safely New York* stakeout will be conducted at the Site to locate subsurface utilities in the stormwater pond/bio-retention area where the subsurface investigation will take place.
2. Soil sampling will be completed via direct-push Geoprobe equipment. Each soil boring will be advanced to a depth of approximately 12-feet below ground surface (bgs), to bedrock refusal, or to within the apparent saturated zone. Borings are anticipated to be collected within the excavated pond area and bio-retention area as shown on the attached figure.
3. Soils from the borings will be continuously assessed for visible or olfactory indications of impairment, and/or indication of detectable volatile organic compounds (VOCs) with a photo ionization detector (PID). Positive indications from any of these screening methods are collectively referred to as “evidence of impairment.” Continuous soil sampling will be conducted and each soil boring will be logged to evaluate geology and for evidence of impairment. The total number of borings is intended to provide subsurface information from throughout the pond areas; however, soil samples will not be analyzed from each soil boring, rather worst case samples will be retained for analytical testing based on field screening. It is currently anticipated that up to five (5) soil samples will be retained from the borings. In the event that there is a lack of any evidence of impairment soil samples will be collected from the apparent top of the saturated zone and will include at least one soil sample from the bio-retention area, main pond area and the influent area (between bio-retention and main pond). Each of the samples will be analyzed for the following.



Parameter	USEPA Method	No. Samples
USEPA TCL and NYSDEC CP-51 List Volatile Organic Compounds (VOCs) (including Tentative Identified Compounds [TICs])	8260	5
USEPA TCL and NYSDEC CP-51 List Semi-Volatile Organic Compounds (SVOCs) (including TICs)	8270	5
USEPA Target Analyte List (TAL) Metals	6010/7470/ 7471	5
Cyanide	9012	5
Polychlorinated Biphenyls (PCBs)	8082	5
Pesticides	8081	5
1,4-dioxane	8270 SIM	5
Poly- and perfluorinated compounds (PFAS)	537.1	5

Documentation sampling is anticipated to take place on Tuesday, April 13, 2021.

SURFACE SOIL SAMPLING

As part of this scope of work, LaBella will conduct full-suite surface soil sampling across the bio-retention area and stormwater pond area. The bio-retention and stormwater pond area include approximately 38,375 square feet (SF) total. As such, LaBella will collect a total of three (3) full suite surface soil samples:

Sample Location	Sample Name	Representative Area	Discrete Analyses	Composite Analyses
Bio-retention Area	SS-01	9,080 SF	VOCs	SVOCs, TAL Metals, Cyanide, PCBs, Pesticides, 1,4-dioxane, PFAS
Stormwater Pond	SS-02	14,645	VOCs	SVOCs, TAL Metals, Cyanide, PCBs, Pesticides, 1,4-dioxane, PFAS
Stormwater Pond	SS-03	14,650	VOCs	SVOCs, TAL Metals, Cyanide, PCBs, Pesticides, 1,4-dioxane, PFAS

Samples will be collected from the top 1'-0" of soil in the bio-retention area and stormwater pond area using hand tools. Tools will be decontaminated following collection of each sample, and an equipment blank will be collected following completion of the surface soil sampling event. Each sample will consist of approximately 4 discrete locations that will each be screened with a PID and the location with the highest PID reading will be retained for a discrete VOC analysis. In the event of a lack of PID readings, the discrete VOC analysis will be collected at random. The composite samples will be composited from the 4 discrete locations (i.e., 4:1 composite).

Surface soil sampling locations will be located with a global positioning system or tape measured from existing site features.

Surface soil sampling is anticipated to take place on April 13 or 14, 2021.



1. All sampling work will be completed in accordance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation dated June 2010 and the NYSDEC Sampling, Analysis, and Assessment of Per-and Polyfluoroalkyl Substances (PFAS) dated January 2021.
2. All samples will be sent under standard Chain of Custody procedures to a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory with a standard turnaround request (5 to 7 business days for petroleum compounds and 21 days for PFAS).
3. Exploration locations will be located with a global positioning system or tape measured from existing site features.
4. Quality Assurance/Quality Control QA/QC sampling will include 1 duplicate sample, and 1 matrix spike/matrix spike duplicate (MS/MSD). In addition, one (1) equipment rinsate blank will be collected for PFAS analysis as verification that equipment was properly decontaminated during sampling.

REPORTING

LaBella will provide a report to NYSDEC with the documentation of the liner location, a data package documenting the sampling work completed and providing the analytical laboratory results, and a figure showing the original and final locations of any soils relocated as part of the construction project.

If you have any questions, please do not hesitate to contact me at (585) 301-8458.

Respectfully submitted,

LABELLA ASSOCIATES, D.P.C.



Daniel P. Noll, PE
Project Manager

Attachment 1 – Liner Data Sheet
Attachment 2 – Geotextile Data Sheet
Attachment 3 – Liner Installation Specification



