Interim Remedial Measures Work Plan
NYSDEC BCP Site #C819023

Location:

Ellicott Station
56-70 Ellicott Street
Batavia, New York

Prepared for:

Ellicott Station, LLC
c/o Savarino Companies
500 Seneca Street
Buffalo, New York 14204

LaBella Project No. 2171218

November 18, 2020

LaBella
Powered by partnership.

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CERTIFICATION STATEMENT

I, Jared Pristach, certify that I am currently a NYS registered professional engineer and that this Interim Remedial Measures 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) and that all activities were performed in full accordance with the DER-approved work plans and any DER-approved modifications.

098932	11/18/2020	
NYS Professional Engineer #	Date	Signature

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1.0 INTRODUCTION

LaBella Associates, D.P.C. ("LaBella") is submitting this Interim Remedial Measures (IRM) Work Plan for the Ellicott Station property located at 56-70 Ellicott Street, Genesee County, City of Batavia, New York, hereinafter referred to as "the Site". The Site was entered into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) in June 2019 and is designated NYSDEC Site #C819023. A Site Location Map is included as Figure 1.

LaBella completed a Supplemental Subsurface Investigation (SSI) for the Site in 2018 and a Remedial Investigation (RI) in 2020 and the findings were documented in a Draft RI Report dated July 2020 (note the RI has not yet been submitted to the NYSDEC). The RI was completed in accordance with NYSDEC *Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation* issued May 3, 2010 and with the RI Work Plan dated August 2017 and approved by the NYSDEC in a letter dated February 7, 2020.

The RI identified four (4) Remedial Areas of Concern (RAOC). This Work Plan includes an IRM for each of the three (3) of these RAOCs. `

1.1 Site Description

The Site comprises ±0.806 acres of land and is developed with a single-story, approximately 11,611-square foot (sq ft) structure which is currently vacant. The remainder of the Site is comprised of asphalt paved parking lots and an approximately 5,000-sq ft vegetated area on the southwestern portion of the Site.

During a site walkthrough of the building, an oil-water separator, six (6) apparent hydraulic lifts with underground components and four (4) aboveground storage tanks (ASTs) containing petroleum were observed. Additionally, four (4) underground storage tanks (USTs) associated with historical gasoline filling station operations were discovered during the SSI in 2018. The approximate locations of these features are depicted on Figure 5. In addition, several containers and drums potentially containing petroleum products and/or hazardous substances were observed throughout the building. These features are likely associated with historical automotive repair operations within the building.

The Site is located on Ellicott Street in the City of Batavia within a predominantly urban area. The adjacent property, located at 40-52 Ellicott Street, is part of the NYSDEC BCP (BCP Site #C819021) and will be developed concurrently with this Site. This adjacent Site entered into the BCP in July 2015.

1.2 Site History

The Site appears to have been historically utilized as a lumber and/or coal yard from at least 1884 to at least 1948; a railroad depot from 1896 to at least 1954; and as an automobile repair facility from approximately 1959 to the early 2000s.

An oil house and scales (potentially containing hydraulic oil) are depicted on the 1919, 1931, and 1948 Sanborn Fire Insurance Maps. The 1948 Sanborn Fire Insurance Map also depicts a gasoline filling station with four (4) USTs on the eastern-most portion of the Site. One (1) NYSDEC Spill listing (#9413666) identified for the Site indicated the presence of surficial staining associated with several 55-gallon drums and 30-gallon containers of waste oil. The location of the staining noted in the Spill listing is unknown.

1.3 Planned Redevelopment

The Site is planned to be redeveloped for commercial use. The Site building is planned to be demolished. A newly-constructed, slab-on-grade commercial office building is planned for the Site. The remaining area of the Site will primarily be comprised of asphalt parking areas with limited surface soils. Site plans will be included as part of the RI Report or as an addendum to the RI Report once they become available.

2.0 PREVIOUS INVESTIGATIONS

The following previous environmental reports have been prepared for the Site and/or neighboring properties:

- Phase II ESA for Site, by LaBella dated October 2014
- Phase I ESA for Site, by LaBella dated November 2017
- Supplemental Site Investigation, by LaBella dated March 2018
- Emerging Contaminant Sampling, 40-52 Ellicott Street & 56-70 Ellicott Street, by LaBella dated August 2018

Data collected during the Supplemental Subsurface Investigation and the RI were utilized to develop this IRM Work Plan. The following work was conducted between the two field events:

Investigation Activity	Supplemental Site Investigation	Remedial Investigation	Totals
Wells	11	3	**14**
Test Pits	3	2	**5**
Borings	20	10	**30**
Surface Soil Sampling	2	0	**2**

RI investigation locations are included on Figures 2, 3, 4, and 5. Data summary tables from the RI are included in Appendix 5.

2.1 Remedial Areas of Concern

Based on the RI and previous environmental investigations as noted above, three (3) Remedial Areas of Concern (RAOCs) exist for the Site:

RAOC #1 – Abandoned Tanks, Lifts, and Containers: During a site walkthrough as part of the Phase I ESA and during subsequent field activities at the Site, potential contaminant source features were identified at the Site. Four (4) ASTs were identified on the western side of the Site building which contained petroleum. Six (6) apparent hydraulic lifts associated with historical automotive repairs in the Site building were identified during a site walkthrough. Five (5) of the hydraulic lifts were observed in the western portion of the building, while one (1) hydraulic lift was identified in the central portion of the building. An oil-water separator was observed near the southwest corner of the Site building. Four (4) drums potentially containing petroleum products and/or hazardous materials were observed throughout the building.

RAOC #2 – Eastern Subsurface Impacts: Volatile organic compound (VOC) impacts in soil and groundwater are present in the eastern portion of the Site, adjacent to the intersection of Ellicott Street and Jackson Street and in the vicinity of four (4) USTs that were discovered in a concrete vault in this area. Specifically, total VOCs were detected up to 516 milligrams per kilogram (mg/kg) or parts per million (ppm) in soil at 10.5-feet (ft) below ground surface (bgs) and 64 micrograms per liter (µg/L) or parts per billion (ppb) in groundwater. Photoionization detector (PID) readings up to 1,783 ppm were noted in the soil boring advanced in this area at 11-ft bgs (SB35/MW9). The greatest impacts appear to be at and around the level of the water table (between 9.5-ft to 14.5-ft bgs). Soil contamination and the presence of the USTs in this area appear to be the major concerns for RAOC #2, which would indicate that the USTs are a source of subsurface contamination. A PID reading model, total VOCs in soil, and total VOCs in groundwater are presented as Figures 2, 3, and 4, respectively.

RAOC #3 – Central Subsurface Impacts: VOC impacts in soil and groundwater are present in the central portion of the Site, extending from the existing Site building to the northwest towards Ellicott Street. Specifically, total VOCs were detected up to 549 mg/kg or ppm in soil at 11-ft bgs at SB39 (at the northernmost section of RAOC #3, adjacent to Ellicott Street) and 109 µg/L or ppb in groundwater. PID readings up to 1,389 ppm were noted in SB23/MW6 advanced in this area at 13-ft bgs. The greatest impacts appear to be at and around the level of the water table (between 8-ft to 12-ft bgs). Soil contamination is the major concern along the northern end of RAOC #3 adjacent to Ellicott Street, while groundwater contamination is the major concern along the southern end of RAOC #3 adjacent to the Site building. A PID reading model, total VOCs in soil, and total VOCs in groundwater are presented as Figures 2, 3, and 4, respectively.

Additionally, shallow subsurface soil impacted with metals and urban fill consisting of cinders, slab, coal-like debris and brick material were identified in several areas of the Site, in the top approximately 6-ft of the soil column. Metals impacts in shallow subsurface soils are centered on LBA-SB26. Three (3) samples of the urban fill material (LBA-SS01, LBA-SB26, and TP-1) did identify elevated concentrations of SVOCs and metals in this material. These elevated concentrations could be indicative of similar levels of impairment in this fill material in other areas of the Site. As part of future redevelopment, a site cover consisting of 1-ft of approved material and/or impervious surface is planned to be constructed at the Site. The proposed cover system will be addressed via an IRMWP Amendment or in a Remedial Action Work Plan (RAWP).

3.0 SITE GEOLOGY AND HYDROGEOLOGY

3.1 Geology

The general subsurface soil profile observed across the Site consisted of shallow fill materials overlying native glacial deposits. The occurrence and distribution of fill materials and underlying native soils was generally consistent across the portions of the Site investigated during the RI.

Surface Materials and Fill

Surface materials (generally 0-1 ft bgs) consisted of either asphalt and sub-base (gravel of crushed stone) or concrete and sub-base, throughout the Site. The only exception to this was a small grass covered area located at the southwestern corner of the Site, west of the Site building. Primary fill soils distributed immediately beneath the surface materials varied in composition, but typically consisted of silt/sand/gravel mixtures, with lesser, varying amounts of urban fill including intermixed cinders, brick fragments, coal-like debris, slag, and

cobbles. The observed thickness of the fill materials averaged 4 to 6 ft bgs. The lesser fill materials (i.e. cinders, brick, coal-like debris, slag) were not observed in distinct layers but were intermixed within the fill soil matrix.

Native Soils

Beneath the shallow fill materials (i.e. generally beneath 4-ft to 6-ft bgs), soil borings revealed the presence of varying amounts of native glacial deposits including silt, sand, gravel and clay. These interbedded deposits were generally observed between 6 and 9 ft bgs. Poorly-graded (fine grained) and well-graded (coarse, medium, and fine grained) sand was generally observed between 9 and 13 ft bgs and lesser amounts of intermixed silt, gravel, and clay. Silt with lesser amounts of sand, gravel and clay was observed between 13 and 20 ft bgs. Twenty (20) ft bgs was the greatest depth that soil was sampled.