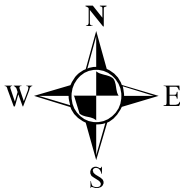
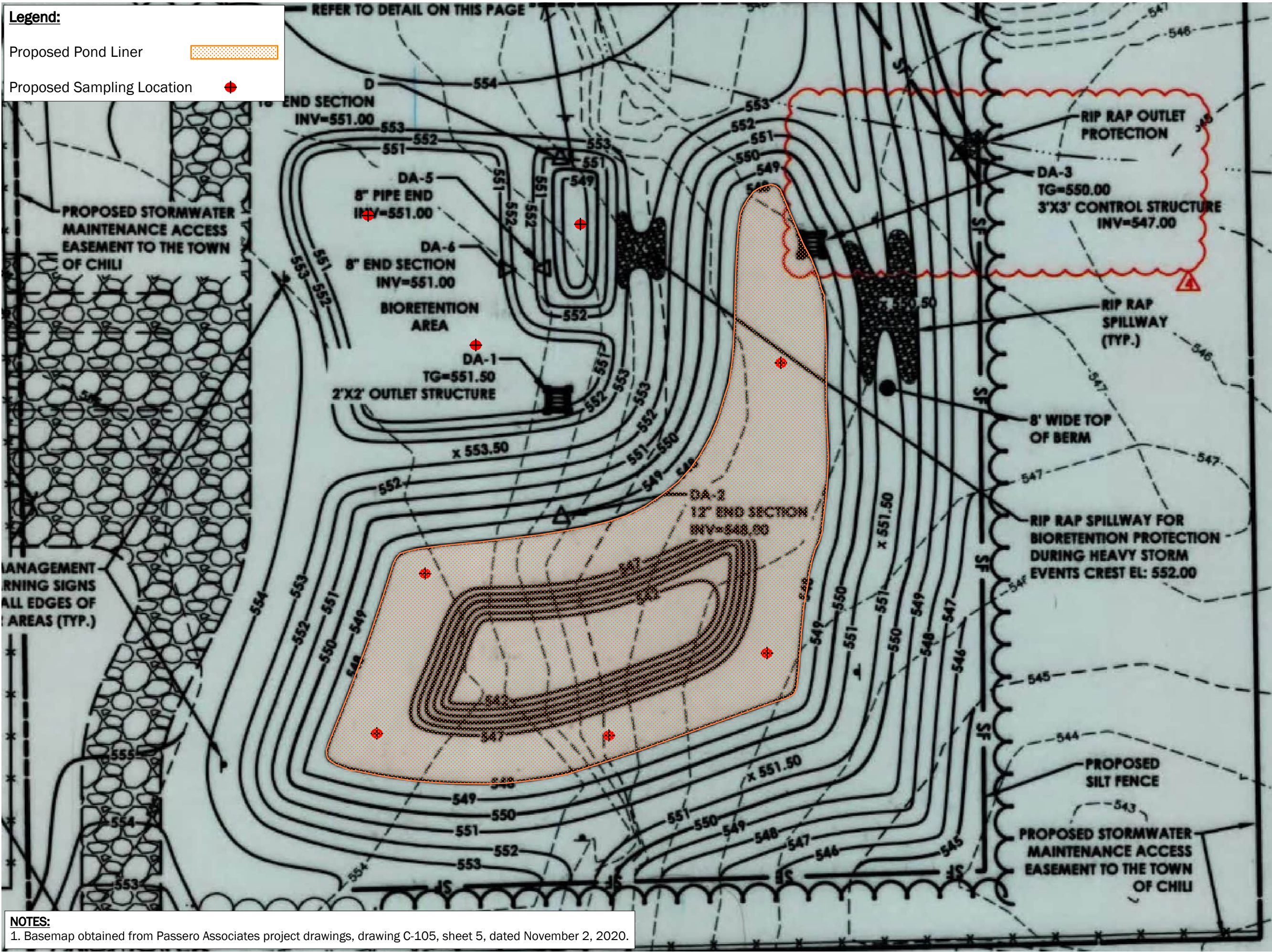
FIGURE



Legend:

Proposed Pond Liner

Proposed Sampling Location



NOT TO SCALE

CLIENT:

HANCOCK AND
ESTABROOK, LLP

PROJECT:

DOCUMENTATION
SAMPLING AND
MITIGATION MEASURES

3231 CHILI AVE.
CHILI, NY

DRAWING NAME:

PROPOSED POND
LINER AND
DOCUMENTATION
SAMPLING LOCATIONS

PROJECT #/DRAWING #/ DATE

P2102055

FIGURE 1

4/5/2021

ATTACHMENT 1 LINER DATA SHEET



PROPERTY	TEST METHOD	FREQUENCY ⁽¹⁾	UNIT Imperial	
SPECIFICATIONS				
Thickness (min. avg.)	ASTM D5199	Every roll	mils	60.0
Thickness (min.)	ASTM D5199	Every roll	mils	54.0
Melt Index - 190/2.16 (max.)	ASTM D1238	1/Batch	g/10 min	1.0
Sheet Density (8)	ASTM D792	Every 10 rolls	g/cc	≥ 0.940
Carbon Black Content	ASTM D4218	Every 2 rolls	%	2.0 - 3.0
Carbon Black Dispersion	ASTM D5596	Every 10 rolls	Category	Cat. 1 & Cat. 2
OIT - standard (avg.)	ASTM D3895	1/Batch	min	100
Tensile Properties (min. avg.) (2)	ASTM D6693	Every 2 rolls		
Strength at Yield			ppi	132
Elongation at Yield			%	13
Strength at Break			ppi	243
Elongation at Break			%	700
Tear Resistance (min. avg.)	ASTM D1004	Every 5 rolls	lbf	42
Puncture Resistance (min. avg.)	ASTM D4833	Every 5 rolls	lbf	120
Dimensional Stability	ASTM D1204	Certified	%	± 2
Stress Crack Resistance (SP-NCTL)	ASTM D5397	1/Batch	hr	500
Oven Aging - % retained after 90 days	ASTM D5721	Per formulation		
HP OIT (min. avg.)	ASTM D5885		%	80
UV Res. - % retained after 1600 hr	ASTM D7238	Per formulation		
HP-OIT (min. avg.)	ASTM D5885		%	50
Low Temperature Brittleness	ASTM D746	Certified	°F	- 106

SUPPLY SPECIFICATIONS (Roll dimensions may vary ±1%)

NOTES

1. Testing frequency based on standard roll dimension and one batch is approximately 180,000 lbs (or one railcar).
2. Machine Direction (MD) and Cross Machine Direction (XMD or TD) average values should be on the basis of 5 specimens each direction.
8. Correlation table is available for ASTM D792 vs ASTM D1505. Both methods give the same results.

* All values are nominal test results, except when specified as minimum or maximum.

* The information contained herein is provided for reference purposes only and is not intended as a warranty of guarantee. Final determination of suitability for use contemplated is the sole responsibility of the user. SOLMAX assumes no liability in connection with the use of this information.

Solmax is not a design professional and has not performed any design services to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification.

ATTACHMENT 2 GEOTEXTILE DATA SHEET



TENCATE

MIRAFI E1200 Certification

TenCate Geosynthetics Americas

Page: 1

CHENANGO CONTRACTING INC
CARL BURDICK
E-mail: CBURDICK@CHENANGOCONTRACTING.COM

BOL#: 2219099
Order#: 1121175-000
PO#: 4128

This is to certify that Mirafi® E1200 is a needle punched nonwoven geotextile composed of at least 95% polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. Mirafi® E1200 geotextile is inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids. NTPEP Listed

Mechanical Properties	Test Method	Minimum Average Roll Value			
GRAB TENSILE STRENGTH (MD)	ASTM D4632	320	LBS	1424	N
GRAB TENSILE STRENGTH (CD)	ASTM D4632	320	LBS	1424	N
ELONGATION (MD)	ASTM D4632	50	%		
GRAB ELONGATION (CD)	ASTM D4632	50	%		
TRAP TEAR STRENGTH (MD)	ASTM D4533	125	LBS	556	N
TRAP TEAR STRENGTH (CD)	ASTM D4533	125	LBS	556	N
CBR PUNCTURE STRENGTH	ASTM D6241	900	LBS	4005	N
MASS/UNIT WEIGHT	ASTM D5261	12.0	OZ/YD2	406.8	G/M2

Mechanical Properties	Test Method	Minimum Roll Value			
PERMITTIVITY	ASTM D4491	.7	SEC-1		
PERMEABILITY	ASTM D4491	.08	CM/SEC		
WATER FLOW RATE	ASTM D4491	30	GPM/FT2	1222	L/MIN/M2

Mechanical Properties	Test Method	Minimum Test Value			
UV RESISTANCE @ 500 HOURS	ASTM D4355	80	%		

Mechanical Properties	Test Method	Maximum Opening Size			
APPARENT OPENING SIZE - SIEVE	ASTM D4751	100	#		
APPARENT OPENING SIZE - MM	ASTM D4751	.150	MM		

Certification reflects test results at time of manufacturing and shipment. TenCate Geosynthetics is not responsible for environment or other factors which could alter the physical properties.
ASTM D4491 - Tested according to Constant Head procedure.

* * * END OF REPORT * * *

This June 19, 2019

Melissa Medlin

Melissa Medlin, Quality Manager

CERT#: 2219099-003

Unless specified separately in writing, material results apply only to items tested. No portion of this document may be reproduced whole or in part without the expressed written consent of TenCate. TenCate warrants our products and services to be free from defects in material and workmanship when delivered to TenCate's customers and that our products meet our published specifications. Actual test data supplied is for the full width of the tested master roll.

Accreditation #: GAI-LAP-25-97

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Cornelia, GA 30531 Tel 888 795 0808 www.tencate.com



ATTACHMENT 3

LINER INSTALLATION SPECIFICATION



Guidelines for Installation of:

HDPE and LLDPE Geomembrane Installation Specification



**International Association of
Geosynthetic Installers**

www.iagi.org

Revised November 1, 2015

Guidelines for Installation of:

HDPE and LLDPE Geomembrane Installation Specification



International Association of Geosynthetic Installers

8457 N. Rampart Range Road, Unit 106, PMB #154

Roxborough, CO 80125 USA

Telephone: +1 (720) 353-4977 / Fax: +1 (612) 235-6484

Email: iagi@iagi.org

www.iagi.org

Date: November 1, 2015

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The most recent version of this document can be found at: www.iagi.org

Part 1 — GENERAL

1.01 Guideline Scope

A.

This specification includes furnishing and installing HDPE and LLDPE geomembranes with a formulated sheet density of 0.940 g/cc or greater associated with HDPE geomembranes and a formulated sheet density of 0.939 or less for LLDPE geomembranes. Geomembranes with both smooth and textured surfaces are included.

1.02 References

A. American Society for Testing and Materials (ASTM):

1. D 638, Standard Test Method for Tensile Properties of Plastics.
2. D 4439 Terminology for Geosynthetics.
3. D 751, Standard Test Methods for Coated Fabrics.
4. D 792, Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
5. D 1004, Standard Test Method for Initial Tear Resistance of Plastic Film and Sheeting.
6. D 1204, Standard Test Method for Linear Dimensional Changes of Non Rigid Thermoplastic Sheeting or Film at Elevated Temperature.
7. D 1238, Standard Test Method for Flow Rates of Thermoplastics by Extrusion Plastometer.
8. D 1505, Standard Test Method for Density of Plastics by Density-Gradient Technique.
9. D 1603, Standard Test Method for Carbon Black in Olefin Plastics.
10. D 3895, Test Method for Oxidative Induction Time of Polyolefins by Thermal Analysis.

11. D 4218, Test Method for Determination of Carbon Black Content in Polyethylene Compounds by the Muffle-Furnace Technique.
12. D4437 - 08, Standard Practice for Non-destructive Testing (NDT) for Determining the Integrity of Seams Used in Joining Flexible Polymeric Sheet Geomembranes.
13. D 4833, Test Method for Index Puncture Resistance of Geotextiles, Geomembranes and Related Products.
14. D 5199, Standard Test Method for Measuring Nominal Thickness of Smooth Geomembranes.
15. D 5397, Standard Test Method for Evaluation of Stress Crack. Resistance of Polyolefins using Notched Constant Tensile Load Test.
16. D 5596, Standard Practice for Microscopical Examination of Pigment Dispersion in Plastic Compounds.
17. D 5641, Standard Practice for Geomembrane Seam Evaluation by Vacuum Chamber.
18. D 5721, Practice for Air-Oven Aging of Polyolefin Geomembranes.
19. D 5820, Test Method for Air Testing.
20. D 5885, Test Method for Oxidative Induction Time of Polyolefin Geosynthetics by High Pressure Differential Scanning Calorimetry.
21. D 5994, Standard Test Method for Measuring Nominal Thickness of Textured Geomembranes.
22. D 6365, Standard Practice for the Nondestructive Testing of Geomembrane Seams using The Spark Test.
23. D5820-95, Pressurized Air Channel Test for Dual Seamed Geomembranes.
24. D 6392-08, Integrity of Non-reinforced Geomembrane Seams Produced Using Thermo-Fusion Methods.
25. D7002, Standard Practice for Electrical Leak Location on Exposed Geomembranes Using the Water Puddle Method.
26. D7007-15, Standard Practices for Electrical Methods for Locating Leaks in Geomembranes Covered with Water or Earthen Materials.

27. ASTM D7466, Measurement of the Asperity Height of Textured Geomembranes Using a Depth Gage

B. Geosynthetic Research Institute (GRI)

1. GRI GM 9, Cold Weather Seaming of Geomembranes
2. GRI GM 10, The Stress Crack Resistance of HDPE Geomembrane Sheet
3. GRI GM 13, Test Properties, Testing Frequency for High Density Polyethylene (HDPE) Smooth and Textured Geomembranes
4. GRI GM 14, Test Frequencies for Destructive Seam Testing Selecting, variable intervals for taking geomembrane destructive samples using the method of attributes.
5. GRI GM 17, Test Methods, Test Properties and Testing Frequency for Linear Low Density Polyethylene (LLDPE) Smooth and Textured Geomembranes
6. GRI GM 19, Seam Strength and Related Properties of Thermally Bonded Polyolefin Geomembranes.
7. GRI GM 20, Selecting Variable Intervals for Taking Geomembrane Destructive Seam Samples Using Control Charts.

1.03 Submittals

A. Submit under provisions of Section 1.03B an 1.03D

- B.** Submit the following to the Engineer or Owner, for review and approval, within a reasonable time so as to expedite shipment or installation of the Geomembrane:
1. Documentation of manufacturer's qualifications as specified in subsection 1.04A of this Section.
 2. Manufacturer's Quality Control program manual or descriptive documentation.

3. A material properties sheet, including at a minimum all properties specified in GRI GM 13 or GRI GM 17, including test methods used.
4. Sample of the material.
5. Documentation of Installer's qualifications, as specified below and in subsection 1.04B of this Section.
 - a. Submit a list of at least ten completed facilities. For each installation, provide: name and type of facility; its location; the date of installation; name and telephone number of contact at the facility; type and thickness of geomembrane and; surface area of the installed geomembrane.
 - b. Submit resumes or qualifications of the Installation Supervisor, Master Seamer and IAGI Certified Welding Technicians (CWTs) to be assigned to this project.
 - c. Quality Control Program.
6. Example Material Warranty and Liner Installation Warranty.