Bedrock

A bedrock evaluation was not completed as part of the RI. However, as part of the adjacent BCP Site evaluation, a solid rod with expendable tip was pushed to the presumed bedrock surface at a depth of 32 ft bgs. This was the only boring in the area in which the presumed bedrock surface was encountered. Based on geologic mapping obtained from the New York State Museum, bedrock beneath the Site is most likely Devonian aged Marcellus Shale or underlying Onondaga Limestone.

3.2 Hydrogeology

Though fluctuation in the depth to groundwater was observed during the RI and pre-BCP investigations due to sampling at different times of the year, groundwater was generally present between 9.5 and 11-ft bgs. Static water levels were collected during sampling events and indicate that groundwater flow across the Site is generally towards the northwest.

4.0 STANDARDS, CRITERIA AND GUIDANCE

This section identifies the Standards, Criteria and Guidance (SCGs) for the Site. The SCGs identified are used in order to quantify the extent of contamination at the Site that may require remedial work. The SCGs utilized for the Site are provided below. It should be noted that these SCGs are applied based on the intended future Site use (Commercial).

Soil SCGs:

- New York Codes, Rules, and Regulations (NCYRR) Subpart 375-6 Remedial Program Soil Cleanup Objectives (RPSCOs) for the Protection of Groundwater;
- NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (RPSCOs) for Unrestricted Use; and,
- NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (RPSCOs) for the Protection of Public Health/Commercial Use.

Groundwater SCGs:

- NYSDEC Part 703 Groundwater Standards; and
  Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values.

5.0 OBJECTIVES

The objective of the IRMs is to remove impacted material above applicable SCGs identified during the RI and other previous investigations in conjunction with redevelopment of the Site. Specifically, the objectives for each IRM are as follows:

- **IRM #1** – The objective of IRM #1 is to remove the observed abandoned tanks, lifts, and containers located on-Site to eliminate the potential for additional contamination to enter the subsurface soil and groundwater. This includes removal of the four (4) ASTs, six (6) hydraulic lifts, and four (4) drums on-Site, as well as cleaning of the oil-water separator. All petroleum products and/or hazardous substances that are located in these features will be transported off-Site and properly disposed of as part of IRM #1.
- **IRM #2** – The objective of IRM #2 is to remove subsurface petroleum-contaminated soils from the eastern portion of the Site to meet Commercial Use SCOs, as well as to remove the four (4) USTs located within the RAOC #2 area.
- **IRM #3** – The objective of IRM #3 is to remove subsurface petroleum-contaminated soils from the central portion of the Site to meet Commercial Use SCOs.

6.0 DESIGN PHASE INVESTIGATION

Prior to the start of IRM activities, LaBella will conduct a Design Phase Investigation (DPI) at the Site. The purpose of this investigation is to collect waste characterization samples, as well as to fully delineate the horizontal and vertical extents of the deep contamination in RAOC #2. The DPI will consist of the following activities:

6.1 Direct Push Soil Boring

In order to fully delineate the horizontal and vertical extents of contamination in the northern source area of RAOC #2, LaBella will advance two (2) additional soil borings in the vicinity of SBMW2020-08. This work will consist of the following:

1. A *Dig Safely New York* stakeout will be conducted at the Site to locate subsurface utilities in the areas where the limited subsurface investigation will take place.
2. A direct-push soil boring study will be implemented at the Site. It is anticipated that two (2) borings will be advanced at the Site. Each soil boring will be advanced into the water table, to bedrock refusal, or at the discretion of the project geologist. It is anticipated that soil borings will be advanced to between 20-25-ft bgs.
3. Soils from borings will be continuously assessed for visible or olfactory indications of impairment, and/or indication of detectable VOCs with a photoionization 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 soil samples will be submitted and analyzed for United States Environmental Protection Agency (USEPA) Target Compound List (TCL) and NYSDEC Commissioner Policy (CP-)51 volatile organic compounds (VOCs) using USEPA Method 8260 and TCL and CP-51 semi-volatile organic compounds (SVOCs) using USEPA Method 8270. One (1) soil sample will be collected from each soil boring.
4. 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).

6.2 Waste Characterization Sampling

As part of the DPI, in-situ waste characterization soil sampling will be conducted to develop a waste profile for off-Site soil transportation and disposal. A total of three (3) waste characterization samples will be collected as part of the DPI. In-situ waste characterization samples will be collected utilizing a direct-push methods. Two (2) waste characterization samples will be collected from RAOC #2 and one (1) sample will be collected from RAOC #3. Samples will be collected in areas where the highest levels of contamination were observed during the RI. It is anticipated that waste characterization samples will be analyzed for the following:

- Resource Conservation and Recovery Act (RCRA) metals via USEPA Method 6010/7470.
- USEPA Target Compound List (TCL) SVOCs via USEPA Method 8270.
- USEPA TCL VOCs via USEPA Method 8260.
- Polychlorinated biphenyls (PCBs) via USEPA Method 8082.
- Pesticides via USEPA Method 8081.
- Herbicides via USEPA Method 8151.
- Toxicity Characteristics Leaching Procedure (TCLP) SVOCs via USEPA Method 8270.
- TCLP lead via USEPA Method 6010.
- TCLP benzene via USEPA Method 8260.
- Ignitability via method D93/1010A.
- Corrosivity via USEPA Method 9045.
- Reactive sulfide via USEPA Method 9030.
- Reactive cyanide via USEPA Method 9012.

7.0 IRM #1- RAOC #1: ABANDONED TANKS, LIFTS, AND CONTAINERS

This section details proposed IRMs for RAOC #1. The IRMs for RAOC #1 are anticipated to include the removal of several ASTs, USTs, hydraulic lifts, and drums as well as the removal of liquid and cleaning of the oil-water separator (OWS). The locations of these features are shown in Figure 5. Some minimal excavation of contaminated soil will be required to remove some of these features, and will be disposed of as part of IRM #2 and IRM #3. Presented below is LaBella's approach to removal of these potential source features across the Site.

LaBella personnel will be on-site during all ground intrusive activities to document the extent of excavations, imported backfill, and compliance with the Community Air Monitoring Plan (CAMP). The existing Site building will be demolished as part of Site redevelopment, and environmental remediation will take place concurrently with building demolition.

7.1 Aboveground Storage Tank (AST) Removal

During a walkthrough of the Site conducted by LaBella in 2017 as part of the Phase I ESA, four (4) ASTs containing petroleum were observed in the western portion of the building. All four (4) ASTs appear to be approximately 500-gallons, with unknown quantities of apparent petroleum products in the tanks. There were no indications that these ASTs have leaked any product. A tank removal permit will be obtained from the City of Batavia Fire Marshal or Code Enforcement Officer. Tank closure will be conducted in accordance with NYSDEC Petroleum Bulk Storage (PBS) regulations and the ASTs will be registered with the NYSDEC PBS Program following removal.

Any petroleum product will be removed from all four (4) tanks prior to removal of the tanks from the Site. The tanks will be pressure washed in place. Residual solids, liquids and wash water will be containerized in 55-gallon drums (or removed via vacuum truck) and disposed of off-Site. All waste

fluids will be transported by a NYSDEC permitted waste transporter for disposal at an appropriate facility. The tanks will then be rendered free of flammable/explosive vapor conditions with an inert gas (e.g. nitrogen, carbon monoxide, etc.) and checked with a meter to measure the lower explosive limit of hydrocarbons prior to being cut open (if applicable). Once the tanks are determined to be free of a flammable/explosive atmosphere the tanks may be cut open and/or transported off-site disposal as scrap metal.

No excavation is anticipated as part of AST removal.

7.2 In-Ground Hydraulic Lift Removal

At least six (6) in-ground lifts are present in the western portion of the Site building. The lifts will be emptied of liquid and/or sludge to the extent practicable and placed into 55-gallon drums or removed via a vacuum truck prior to removal. The lift components will then be removed and soils will be assessed for evidence of impairment. Material classifications are presented below in Section 7.6. Subsurface impacts were not identified proximate the lift during the RI. If additional lifts are observed, such will be removed using the same procedures outlined below.

7.2.1 In-Ground Lift Documentation Sampling

Following removal of in-ground components and excavation of Class 2 material, if applicable, documentation soil samples will be collected from the sidewalls and bottom of the excavation(s) in accordance with NYSDEC DER-10.

Documentation samples will be analyzed for TCL/CP-51 VOCs including TICs via USEPA Method 8260 and SVOCs via USEPA Method 8082 by a NYSDOH ELAP certified laboratory. If documentation soil samples do not meet Commercial Use SCOs on the sidewalls or bottom of the excavation, further excavation and documentation soil sampling will be conducted until Commercial Use criteria are met.

7.3 Removal of Containers

Based on the historic use of the building, there is the potential for numerous smaller containers, such as 5-gallon pails and paint can containers, to be present within the Site building. These small containers will be placed in a lab-pack (i.e. 55-gallon drum with like contents) and disposed of as hazardous. AST contents and drums containing similar contents (i.e. petroleum products) will be consolidated into drums or totes for characterization and disposal. Anticipated analytical sampling for these containers is presented below in Section 7.4. Final analyses performed will be dependent on the disposal facility requirements.

7.4 Drum Disposal

Four (4) drums containing unknown petroleum and/or hazardous materials were observed in the Site building. These drums will be opened to determine if the contents are similar, and waste characterization sample(s) will be collected. It is anticipated that one (1) waste characterization sample will be collected to characterize the drum contents and analyzed for the following parameters:

- Resource Conservation and Recovery Act (RCRA) metals via USEPA Method 6010/7470.
- USEPA Target Compound List (TCL) SVOCs via USEPA Method 8270.
- USEPA TCL VOCs via USEPA Method 8260.
- Polychlorinated biphenyls (PCBs) via USEPA Method 8082.
- Pesticides via USEPA Method 8081.

- Herbicides via USEPA Method 8151.
- Toxicity Characteristics Leaching Procedure (TCLP) SVOCs via USEPA Method 8270.
- TCLP lead via USEPA Method 6010.
- TCLP benzene via USEPA Method 8260.
- Ignitability via method D93/1010A.
- Corrosivity via USEPA Method 9045.
- Reactive sulfide via USEPA Method 9030.
- Reactive cyanide via USEPA Method 9012.

Following receipt of the analytical results, these drums will be properly removed, transported, and disposed of off-Site at a NYSDEC-permitted facility capable of accepting this waste.

7.5 Oil-Water Separator (OWS) Cleaning and Removal

An OWS is located in the western portion of the Site building near the existing hydraulic lifts. This system is partially filled, and it is unknown if the integrity of this OWS has been compromised. As part of this IRM, the contents of the OWS will be pumped out, characterized, containerized, and properly transported and disposed of off-Site. Following removal of the OWS contents, the OWS will be power-washed and the wash water will be removed and containerized along with the OWS contents. Following building demolition, the OWS will be demolished in-place and removed. Following OWS removal, the excavation will be inspected and screened for evidence of impairment. It is anticipated that minor additional excavation will be required to remove any residual petroleum contamination in the subsurface. Once field screening methods indicate that remaining soil is consistent with Class 1 materials, two (2) documentation samples will be collected from the excavation. It is anticipated that one (1) bottom sample and one (1) sidewall sample will be collected. Documentation samples will be analyzed for TCL/CP-51 VOCs including TICs via USEPA Method 8260 and SVOCs via USEPA Method 8082 by a NYSDOH ELAP certified laboratory.

7.6 Excavation

It is currently anticipated soils around the hydraulic lifts will be excavated and temporarily staged on poly sheeting to be used as backfill in accordance with Section 13.0. These soils will be characterized to determine if it can be re-used as backfill on-Site. If it cannot be re-used on-Site, it will be transported and disposed of at a NYCRR Part 360 landfill. Soils will be continuously screened with a PID and assessed for visual and olfactory evidence of impairment. Soils will be segregated as follows:

Material Classifications for IRM #1

Class of Material	Description	Screening Parameter	Management/ Re-use of Material
Class 1	Soil/fill material with little to no evidence of petroleum impairment	No nuisance characteristics (i.e., limited petroleum odors and/or staining); PID Readings < 50 ppm*.	Stage on and cover with poly sheeting. Use on-site for backfill in the remedial excavation. All excavated Class 1 material will be sampled and reused in accordance with Section 13.0.
Class 2	Soil/fill material with evidence of petroleum impairment	PID readings greater than 50 ppm*, and/or substantial nuisance characteristics (i.e., petroleum odors and/or staining).	Stage on and cover with poly sheeting pending off-Site disposal or direct load for off-site disposal at a NYCRR Part 360 landfill.

**Screening parameters based on observations made during the Phase II ESA and RI combined with VOC concentrations detected in soil samples.*

7.7 Documentation Sampling

Following excavation of the USTs and hydraulic lifts, documentation samples will be collected from the sidewalls and bottom of the excavations in accordance with NYSDEC's *DER-10 Technical Guidance for Site Investigation and Remediation* dated May 2010 (i.e. one (1) sidewall sample every 30 linear feet of the perimeter and one (1) sample from the excavation bottom for every 900 square feet). In accordance with NYSDEC DER-10, the following sampling is anticipated for each excavation area:

Anticipated Documentation Soil Sampling for IRM #1

IRM	PERIMETER (FEET)	# SIDEWALL	AREA (SQUARE FEET)	# BOTTOM
USTs	70	3	300	1
Hydraulic Lifts	120	4	180	1

Based on the contaminants of concern in this area of the Site, documentation samples will be analyzed for TCL and CP-51 list VOCs including tentatively identified compounds (TICs) via USEPA Method 8260 and CP-51 SVOCs via USEPA Method 8270 by a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory. If documentation soil samples do not meet Restricted Residential Use SCOs in the UST area or within the hydraulic lift areas, further excavation and documentation soil sampling may be conducted until Commercial Use criteria is met.

7.8 Dewatering

Due to the observed groundwater elevations at the Site and the anticipated excavation depths for the USTs and hydraulic lifts, dewatering is not anticipated to be necessary to remove these features. In the event that dewatering is necessary, water will be temporarily containerized and staged on-Site until it can be properly characterized and either treated on-Site and discharged to a municipal sewer or transported and disposed of off-Site.

7.9 Backfilling

A demarcation layer will be placed in the bottom of excavations prior to backfilling. Following the receipt of documentation sample data below Commercial Use SCOs, the excavations will be backfilled with any approved staged excavated material and clean imported material (e.g., crushed stone) in accordance with Section 13.0. Sample locations and excavation limits will be located with a GPS.

8.0 IRM #2- RAOC #2: EASTERN SUBSURFACE IMPACTS

This section details proposed IRMs for RAOC #2. The IRM for RAOC #2 will include excavation of petroleum-impacted material with elevated concentrations of VOCs in the approximate area shown in Figure 5, as well as the removal of four (4) USTs and a concrete vault from the area. IRM #2 is anticipated to be up to approximately 1,000-sq ft and this material is from approximately 8-ft to 11-ft bgs. IRM #2 will consist of excavation and off-Site disposal of up to approximately 110 cubic yards (CY) of impacted soil.

LaBella personnel will be on-Site during all ground intrusive activities to document the extent of excavations, imported backfill, and compliance with the Community Air Monitoring Plan (CAMP).

8.1 Waste Characterization

It is anticipated that one (1) waste characterization sample will be collected in-place from IRM #2 for the following parameters:

- Resource Conservation and Recovery Act (RCRA) metals via USEPA Method 6010/7470.
- USEPA Target Compound List (TCL) SVOCs via USEPA Method 8270.
- USEPA TCL VOCs via USEPA Method 8260.
- Polychlorinated biphenyls (PCBs) via USEPA Method 8082.
- Pesticides via USEPA Method 8081.
- Herbicides via USEPA Method 8151.
- Toxicity Characteristics Leaching Procedure (TCLP) SVOCs via USEPA Method 8270.
- TCLP lead via USEPA Method 6010.
- TCLP benzene via USEPA Method 8260.
- Ignitability via method D93/1010A.
- Corrosivity via USEPA Method 9045.
- Reactive sulfide via USEPA Method 9030.
- Reactive cyanide via USEPA Method 9012.

8.2 Underground Storage Tank (UST) Removal

The four (4) 1,000 gallon USTs shown on Figure 5 will be removed as part of IRM #2. A tank removal permit will be obtained from the City of Batavia Fire Marshal or Code Enforcement Officer. Tank closure will be conducted in accordance with NYSDEC PBS regulations and the USTs will be registered with the NYSDEC PBS Program following removal. LaBella personnel will be on-site during all ground intrusive activities to document the extent of excavations, imported backfill, and compliance with the Community Air Monitoring Plan (CAMP).

The top of the tanks will be uncovered and emptied of liquid and sludge to the extent practicable and placed into 55-gallon drums or removed via a vacuum truck. The tanks will be pressure washed in place. Residual solids, liquids and wash water will be containerized in 55-gallon drums (or removed

via vacuum truck) and disposed of off-Site. All waste fluids will be transported by a NYSDEC permitted waste transporter for disposal at an appropriate facility. The tanks will then be rendered free of flammable/explosive vapor conditions with an inert gas (e.g. nitrogen, carbon monoxide, etc.) and checked with a meter to measure the lower explosive limit of hydrocarbons prior to being cut open (if applicable). Once the tanks are determined to be free of a flammable/explosive atmosphere the tank may be cut open and/or transported off-site disposal as scrap metal.

Impacted soils are anticipated to be encountered during the removal. Planned procedures for the excavation and disposal of these impacted soils as well as confirmatory sampling are detailed in Section 8.3.

8.3 Excavation

Based on previous investigations, the anticipated area of excavation for IRM #2 is shown on Figure 5; however, final excavation limits will be based on field screening and documentation soil sampling results. It is currently anticipated soils from 8-11-ft bgs will be excavated and temporarily staged on poly sheeting or live-loaded for disposal at a NYCRR Part 360 landfill. Additionally, excavation is required to remove the USTs in RAOC #2 as well as the concrete vault the USTs are housed in. Soils will be continuously screened with a PID and assessed for visual or olfactory evidence of impairment. Soils will be segregated as follows:

Material Classifications for IRM #2

Class of Material	Description	Screening Parameter	Management/ Re-use of Material
Class 1	Soil/fill material with little to no evidence of impairment	Little nuisance characteristics (i.e., limited petroleum odors and/or staining); PID Readings < 50 ppm*.	Stage on and cover with poly sheeting. Use on-site for backfill in the remedial excavation. All excavated Class 1 material will be sampled and reused in accordance with Section 13.0.
Class 2	Soil/fill material with evidence of impairment	PID readings greater than 50 ppm*, and/or discernable nuisance characteristics (i.e., petroleum odors and/or staining).	Stage on and cover with poly sheeting pending off-Site disposal or direct load for off-site disposal at a NYCRR Part 360 landfill.