C. Shop Drawings

1. Submit copies of shop drawings for engineer's approval within a reasonable time so as not to delay the start of geomembrane installation. Shop drawings shall show the proposed panel layout identifying seams and details. Seams should generally follow the direction of the slope. Butt seams or roll-end seams should not occur on a slope unless approved by the Owner's Representative. Butt seams on a slope, if allowed, should be staggered.
2. Placement of geomembrane should not be allowed to proceed until Owner's Representative has received and approved the shop drawings.

D. Additional Submittals (In-Progress and at Completion)

1. Manufacturer's warranty (refer to subsection 1.07).
2. Geomembrane installation warranty (refer to subsection 1.08).

3. Daily written acceptance of subgrade surface (refer to subsection 3.01.C).
4. Low-temperature seaming procedures if applicable (refer to subsection 3.03.A).
5. Prequalification test seam samples (refer to subsection 3.05.A.6).
6. Field seam non-destructive test results (refer to subsection 3.05.B.1).
7. Field seam destructive test results (refer to subsection 3.05.C.6).
8. Daily field installation reports (refer to subsection 3.05.G).
9. Installation record drawing, as discussed in subsection 3.05.

1.04 Quality Control

A. Manufacturer's Qualifications: The manufacturer of geomembrane of the type specified or similar product shall have at least five years experience in the manufacture of such geomembrane. In addition, the geomembrane manufacturer shall have manufactured at least 1,000,000 M² (10,000,000 FT²) of the specified type of geomembrane or similar product during the last five years.

B. Installer's Qualifications

1. The Geomembrane Installer shall be the Manufacturer, approved Manufacturer's Installer or a contractor approved by the Owner's Representative to install the geomembrane.
2. The Geomembrane Installer shall have at least three years experience in the installation of the specified geomembrane or similar. The Geomembrane Installer shall have installed at least 10 projects involving a total of 500,000 M² (5,000,000 FT²) of the specified type of geomembrane or similar during the last three years.

3. Installation shall be performed under the direction of a field Installation Supervisor who shall be responsible throughout the geomembrane installation, for geomembrane panel layout, seaming, patching, testing, repairs, and all other activities of the Geomembrane Installer. The Field Installation Supervisor shall have installed or supervised the installation and seaming of a minimum of 10 projects involving a total of 500,000 M² (5,000,000 FT²) of geomembrane of the type specified or similar product.
4. Seaming shall be performed under the direction of a Master Seamer (who may also be the Field Installation Supervisor or Crew Foreman) who has seamed a minimum of 300,000 M² (3,000,000 FT²) of geomembrane of the type specified or similar product, using the same type of seaming apparatus to be used in the current project. The Field Installation Supervisor and/or Master Seamer shall be present whenever seaming is performed.
5. All seaming, patching, other welding operations, and testing shall be performed by qualified technicians employed by the Geomembrane Installer.

1.05 Delivery, Storage and Handling

- A. Each roll of geomembrane delivered to the site shall be labeled by the manufacturer. The label shall be firmly affixed and shall clearly state the manufacturer's name, product identification, material thickness, roll number, roll dimensions and roll weight.
- B. Geomembrane shall be protected from mud, dirt, dust, puncture, cutting or any other damaging or deleterious conditions.
- C. Rolls shall be stored away from high traffic areas. Continuously and uniformly support rolls on a smooth, level prepared surface.

1.06 Project Conditions

- A. Geomembrane should not be installed in the presence of standing water, while precipitation is occurring, during excessive winds, or when material temperatures are outside the limits specified in Section 3.03.

1.07 Material Warranty

- A. As agreed by project participants.

1.08 Geomembrane Installation Warranty

- A. The Geomembrane Installer shall guarantee the geomembrane installation against defects in the installation and workmanship for 1 year commencing with the date of final acceptance.

1.09 Geomembrane Pre-Construction Meeting

- A. A geomembrane pre-construction meeting shall be held at the site prior to installation of the geomembrane. At a minimum, the meeting shall be attended by the Geomembrane Installer, Owner, Owner's representative (Engineer and/or CQA Firm), and the Earthwork Contractor.
- B. **Topics for this meeting shall include:**
 - 1. Health and Safety
 - 2. Lines of authority and communication. Resolution of any project document ambiguity.

3. Methods for documenting, reporting and distributing documents and reports.
4. Procedures for packaging and storing archive samples.
5. Review of time schedule for all installation and testing.
6. Review of panel layout and numbering systems for panels and seams including details for marking on geomembrane.
7. Procedures and responsibilities for preparation and submission of as-built panel and seam drawings.
8. Temperature and weather limitations. Installation procedures for adverse weather conditions. Defining acceptable subgrade, geomembrane, or ambient moisture and temperature conditions for working during liner installation.
9. Subgrade conditions, dewatering responsibilities and subgrade maintenance plan.
10. Deployment techniques including allowable subgrade for the geomembrane.
11. Plan for controlling expansion/contraction and wrinkling of the geomembrane.
12. Covering of the geomembrane and cover soil placement.
13. Measurement and payment schedules.
14. Responsibilities of each party.

C. The meeting shall be documented by a person designated at the beginning of the meeting and minutes shall be transmitted to all parties.

PART 2 - PRODUCTS

2.01 Source Quality Control

A. Manufacturing Quality Control

1. The test methods and frequencies used by the manufacturer for quality control/quality assurance of the above geomembrane prior to delivery, shall be in accordance with GRI GM 13 for HDPE geomembrane or GRI GM 17 for LLDPE geomembrane, or modified as required for project specific conditions.
2. The manufacturer's geomembrane quality control certifications, including results of quality control testing of the products, as specified in subsection 2.01.A.3 of this Section, must be supplied to the Owner's Representative to verify that the materials supplied for the project are in compliance with all product and or project specifications in this Section. The certification shall be signed by a responsible party employed by the manufacturer, such as the QA/QC Manager, Production Manager, or Technical Services Manager. Certifications shall include lot and roll numbers and corresponding shipping information.
3. The Manufacturer will provide Certification that the geomembrane and welding rod supplied for the project are made from the same material type and are compatible.