**Screening parameters based on observations made during the Phase II ESA and RI and contaminant concentrations detected in soil samples.*

Concrete present as part of the UST vault in RAOC #2 will also be removed and disposed of as part of the excavation. All concrete associated with this UST vault will be removed during excavation and disposed of as contaminated material. All concrete associated with this vault will be broken into smaller pieces utilizing an excavator and will be either stockpiled on-Site or live loaded into trucks for off-Site disposal.

8.4 Documentation Sampling

Following excavation of the area shown on Figure 5, documentation soil samples will be collected from the sidewalls and bottom of the excavation in accordance with NYSDEC's *DER-10 Technical Guidance for Site Investigation and Remediation* dated May 2010 (i.e., one (1) sidewall sample every 30 linear feet of the perimeter and one (1) sample from the excavation bottom for every 900

square feet). In accordance with NYSDEC DER-10, the following sampling is anticipated for the excavation area:

Anticipated Documentation Soil Sampling for IRM #2

IRM	PERIMETER (FEET)	# SIDEWALL	AREA (SQUARE FEET)	# BOTTOM
2	125	5	1,000	2

Documentation samples will be analyzed for NYSDEC CP-51 list VOCs including TICs via USEPA Method 8260 by a NYSDOH ELAP certified laboratory. If documentation soil samples do not meet Commercial Use SCOs on the sidewalls or bottom of the excavation, further excavation and documentation soil sampling will be conducted until Commercial Use criteria is met. It should be noted that the RAOC #2 excavation area cannot be extended further to the north (Ellicott Street right-of-way [ROW]), to the east (Jackson Street ROW), or to the south (off-Site property).

8.5 Dewatering

Subsequent to the collection of documentation samples but prior to the receipt of data from the laboratory, the excavations may be left open in the event that laboratory analysis indicates additional excavation and sampling is required. Groundwater is anticipated to be present at approximately 9-ft bgs. Water that accumulates in the excavation will be pumped to a temporary holding tank and disposed of following backfilling. The excavation may be temporarily backfilled pending documentation soil sample results to avoid groundwater and/or stormwater from accumulating in the excavation. Based on the currently anticipated excavation footprint it is assumed that water will be pumped to an on-Site frac tank. Pending characterization and permit issuance, containerized water will be disposed of via the municipal sewer system. It is anticipated waste characterization analyses for water will include TAL metals, VOCs, SVOCs, PCBs, and pesticides; however, the parameters will be dictated by the municipal permit requirements.

8.6 Backfilling

A demarcation layer will be placed in the bottom of the excavation prior to backfilling. Following the receipt of documentation sample data below Commercial Use SCOs with the exception of the sidewalls along the property boundary and near the Site building, the excavations will be backfilled with the staged excavated material that was removed (pending reuse approval)and clean imported material (e.g., crushed stone) in accordance with Section 13.0. The backfill will be compacted with a vibratory roller to a minimum of 90% of maximum dry density. A third party geotechnical firm will collect compaction data during compaction of the backfill. Sample locations and excavation limits will be located with a GPS.

Refer to Figure 5 for a representation of IRM #2.

9.0 IRM #3- RAOC #3: CENTRAL SUBSURFACE IMPACTS

This section details proposed IRMs for RAOC #3. The IRM for RAOC #3 will include excavation of petroleum-impacted material with elevated concentrations of VOCs in the approximate area shown in Figure 5. IRM #3 is anticipated to be up to approximately 3,430-sq ft and this material ranges from approximately 9-ft to 18-ft bgs. IRM #3 will consist of excavation and off-Site disposal of up to approximately 370 cubic yards (CY) of impacted soil.

LaBella personnel will be on-Site during all ground intrusive activities to document the extent of excavations, imported backfill, and compliance with the Community Air Monitoring Plan (CAMP).

9.1 Waste Characterization

It is anticipated that two (2) waste characterization sample will be collected in-place from IRM #3 for the following parameters:

- Resource Conservation and Recovery Act (RCRA) metals via USEPA Method 6010/7470.
- USEPA Target Compound List (TCL) SVOCs via USEPA Method 8270.
- USEPA TCL VOCs via USEPA Method 8260.
- Polychlorinated biphenyls (PCBs) via USEPA Method 8082.
- Pesticides via USEPA Method 8081.
- Herbicides via USEPA Method 8151.
- Toxicity Characteristics Leaching Procedure (TCLP) SVOCs via USEPA Method 8270.
- TCLP lead via USEPA Method 6010.
- TCLP benzene via USEPA Method 8260.
- Ignitability via method D93/1010A.
- Corrosivity via USEPA Method 9045.
- Reactive sulfide via USEPA Method 9030.
- Reactive cyanide via USEPA Method 9012.

9.2 Excavation

Based on previous investigations, the anticipated area of excavation for IRM #3 is shown on Figure 5; however, final excavation limits will be based on the Design Phase Investigation, field screening and documentation soil sampling results. It is currently anticipated soils from 9-18-ft bgs will be excavated and temporarily staged on poly sheeting or live-loaded for disposal at a NYCRR Part 360 landfill. It is anticipated that sheet piling or other similar shoring materials will be required along the northern edge of the excavation area, adjacent to the Ellicott Street ROW, in order to prevent structural damage to the ROW. Soils will be continuously screened with a PID and assessed for visual olfactory evidence of impairment. Soils will be segregated as follows:

Material Classifications for IRM #3

Class of Material	Description	Screening Parameter	Management/ Re-use of Material
Class 1	Soil/fill material with little to no evidence of impairment	Little nuisance characteristics (i.e., limited petroleum odors and/or staining); PID Readings < 50 ppm*.	Stage on and cover with poly sheeting. Use on-site for backfill in the remedial excavation. All excavated Class 1 material will be sampled and reused in accordance with Section 13.0.
Class 2	Soil/fill material with evidence of impairment	PID readings greater than 50 ppm*, and/or discernable nuisance characteristics (i.e., petroleum odors and/or staining).	Stage on and cover with poly sheeting pending off-Site disposal or direct load for off-site disposal at a NYCRR Part 360 landfill.

**Screening parameters based on observations made during the Phase II ESA and RI and contaminant concentrations detected in soil samples.*

9.3 *Documentation Sampling*

Following excavation of the area shown on Figure 5, documentation soil samples will be collected from the sidewalls and bottom of the excavation in accordance with NYSDEC's *DER-10 Technical Guidance for Site Investigation and Remediation* dated May 2010 (i.e., one (1) sidewall sample every 30 linear feet of the perimeter and one (1) sample from the excavation bottom for every 900 square feet). In accordance with NYSDEC DER-10, the following sampling is anticipated for the excavation area:

Anticipated Documentation Soil Sampling for IRM #3

IRM	PERIMETER (FEET)	# SIDEWALL	AREA (SQUARE FEET)	# BOTTOM
3	305	11	3,430	4

Documentation samples will be analyzed for NYSDEC CP-51 list VOCs including TICs via USEPA Method 8260 by a NYSDOH ELAP certified laboratory. If documentation soil samples do not meet Commercial Use SCOs on the sidewalls or bottom of the excavation, further excavation and documentation soil sampling will be conducted until Restricted Residential criteria is met. It should be noted that the RAOC #3 excavation area cannot be extended further to the north due to the Ellicott Street ROW.

9.4 *Dewatering*

Subsequent to the collection of documentation samples but prior to the receipt of data from the laboratory, the excavations may be left open in the event that laboratory analysis indicates additional excavation and sampling is required. Groundwater is anticipated to be present at approximately 9-ft bgs. Water that accumulates in the excavation will be pumped to a temporary holding tank and disposed of following backfilling. The excavation may be temporarily backfilled pending documentation soil sample results to avoid groundwater and/or stormwater from accumulating in the excavation. Based on the currently anticipated excavation footprint it is assumed that water will be pumped to an on-Site frac tank. Pending characterization and permit issuance, containerized water will be disposed of via the municipal sewer system. It is anticipated waste characterization analyses for water will include TAL metals, VOCs, SVOCs, PCBs, and pesticides; however, the parameters will be dictated by the municipal permit requirements.

9.5 *Backfilling*

A demarcation layer will be placed in the bottom of the excavation prior to backfilling. Following the receipt of documentation sample data below Commercial Use SCOs with the exception of the sidewalls along the property boundary and near the Site building, the excavations will be backfilled with the staged excavated material that was removed from non-petroleum impacted overburden (pending NYSDEC approval) and clean imported material (e.g., crushed stone) in accordance with Section 13.0. The backfill will be compacted with a vibratory roller to a minimum of 90% of maximum dry density. A third party geotechnical firm will collect compaction data during compaction of the backfill. Sample locations and excavation limits will be located with a GPS.

Refer to Figure 5 for a representation of IRM #3.

10.0 SCHEDULE AND DELIVERABLES

Implementation of the IRM Work Plan is anticipated to begin within 60 days of NYSDEC approval of this Work Plan. On-site work is expected to be completed within approximately 1-2 months from

initiation. IRMs will be documented in a Construction Completion Report (CCR). The CCR will be submitted within 90 days of receipt of all validated data.

Any soil removal and imported and disposed of soil/fill conducted outside of the areas identified in the IRM work plan will be documented in the CCR.