2.02 Geomembrane

- A. The geomembrane shall consist of new, first quality products designed and manufactured specifically for the purpose of this work which shall have been satisfactorily demonstrated by prior testing to be suitable and durable for such purposes. The geomembrane rolls shall be seamless, high density polyethylene (HDPE - Formulated Sheet Density $\geq 0.940\text{g/cc}$) or linear low density pol-

yethylene (LLDPE - Formulated Sheet Density ≤ 0.939 g/cc) containing no plasticizers, fillers or extenders and shall be free of holes, blisters or contaminants, and leak free verified by 100% in line spark or equivalent testing. The geomembrane shall be supplied as a continuous sheet with no factory seams in rolls. The geomembrane will meet the property requirements as shown in Table 1a or 2a (GRI GM 13) or Table 1a or 2a (GRI GM 17).

- B. Material conformance testing by the Owner's Representative, if required, will be conducted using in-plant sampling or as specified for the project.
- C. The geomembrane seams shall meet the property requirements as shown in Table 2, (Attachment B) or as required by project specifications.

Interesting Historical Fact:

Before Australia adopted the metric system, they used the term "thou" to mean thousandth of an inch instead of using the term "mil." So 30 mil geomembranes would be referred to as "30 thou." For clarification, the use of the term mil in this guideline means "thousandth of an inch."

PART 3 - EXECUTION

3.01 Subgrade Preparation

- A. The subgrade shall be prepared in accordance with the project specifications. The geomembrane subgrade shall be uniform and free of sharp or angular objects that may damage the geomembrane prior to installation of the geomembrane.
- B. The Geomembrane Installer and Owner's Representative shall inspect the surface to be covered with the geomembrane on each day's operations prior to placement of geomembrane to verify suitability.
- C. The Geomembrane Installer and Owner's Representative shall provide daily written acceptance for the surface to be covered by the geomembrane in that day's operations. The surface shall be maintained in a manner, during geomembrane installation, to ensure subgrade suitability.
- D. All subgrade damaged by construction equipment and deemed unsuitable for geomembrane deployment shall be repaired prior to placement of the geomembrane. All repairs shall be approved by the Owner's Representative and the Geomembrane Installer. This damage, repair, and the responsibilities of the contractor and Geomembrane Installer shall be defined in the preconstruction meeting.

3.02 Geomembrane Placement

- A. No geomembrane shall be deployed until the applicable certifications and quality control certificates listed in subsection 1.03 of this Section are submitted to and approved by the Owner's Representative within the timeframe specified in the contract documents. If the material does not meet project specifications it shall be removed from the work area.

- B. The geomembrane shall be installed to the limits shown on the project drawings and essentially as shown on approved panel layout drawings.
- C. No geomembrane material shall be unrolled and deployed if the material temperatures are lower than 0 degrees C (32 degrees F) unless otherwise approved by the Owner's Representative. The specified minimum temperature for material deployment may be adjusted by the Owner's Representative. Temperature limitations should be defined in the preconstruction meeting. Typically, only the quantity of geomembrane that will be anchored and seamed together in one day should be deployed.
- D. No vehicular traffic shall travel on the geomembrane other than an approved low ground pressure vehicle or equivalent.
- E. Sandbags or equivalent ballast shall be used as necessary to temporarily hold the geomembrane material in position under the foreseeable and reasonably expected wind conditions. Sand bag material shall be sufficiently close-knit to prevent soil fines from working through the bags and discharging on the geomembrane.
- F. Geomembrane placement shall not be done if moisture prevents proper subgrade preparation, panel placement, or panel seaming. Moisture limitations should be defined in the preconstruction meeting.
- G. Damaged panels or portions of the damaged panels which have been rejected shall be marked and their removal from the work area recorded.
- H. The geomembrane shall not be allowed to "bridge over" voids or low areas in the subgrade. The geomembrane shall rest in intimate contact with the subgrade.
- I. Wrinkles caused by panel placement or thermal expansion should be minimized in accordance with section 1.09 B11.
- J. Considerations on site geometry: In general, seams shall be oriented parallel to the line of the maximum slope. In corners and odd shaped geometric loca-

tions, the total length of field seams shall be minimized. Seams shall not be located at low points in the subgrade unless geometry requires seaming at such locations and if approved by the Owner's Representative.

- K. Overlapping: The panels shall be overlapped prior to seaming to whatever extent is necessary to affect a good weld and allow for proper testing. In no case shall this overlap be less than 75 mm (3 in.).

3.03 Seaming Procedures

- A. Cold weather installations should follow guidelines as outlined in GRI GM9.
- B. No geomembrane material shall be seamed when liner temperatures are less than 0 degrees C (32 degrees F) unless the following conditions are complied with:
 - 1. Seaming of the geomembrane at material temperatures below 0 degrees C (32 degrees F) is allowed if the Geomembrane Installer can demonstrate to the Owner's Representative, using pre-qualification test seams, that field seams comply with the project specifications, the safety of the crew is ensured, and geomembrane material can be fabricated (i.e. pipeboots, penetrations, repairs. etc.) at sub-freezing temperatures.
 - 2. The Geomembrane Installer shall submit to the Owner's Representative for approval, detailed procedures for seaming at low temperatures, possibly including the following:
 - a. Preheating of the geomembrane.
 - b. The provision of a tent or other device if necessary to prevent heat losses during seaming and rapid heat losses subsequent to seaming.
 - c. Number of test welds to determine appropriate seaming parameters.

- C. No geomembrane material shall be seamed when the sheet temperature is above 75 degrees C (170 degrees F) as measured by an infrared thermometer or surface thermocouple unless otherwise approved by the Owner's Representative. This approval will be based on recommendations by the manufacturer and on a field demonstration by the Geomembrane Installer using prequalification test seams to demonstrate that seams comply with the specification.
- D. Seaming shall primarily be performed using automatic fusion welding equipment and techniques. Extrusion welding shall be used where fusion welding is not possible such as at pipe penetrations, patches, repairs and short (less than a roll width) runs of seams.
- E. Fishmouths or excessive wrinkles at the seam overlaps shall be minimized and when necessary cut along the ridge of the wrinkles back into the panel so as to effect a flat overlap. The cut shall be terminated with a keyhole cut (nominal 10 mm (1/2 in) diameter hole) so as to minimize crack/tear propagation. The overlay shall subsequently be seamed. The key hole cut shall be patched with an oval or round patch of the same base geomembrane material extending a minimum of 150 mm (6 in.) beyond the cut in all directions.

3.04 Pipe and Structure Penetration Sealing System

- A. Provide penetration sealing system as shown in the Project Drawings.
- B. Penetrations shall be constructed from the base geomembrane material, flat stock, prefabricated boots and accessories as shown on the Project Drawings. The pre-fabricated or field fabricated assembly shall be field welded to the geomembrane as shown on the Project Drawings so as to prevent leakage. This assembly shall be tested as outlined in section 3.05.B. Alternatively, where field non-destructive testing cannot be performed, attachments will be field spark tested by standard holiday leak detectors in accordance with ASTM

6365.

- C. Spark testing should be done in areas where both air pressure testing and vacuum testing are not possible.
 - 1. Equipment for spark testing shall be comprised of but not limited to a hand held holiday spark tester and conductive wand that generates a high voltage.
 - 2. The testing activities shall be performed by the Geomembrane Installer by placing an electrically conductive tape or wire beneath the seam prior to welding. A trial seam containing a non-welded segment shall be subject to a calibration test to ensure that such a defect (non-welded segment) will be identified under the planned machine settings and procedures. Upon completion of the weld, enable the spark tester and hold approximately 25mm (1 in) above the weld moving slowly over the entire length of the weld in accordance with ASTM 6365. If there is no spark the weld is considered to be leak free.
 - 3. A spark indicates a hole in the seam. The faulty area shall be located, repaired and retested by the Geomembrane Installer.
 - 4. Care should be taken if flammable gases are present in the area to be tested.

3.05 Field Quality Control

The Owner's Representative shall be notified prior to all pre-qualification and production welding and testing, or as agreed upon in the pre-construction meeting.

A. Prequalification Test Seams

- 1. Test seams shall prepare and tested by the Geomembrane Installer to verify that seaming parameters (speed, temperature and pressure of welding equipment) are adequate.

2. Test seams shall be made by each welding technician and tested in accordance with ASTM D 4437 at the beginning of each seaming period. Test seaming shall be performed under the same conditions and with the same equipment and operator combination as production seaming. The test seam shall be approximately 3.3 meters (10 feet) long for fusion welding and 1 meter (3 feet) long for extrusion welding with the seam centered lengthwise. At a minimum, tests seams should be made by each technician 1 time every 4-6 hours; additional tests may be required with changes in environmental conditions.
3. Two 25 mm (1 in) wide specimens shall be die-cut by the Geomembrane Installer from each end of the test seam. These specimens shall be tested by the Geomembrane Installer using a field tensiometer testing both tracks for peel strength and also for shear strength. Each specimen should fail in the parent material and not in the weld, "Film Tear Bond"(F.T.B. failure). Seam separation equal to or greater than 25% of the track width shall be considered a failing test.
4. The minimum acceptable seam strength values to be obtained for all specimens tested are listed in Subsection 3.05.C.4 of this Section. Four specimens shall pass and the fifth specimen must meet or exceed 80% of the required seam strength for the test seam to be a passing seam.
5. If a test seam fails, an additional test seam shall be immediately conducted. If the additional test seam fails, the seaming apparatus shall be rejected and not used for production seaming until the deficiencies are corrected and a successful test seam can be produced.
6. A sample from each test seam shall be labeled. The label shall indicate the date, geomembrane temperature, number of the seaming unit, technician performing the test seam and pass or fail description. The sample shall then be given to the Owner's Representative for archiving.

B. Field Seam Non-destructive Testing

1. All field seams shall be non-destructively tested by the Geomembrane Installer over the full seam length before the seams are covered. Each seam shall be numbered or otherwise designated. The location, date, test unit, name of tester and outcome of all non-destructive testing shall be recorded and submitted to the Owner's Representative.
2. Testing should be done as the seaming work progresses, not at the completion of all field seaming, unless agreed to in advance by the Owner's Representative. All defects found during testing shall be numbered and marked immediately after detection. All defects found should be repaired, retested and remarked to indicate acceptable completion of the repair.
3. Non-destructive testing shall be performed using vacuum box, air pressure or spark testing equipment.
4. Non-destructive tests shall be performed by experienced technicians familiar with the specified test methods. The Geomembrane Installer shall demonstrate to the Owner's Representative all test methods to verify the test procedures are valid.
5. Extrusion seams shall be vacuum box tested by the Geomembrane Installer in accordance with ASTM D 4437 and ASTM D 5641 with the following equipment and procedures:
 - a. Equipment for testing extrusion seams shall be comprised of but not limited to: a vacuum box assembly consisting of a rigid housing, a transparent viewing window, a soft rubber gasket attached to the base, port hole or valve assembly and a vacuum gauge; a vacuum pump assembly equipped with a pressure controller and pipe connections; a rubber pressure/vacuum hose with fittings and connec-

- tions; a plastic bucket; wide paint brush or mop; and a soapy solution.
- b. The vacuum pump shall be charged and the tank pressure adjusted to approximately 35 kPa (5 psig).
 - c. The Geomembrane Installer shall create a leak tight seal between the gasket and geomembrane interface by wetting a strip of geomembrane approximately 0.3m (12 in) by 1.2m (48 in) (length and width of box) with a soapy solution, placing the box over the wetted area, and then compressing the box against the geomembrane. The Geomembrane Installer shall then close the bleed valve, open the vacuum valve, maintain initial pressure of approximately 35 kPa (5 psig) for approximately five (5) seconds. The geomembrane should be continuously examined through the viewing window for the presence of soap bubbles, indicating a leak. If no bubbles appear after five (5) seconds, the area shall be considered leak free. The box shall be depressurized and moved over the next adjoining area with an appropriate overlap and the process repeated.
 - d. All areas where soap bubbles appear shall be marked, repaired and then retested.
 - e. At locations where seams cannot be nondestructively tested, such as pipe penetrations, alternate nondestructive spark testing (as outlined in section 3.04.B) or equivalent should be substituted.
 - f. All seams that are vacuum tested shall be marked with the date tested, the name of the technician performing the test and the results of the test.
6. Double Fusion seams with an enclosed channel shall be air pressure tested by the Geomembrane Installer in accordance with ASTM D 5820 and ASTM D 4437 and the following equipment and procedures:

- a. Equipment for testing double fusion seams shall be comprised of but not limited to: an air pump equipped with a pressure gauge capable of generating and sustaining a pressure of 210 kPa (30 psig), mounted on a cushion to protect the geomembrane; and a manometer equipped with a sharp hollow needle or other approved pressure feed device.
- b. The testing activities shall be performed by the Geomembrane Installer. Both ends of the seam to be tested shall be sealed and a needle or other approved pressure feed device inserted into the tunnel created by the double wedge fusion weld. The air pump shall be adjusted to a pressure of 210 kPa (30 psig), and the valve closed. Allow two (2) minutes for the injected air to come to equilibrium in the channel, and sustain pressure for five (5) minutes. If pressure loss does not exceed 28 kPa (4 psig) after this five minute period the seam shall be considered leak tight. Release pressure from the opposite end verifying pressure drop on needle to ensure testing of the entire seam. The needle or other approved pressure feed device shall be removed and the feed hole sealed.