11.0 HEALTH AND SAFETY

The NYSDOH Generic CAMP included in NYSDEC DER-10 (May 2010) Appendix 1A will be implemented during all ground intrusive activities. A copy of the CAMP is included in Appendix 1 of this work plan. CAMP data will be downloaded and saved electronically. Any exceedances of applicable action levels will be noted in the CCR.

LaBella's Health and Safety Plan (HASP) was developed for the Site and included in the RI Work Plan will be utilized for this IRM Work Plan. The HASP is included in Appendix 2. Contractors conducting work on-Site as part of this IRM Work Plan will be responsible for their own HASP.

12.0 QUALITY CONTROL

IRMs will be conducted in accordance with NYSDEC DER-10 and LaBella's Quality Control Plan (QCP) included in the RI Work Plan and attached as Appendix 3. Laboratory QA/QC sampling will include analysis of one (1) trip blank and one (1) duplicate sample for each matrix type, except for waste characterization samples, at a rate of one per 20 samples collected for each parameter group, or one per shipment, whichever is greater.

Additionally, one (1) Matrix Spike/Matrix Spike Duplicate (MS/MSD) will be collected and analyzed for each twenty samples collected for each parameter group, or one per shipment, whichever is greater. The MS/MSD will be analyzed for the same parameters as that of the field samples. The samples will be delivered under Chain of Custody procedures to an ELAP-certified laboratory. The laboratory will provide a NYSDEC ASP Category B Deliverables data package. A DUSR will be completed for all ASP-B laboratory data packages per DER-10. The DUSRs will include the laboratory data summary pages showing corrections made by the data validator and each page will be initialed by the data validator. The laboratory data summary pages will be included even if no changes were made. All validated data will also be submitted to EQUIS in the NYSDEC-approved format. The data will be submitted on a continuous basis following data validation. ASP Category B deliverables and DUSRs will not be generated for waste characterization samples.

13.0 ON-SITE MATERIAL REUSE AND IMPORTED BACKFILL REQUIREMENTS

13.1 On-Site Material Reuse Requirements

Class 1 Material that will be reused on-site will be sampled in accordance with DER-10 Table 5.4(e)10. A NYSDEC Request to Reuse Fill or Soil form will be completed and provided to the NYSDEC for approval prior to placement, pending analytical results.

13.2 Imported Backfill Material Requirements

A NYSDEC Request to Reuse Fill or Soil form will be completed and provided to the NYSDEC for approval prior to importation and placement of all imported backfill material including topsoil.

Imported backfill material may not be sampled if it meets the exempt requirements in accordance with DER-10 Section 5.4(e)5.

Imported backfill material will sampled in accordance DER-10 Table 5.4(e)10. In addition the imported material will also be analyzed for 1,4-dioxane and polyfluorinated compounds (PFCs) as outlined below:

a. Soil imported to a site for use in a soil cap, soil cover, or as backfill must be tested for 1,4-dioxane and PFAS contamination in general conformance with DER-10, Section 5.4(e). Soil samples must be analyzed for 1,4-dioxane using EPA Method 8270, as well as the full list of PFAS compounds (currently 21) using EPA Method 537.1 (modified).
b. For 1,4-dioxane, soil exceeding 0.1 parts per million (ppm) shall be rejected per DER 10: Appendix 5 - Allowable Constituent Levels for Imported Fill or Soil, Subdivision 5.4(e).
c. If PFOA or PFOS is detected in any sample at or above 1 parts per billion (ppb), then a soil sample must be tested by the Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed. If the SPLP results exceed 10 parts per trillion (ppt) combined PFOA/S, then the source of backfill shall be rejected. Category B deliverables are required for PFAS analysis.

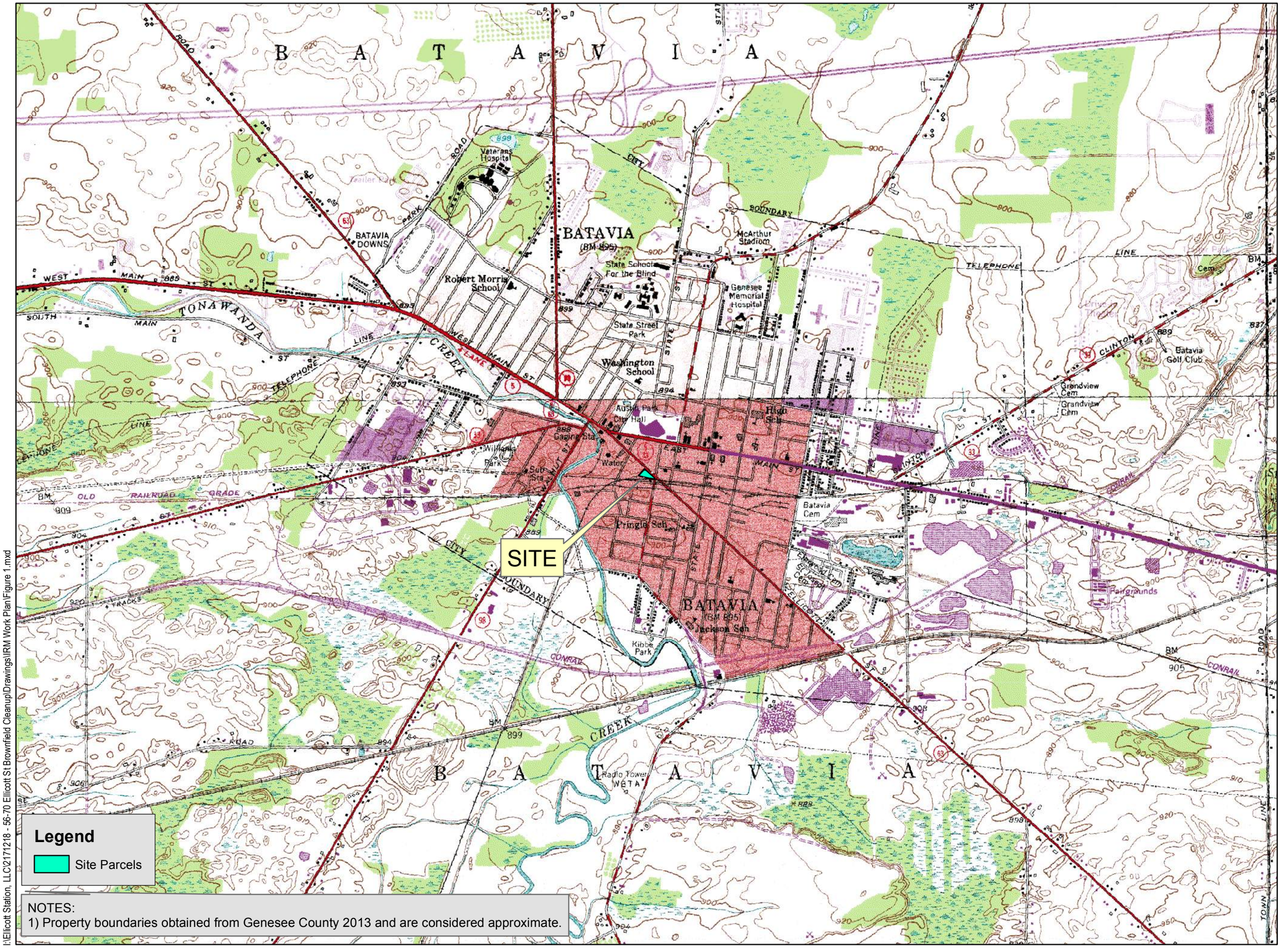
The testing results must meet DER-10 Appendix 5 Allowable Constituent Levels for Imported Fill or Soil Subdivision 5.4(e) Commercial Use.

14.0 INTERIM SITE MANAGEMENT PLAN

An Interim Site Management Plan (ISMP) has been prepared for the site to manage excavations outside of the proposed remedial areas outlined in this IRMWP. Excavated material outside the IRM areas will also be managed in accordance with Section 13.1 and importation of backfill material will be completed in accordance of Section 13.2 of this IRMWP.

Any soil excavations outside those in the proposed IRM shall be handled in accordance with the NYSDEC approved IRM work plan. A representative from LaBella will be present on-site during all ground intrusive work to document the extent of excavations, imported backfill, and compliance with the CAMP.

FIGURES



LaBella
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Feet
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INTENDED TO PRINT AS: 11" X 17"

CLIENT:

ELLICOTT STATION, LLC

PROJECT:

IRM WORK PLAN

ELLICOTT STATION EAST
56-70 ELLICOTT STREET
BATAVIA, NY 14020

DRAWING NAME:

BCP SITE LOCATION MAP

PROJECT/DRAWING NUMBER:

2171218

FIGURE 1

6/30/2020

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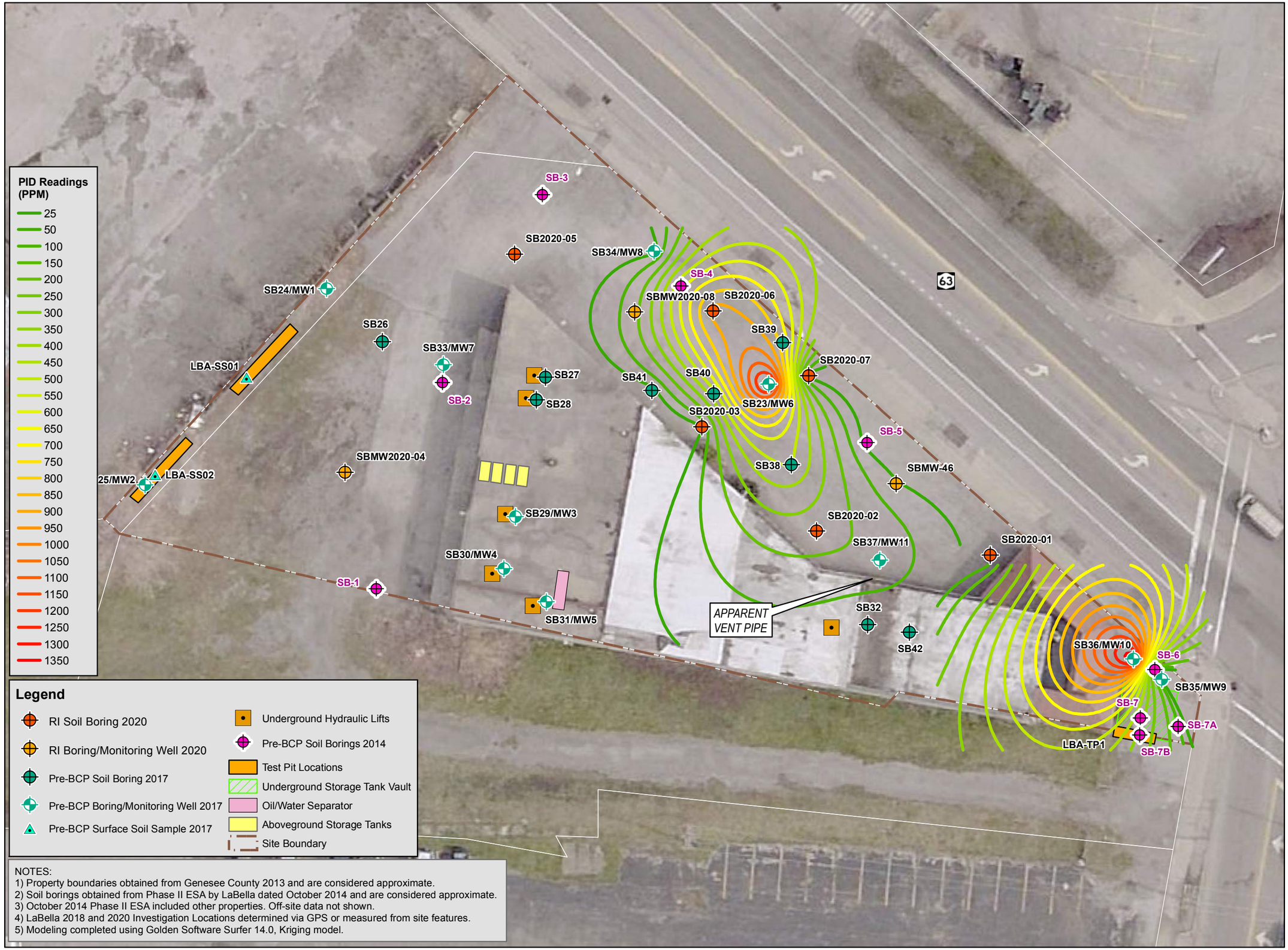

NOTES:
1) Property boundaries obtained from Genesee County 2013 and are considered approximate.
2) Soil borings obtained from Phase II ESA by LaBella dated October 2014 and are considered approximate.
3) October 2014 Phase II ESA included other properties. Off-site data not shown.
4) LaBella 2018 and 2020 Investigation Locations determined via GPS or measured from site features.
5) Modeling completed using Golden Software Surfer 14.0, Kriging model.

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CLIENT:
ELLICOTT STATION, LLC

PROJECT:
IRM
WORK PLAN

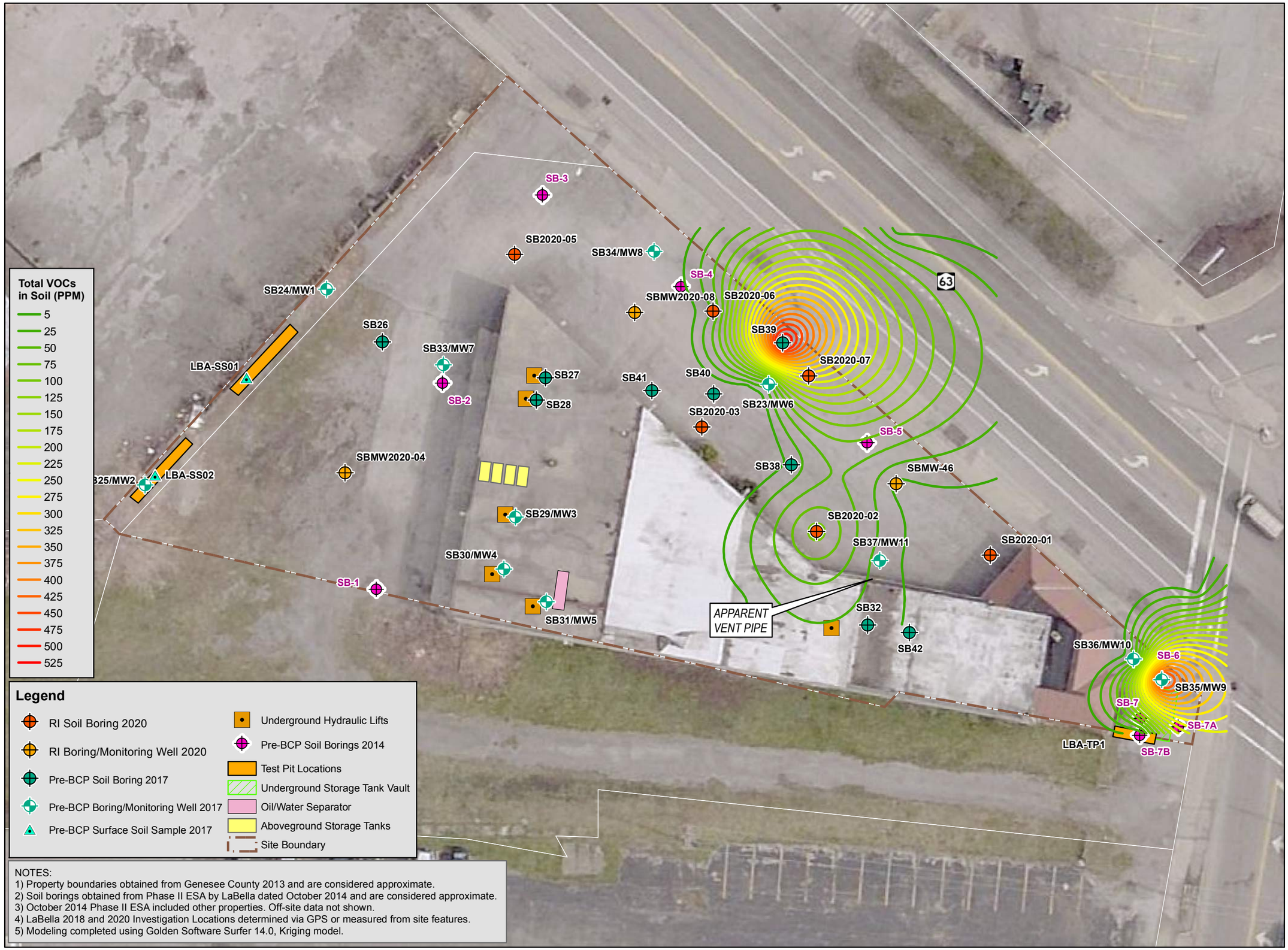
ELLICOTT STATION EAST
56-70 ELLICOTT STREET
BATAVIA, NY 14020

DRAWING NAME:
PID READING MODEL

PROJECT/DRAWING NUMBER:
2171218

FIGURE 2

I:\Ellicott Station, LLC\2171218 - 56-70 Ellicott St Brownfield Cleanup\Drawings\IRM Work Plan\Figure 2.mxd



NOTES:
1) Property boundaries obtained from Genesee County 2013 and are considered approximate.
2) Soil borings obtained from Phase II ESA by LaBella dated October 2014 and are considered approximate.
3) October 2014 Phase II ESA included other properties. Off-site data not shown.
4) LaBella 2018 and 2020 Investigation Locations determined via GPS or measured from site features.
5) Modeling completed using Golden Software Surfer 14.0, Kriging model.