NOTE: Historically, destructive seam testing has been conducted every 150 lineal meters (approximately 500 lineal feet). There is a movement toward doing less destructive testing mid field seam. The rationale behind this change is that when a hole is cut from a seam, it is repaired with a seam that is not as good as the original. There are several methods used within the industry to reduce the amount of destructive seam sampling done. One method involves the use of both destructive and non-destructive methods for testing seam integrity. First, the seam must be made with split-wedge welder and successfully air channel tested. Also a destructive seam sample is taken from the anchor trench and tested. If both tests are successful, then no destructive seams are taken from the field seam. If either test fails, then destructive sampling is conducted on the field seam. A second method is detailed in GRI's GM 14 guideline "Selecting Variable Intervals for Taking Geomembrane Destructive Seam Samples Using the Method of Attributes." A simplified explanation of this method is that good seaming performance is rewarded by extending the de-

- c. If loss of pressure exceeds 28 kPa (4 psig) during the testing period or pressure does not stabilize, the faulty area shall be located, repaired and retested by the Geomembrane Installer.
- d. Results of the pressure testing shall be recorded on the liner at the seam tested and on a pressure testing record.

C. Destructive Field Seam Testing

1. One destructive test sample per 150 linear m (500 linear ft) seam length or another predetermined length in accordance with GRI GM14 or GRI GM20 shall be taken by the Geomembrane Installer from a location specified by the Owner's Representative. The Geomembrane Installer shall not be informed in advance of the sample location. In order to obtain test results prior to completion of geomembrane installation, samples shall be cut by the Geomembrane Installer as directed by the Owner's Representative as seaming progresses.
2. All field samples shall be marked with their sample number and seam number. The sample number, date, time, location, and seam number shall be recorded. The Geomembrane Installer shall repair all holes in the geomembrane resulting from obtaining the seam samples. All patches shall be vacuum box tested or spark tested. If a patch cannot be permanently installed over the test location the same day of sample collection, a temporary patch shall be tack welded or hot air welded over the opening until a permanent patch can be affixed.
3. The destructive sample size shall be 300 mm (12 in) wide by 1 m (36 in) long with the seam centered lengthwise. The sample shall be cut into three equal sections and distributed as follows: one section given to the Owner's Representative as an archive sample; one section given to the Owner's Representative for laboratory testing as specified in paragraph 5 below; and one section retained by the Geomembrane Installer for field testing as specified in paragraph 4 below.

4. For field testing, the Geomembrane Installer shall cut 10 identical 25 mm (1 in) wide replicate specimens from the sample. The Geomembrane Installer shall test five specimens for seam shear strength and five for peel strength. Peel tests will be performed on both inside and outside weld tracks. To be acceptable, 4 of 5 test specimens must pass the stated criteria in section 2.02 with less than 25% separation. The fifth specimen must meet or exceed 80% of the required seam strength.
5. If independent seam testing is required by the specifications it shall be conducted in accordance with ASTM 5820 or ASTM D4437.
6. Reports of the results of examinations and testing shall be prepared and submitted to the Owner's Representative.
7. For field seams, if a laboratory test fails, that shall be considered as an indicator of the possible inadequacy of the entire seamed length corresponding to the test sample. Additional destructive test portions shall then be taken by the Geomembrane Installer at locations indicated by the Engineer; typically 3 m (10 ft.) on either side of the failed sample and laboratory seam tests shall be performed. Passing tests shall be an indicator of adequate seams. Failing tests shall be an indicator of non-adequate seams and all seams represented by the destructive test location shall be repaired with a cap-strip extrusion welded to all sides of the capped area. All cap-strip seams shall be non-destructively vacuum box tested until adequacy of the seams is achieved. Cap strip seams exceeding 50 M in length (150 FT) shall be destructively tested.

D. Identification of Defects

1. Panels and seams shall be inspected by the Installer and Owner's Representative during and after panel deployment to identify all defects, including holes, blisters, undispersed raw materials and signs of contamination by foreign matter.

- E. Evaluation of Defects:** Each suspect location on the liner (both in geomembrane seam and non-seam areas) shall be non-destructively tested using one of the methods described in Section 3.05.B. Each location which fails non-destructive testing shall be marked, numbered, measured and posted on the daily "installation" drawings and subsequently repaired.
1. If a destructive sample fails the field or laboratory test, the Geomembrane Installer shall repair the seam between the two nearest passed locations on both sides of the failed destructive sample location.
 2. Defective seams, tears or holes shall be repaired by re-seaming or applying an extrusion welded cap strip.
 3. Reseaming may consist of either:
 - a. Removing the defective weld area and rewelding the parent material using the original welding equipment; or
 - b. Reseaming by extrusion welding along the overlap at the outside seam edge left by the fusion welding process.
 4. Blisters, larger holes, and contamination by foreign matter shall be repaired by patches and/or extrusion weld beads as required. Each patch shall extend a minimum of 150 mm (6 in) beyond all edges of the defects.
 5. All repairs shall be measured, located and recorded.
- F. Verification of Repairs on Seams:** Each repair shall be non-destructively tested using either vacuum box or spark testing methods. Tests which pass the non-destructive test shall be taken as an indication of a successful repair. Failed tests shall be reseamed and retested until a passing test results. The number, date, location, technician and test outcome of each patch shall be recorded.

- G. Daily Field Installation Reports:** At the beginning of each day's work, the Installer shall provide the Engineer with daily reports for all work accomplished on the previous work day. Reports shall include the following:
1. Total amount and location of geomembrane placed;
 2. Total length and location of seams completed, name of technicians doing seaming and welding unit numbers;
 3. Drawings of the previous day's installed geomembrane showing panel numbers, seam numbers and locations of non-destructive and destructive testing;
 4. Results of pre-qualification test seams;
 5. Results of non-destructive testing; and
 6. Results of vacuum testing of repairs.
- H.** Destructive test results shall be reported prior to covering of liner or within 48 hours.

3.06 Liner Acceptance

- A.** Geomembrane liner will be accepted by the Owner's Representative when:
1. The entire installation is finished or an agreed upon subsection of the installation is finished;
 2. All Installer's QC documentation is completed and submitted to the owner;
 3. Verification of the adequacy of all field seams and repairs and associated geomembrane testing is complete.

3.07 Anchor Trench

- A.** Construct as specified on the project drawings.

3.08 Disposal of Scrap Materials

- A. On completion of installation, the Geomembrane Installer shall dispose of all trash and scrap material in a location approved by the Owner, remove equipment used in connection with the work herein, and shall leave the premises in a neat acceptable manner. No scrap material shall be allowed to remain on the geomembrane surface.

PART 4 - MEASUREMENT AND PAYMENT

As per project specifications.

PART 5 - GSI GM13 SPECIFICATION

"This section shall include the current GSI GM13 manufacturer's specification or a revision of GSI GM13 specific to the unique project requirements and/or standards, as determined by the owner or owners' agent."

Attachment A.