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CLIENT:

ELLICOTT STATION, LLC

PROJECT:

IRM
WORK PLAN

ELLICOTT STATION EAST
56-70 ELLICOTT STREET
BATAVIA, NY 14020

DRAWING NAME:

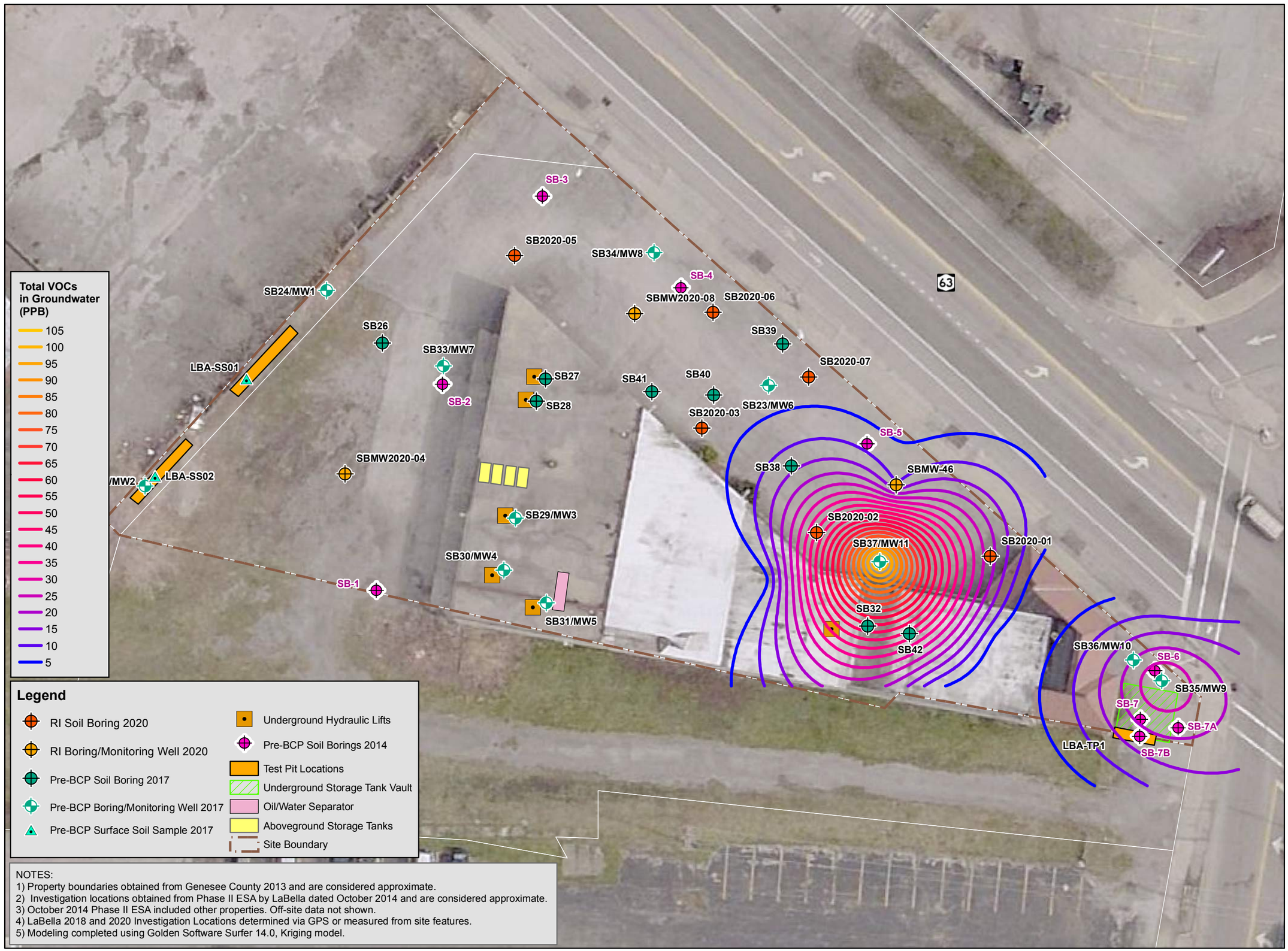
TOTAL VOCS IN SOIL

PROJECT/DRAWING NUMBER:

2171218

FIGURE 3

I:\Ellicott Station, LLC\2171218 - 56-70 Ellicott St Brownfield Cleanup\Drawings\IRM Work Plan\Figure 3.mxd



NOTES:
1) Property boundaries obtained from Genesee County 2013 and are considered approximate.
2) Investigation locations obtained from Phase II ESA by LaBella dated October 2014 and are considered approximate.
3) October 2014 Phase II ESA included other properties. Off-site data not shown.
4) LaBella 2018 and 2020 Investigation Locations determined via GPS or measured from site features.
5) Modeling completed using Golden Software Surfer 14.0, Kriging model.

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CLIENT:
ELLICOTT STATION, LLC

PROJECT:
IRM
WORK PLAN

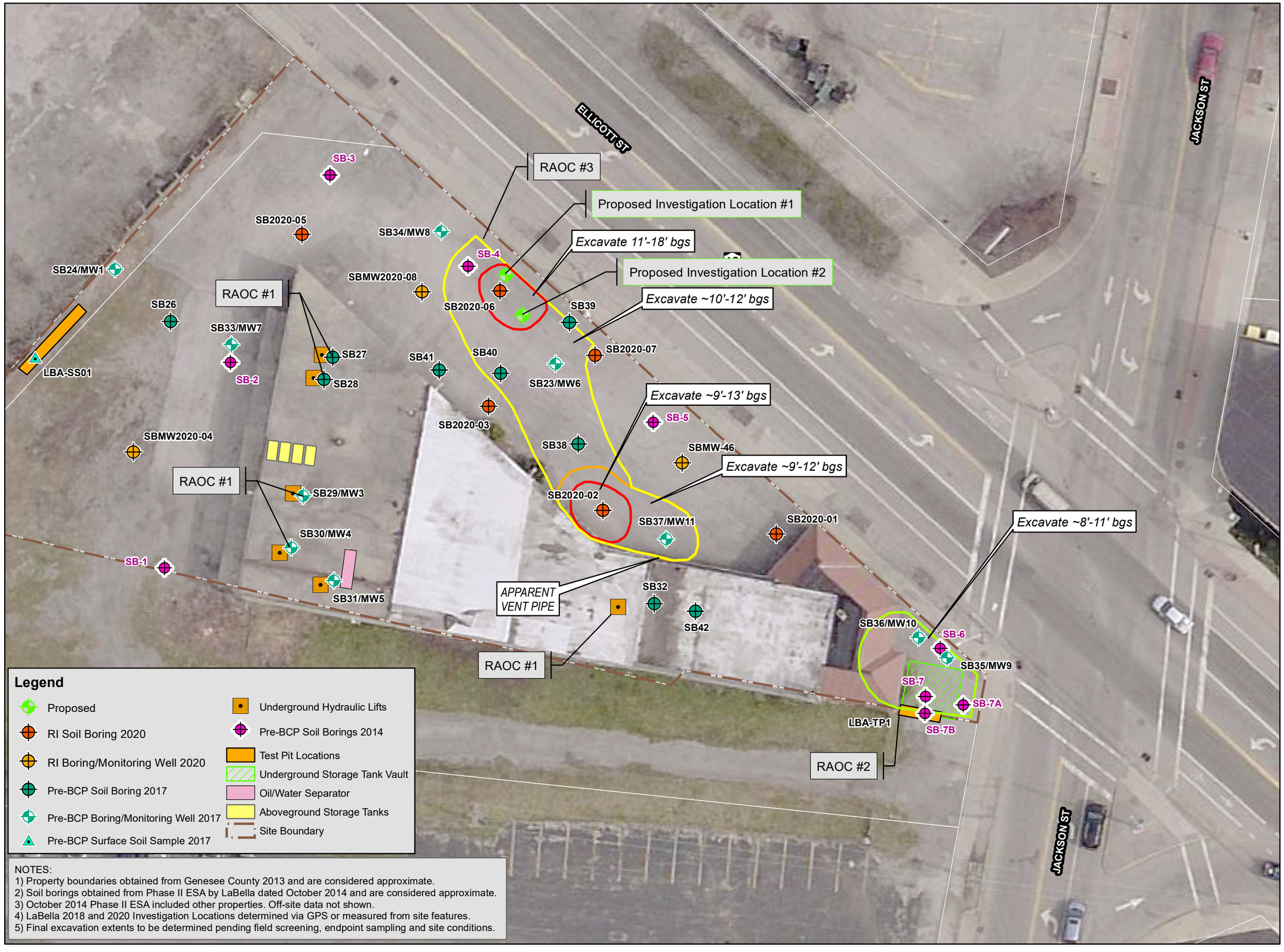
ELLICOTT STATION EAST
56-70 ELLICOTT STREET
BATAVIA, NY 14020

DRAWING NAME:
TOTAL VOCS IN GROUNDWATER

PROJECT/DRAWING NUMBER:
2171218

FIGURE 4

I:\Ellicott Station, LLC\2171218 - 56-70 Ellicott St Brownfield Cleanup\Drawings\IRM Work Plan\Figure 4 GW.mxd



NOTES:
1) Property boundaries obtained from Genesee County 2013 and are considered approximate.
2) Soil borings obtained from Phase II ESA by LaBella dated October 2014 and are considered approximate.
3) October 2014 Phase II ESA included other properties. Off-site data not shown.
4) LaBella 2018 and 2020 Investigation Locations determined via GPS or measured from site features.
5) Final excavation extents to be determined pending field screening, endpoint sampling and site conditions.