Table 1(a) - Seam Strength and related Properties of Thermally Bonded Smooth and Textured Linear Low Density Polyethylene (LLDPE) Geomembrane (English Units)

Geomembrane Nominal Thickness	20 mils	30 mils	40 mils	50 mils	60 mils	80 mils	100 mils	120 mils
Hot Wedge Seams ⁽¹⁾								
shear strength ⁽²⁾ , lb/in.	30	45	60	75	90	120	150	180
shear elongation at break ⁽³⁾ , %	50	50	50	50	50	50	50	50
peel strength ⁽²⁾ , lb/in.	25	38	50	63	75	100	125	150
peel separation, %	25	25	25	25	25	25	25	25
Extrusion Fillet Seams ⁽¹⁾								
shear strength ⁽²⁾ , lb/in.	30	45	60	75	90	120	150	180
shear elongation at break ⁽³⁾ , %	50	50	50	50	50	50	50	50
peel strength ⁽²⁾ , lb/in.	22	34	44	57	66	88	114	136
peel separation, %	25	25	25	25	25	25	25	25

Table 1(b) – Seam Strength and related Properties of Thermally Bonded Smooth and Textured **Linear Low Density Polyethylene (LLDPE)** Geomembrane (S.I. Units)

Geomembrane Nominal Thickness	0.50 mm	0.75 mm	1.0 mm	1.25 mm	1.5 mm	2.0 mm	2.5 mm	3.0 mm
Hot Wedge Seams ⁽¹⁾								
shear strength ⁽²⁾ , N/25mm	131	197	263	328	394	525	657	788
shear elongation at break ⁽³⁾ , %	50	50	50	50	50	50	50	50
peel strength ⁽²⁾ , N/25mm	109	166	219	276	328	438	547	657
peel separation, %	25	25	25	25	25	25	25	25
Extrusion Fillet Seams ⁽¹⁾								
shear strength ⁽²⁾ , N/25mm	131	197	263	328	394	525	657	788
shear elongation at break ⁽³⁾ , %	50	50	50	50	50	50	50	50
peel strength ⁽²⁾ , N/25mm	95	150	190	250	290	385	500	595
peel separation, %	25	25	25	25	25	25	25	25

Notes for Tables 1(a) and 1(b):

- Also for hot air and ultrasonic seaming methods
- Value listed for shear and peel strength are for 4 out of 5 test specimens; the 5th specimen can be low as 80% of the listed values
- Elongation measurements should be omitted for field testing

Table 2(a) - Seam Strength and related Properties of Thermally Bonded Smooth and Textured High Density Polyethylene (HDPE) Geomembrane (English Units)

Geomembrane Nominal Thickness	30 mils	40 mils	50 mils	60 mils	80 mils	100 mils	120 mils
Hot Wedge Seams ⁽¹⁾							
Shear strength ⁽²⁾ , lb/in.	57	80	100	120	160	200	240
Shear elongation at break ⁽³⁾ , %	50	50	50	50	50	50	50
Peel strength ⁽²⁾ , lb/in.	45	60	76	91	121	151	181
Peel separation, %	25	25	25	25	25	25	25
Extrusion Fillet Seams							
Shear strength ⁽²⁾ , lb/in.	57	80	100	120	160	200	240
Shear elongation at break ⁽³⁾ , %	50	50	50	50	50	50	50
Peel strength ⁽²⁾ , lb/in.	39	52	65	78	104	130	156
Peel separation, %	25	25	25	25	25	25	25

Table 2(b) - Seam Strength and related Properties of Thermally Bonded Smooth and Textured High Density Polyethylene (HDPE) Geomembrane (S.I. Units)

Geomembrane Nominal Thickness	0.75 mm	1.0 mm	1.25 mm	1.5 mm	2.0 mm	2.5 mm	3.0 mm
Hot Wedge Seams ⁽¹⁾							
shear strength ⁽²⁾ , N/25mm	250	350	438	525	701	876	1050
shear elongation at break ⁽³⁾ , %	50	50	50	50	50	50	50
peel strength ⁽²⁾ , N/25mm	197	263	333	398	530	661	793
peel separation, %	25	25	25	25	25	25	25
Extrusion Fillet Seams ⁽¹⁾							
shear strength ⁽²⁾ , N/25mm	250	350	438	525	701	876	1050
shear elongation at break ⁽³⁾ , %	50	50	50	50	50	50	50
peel strength ⁽²⁾ , N/25mm	170	225	285	340	455	570	680
peel separation, %	25	25	25	25	25	25	25

Notes for Tables 1(a) and 1(b):

- Also for hot air and ultrasonic seaming methods
- Value listed for shear and peel strength are for 4 out of 5 test specimens; the 5th specimen can be low as 80% of the listed values
- Elongation measurements should be omitted for field testing



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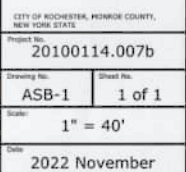
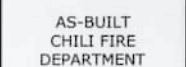
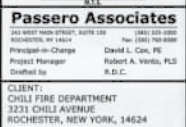
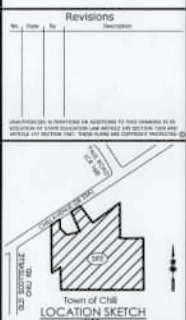
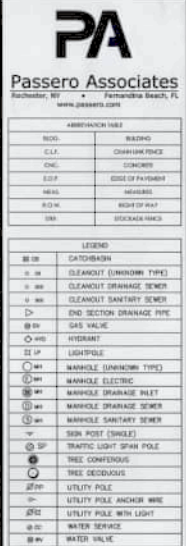
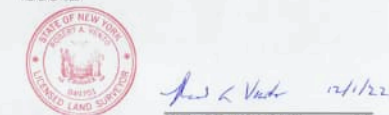
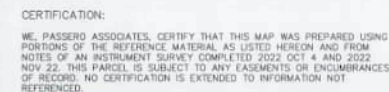
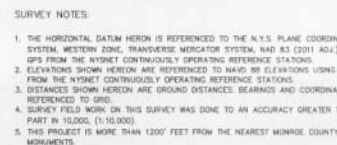
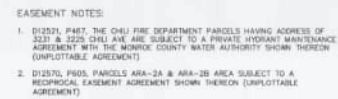
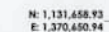
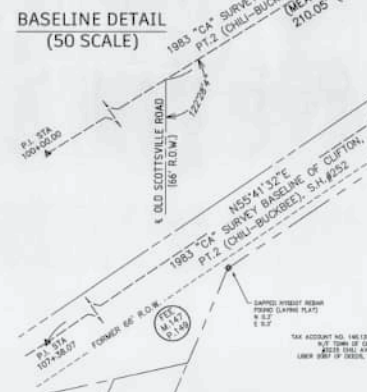
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Exhibit 3
2022 As-Built Drawing



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