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Feet
1 inch = 30 feet

INTENDED TO PRINT AS: 11" X 17"

CLIENT:
ELLICOTT STATION, LLC

PROJECT:
IRM
WORK PLAN

ELLICOTT STATION EAST
56-70 ELLICOTT STREET
BATAVIA, NY 14020

DRAWING NAME:
PLANNED IRM EXCAVATIONS

PROJECT/DRAWING NUMBER:
2171218

FIGURE 5

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APPENDIX 1

NYSDOH Generic CAMP

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

Overview

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

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

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

Community Air Monitoring Plan

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

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

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

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

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

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

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

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

Particulate Monitoring, Response Levels, and Actions

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

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

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

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

December 2009

Appendix 1B
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50^{o} C (14 to 122^{o} F);
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

APPENDIX 2

Health and Safety Plan

Site Health and Safety Plan
Ellicott Station East

Location:

56-70 Ellicott Street
& one unaddressed parcel
Batavia, New York 14020

Prepared For:

Ellicott Station, LLC
One Batavia City Centre
Batavia, New York 14020

LaBella Project No. 2171218
July 2020

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SITE HEALTH AND SAFETY PLAN

Project Title:	Ellicott Station East
Project Number:	2171218
Project Location (Site):	56-70 Ellicott Street & one unaddressed parcel, Batavia NY
Environmental Director:	Gregory Senecal, CHMM
Site Safety Manager:	Steven Szymanski
Site Contact:	Jared Pristach
Site Control Provided By:	LaBella Associates, D.P.C.
Project Manager:	Jared Pristach
Plan Review Date:	7/6/2020
Plan Approval Date:	7/6/2020
Plan Approved By:	_____ Mr. Steven Szymanski
Site Conditions:	0.758 acre vacant commercial property with one (1) 11,611-square foot building
Site Environmental Information Provided By:	• *Phase II Environmental Site Assessment, LaBella, October 2014* • *Phase I Environmental Site Assessment, LaBella, November 2017* • *Supplemental Subsurface Investigation, LaBella, March 2018*
Air Monitoring Provided By:	LaBella Associates, D.P.C.
Site Control Provided By:	Contractor(s) TBD

EMERGENCY CONTACTS

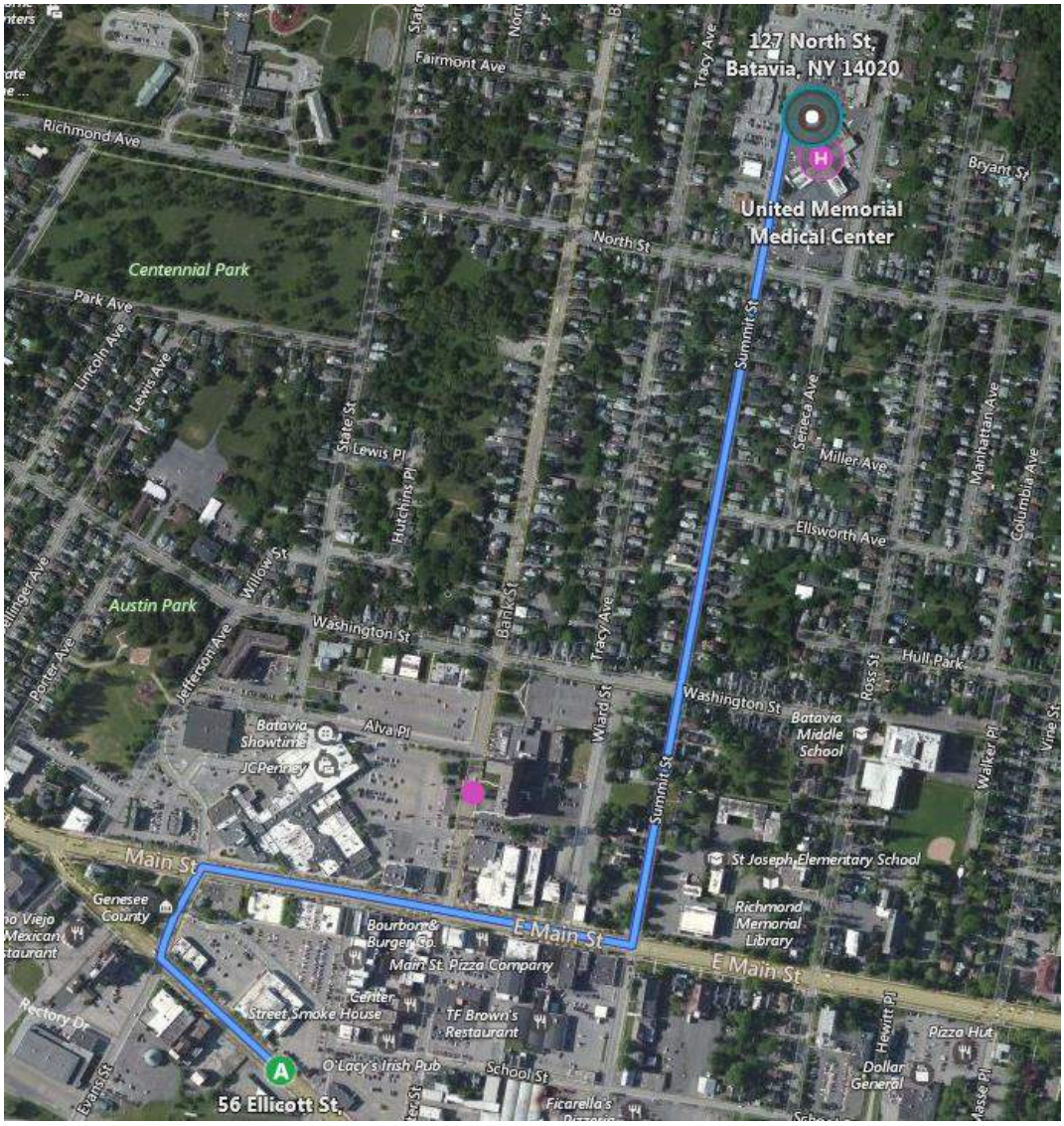
	Name	Phone Number
Ambulance:	As Per Emergency Service	911
Hospital Emergency:	United Memorial Medical Center	585-343-6030
Poison Control Center:	Finger Lakes Poison Control	585-273-4621
Police (local, state):	Batavia Police Department	911
Fire Department:	Batavia Fire Department	911
Site Contact:	Courtney Cox, Ellicott Station LLC	716-332-5959
Agency Contact	NYSDEC Region 8	585-226-2466
Project Manager	Jared Pristach, LaBella	585-402-7004
Site Safety Manager:	Steven Szymanski, LaBella	585-295-6633

MAP AND DIRECTIONS TO THE MEDICAL FACILITY
UNITED MEMORIAL MEDICAL CENTER

Address: 127 North Street, Batavia NY 14020

1. Turn right onto Ellicott Street (Route 63)
2. Turn right onto Court Street
3. Turn right onto Main Street
4. Turn left onto Summit Street
5. Turn right into medical center

Total Travel Estimate: 1.1- miles - about 5 minutes



1.0 Introduction

The purpose of this Health and Safety Plan (HASP) it to provide guidelines for responding to potential health and safety issues that may be encountered during the field activities relating to the implementation of Brownfield Cleanup Program (BCP) requirements at the property addressed as 56-70 Ellicott Street and one unaddressed parcel (SBL #84.015-1-4), City of Batavia, New York 14020 (Site). This HASP only reflects the policies of LaBella Associates D.P.C. The requirements of this HASP are applicable to all approved LaBella personnel at the work site. The provisions of the HASP were developed in general accordance with 29 CFR 1910 and 29 CFR 1926 and do not replace or supersede any regulatory requirements of the USEPA, NYSDEC, OSHA or and other regulatory body.

2.0 Responsibilities

This HASP presents guidelines to minimize the risk of injury to project personnel, and to provide rapid response in the event of injury. The HASP is applicable only to activities of approved LaBella personnel and their authorized visitors. The Project Manager shall implement the provisions of this HASP for the duration of the project. It is the responsibility of LaBella employees to follow the requirements of this HASP, and all applicable company safety procedures.

3.0 Activities Covered

The activities covered under this HASP are limited to the following:

- Management of environmental investigation
- Environmental Monitoring
- Collection of samples
- Management of excavated soil and fill.

4.0 Work Area Access and Site Control

The contractor(s) will have primary responsibility for work area access and site control.

5.0 Potential Health and Safety Hazards

This section lists some potential health and safety hazards that project personnel may encounter at the project site and some actions to be implemented by approved personnel to control and reduce the associated risk to health and safety. This is not intended to be a complete listing of any and all potential health and safety hazards. New or different hazards may be encountered as site environmental and site work conditions change. The suggested actions to be taken under this plan are not to be substituted for good judgment on the part of project personnel. At all times, the Site personnel has responsibility for site safety and his or her instructions must be followed.

5.1 Hazards Due to Heavy Machinery

Potential Hazard:
Heavy machinery including trucks, excavators, backhoes, etc will be in operation at the site. The presence of such equipment presents the danger of being struck or crushed. Use caution when working near heavy machinery.

Protective Action:
Make sure that operators are aware of your activities, and heed operator's instructions and warnings. Wear bright colored clothing and walk safe distances from heavy equipment. A hard hat, safety glasses and steel toe shoes are required.

5.2 Excavation Hazards

Potential Hazard:
Excavations and trenches can collapse, causing injury or death. Edges of excavations can be unstable and collapse. Toxic and asphyxiant gases can accumulate in confined spaces and trenches. Tasks that require working within the excavation will require air monitoring in the breathing zone (refer to Section 9.0).

Excavations left open create a fall hazard which can cause injury or death.

Protective Action:
Personnel must receive approval from the Project Manager to enter an excavation for any reason, and may require additional training. Subsequently, approved personnel are to receive authorization for entry from the Site personnel. Approved personnel are not to enter excavations over 4 feet in depth unless excavations are adequately sloped, shored or otherwise protected. Additional personal protective equipment may be required based on the air monitoring.

Personnel should exercise caution near all excavations at the site as it is expected that excavation sidewalls will be unstable.

Fencing and/or barriers accompanied by "no trespassing" signs should be placed around all excavations when left open for any period of time when work is not being conducted.

5.3 Cuts, Punctures and Other Injuries

Potential Hazard:
In any excavation or construction~~,~~ work site there is the potential for the presence of sharp or jagged edges on rock, metal materials, and other sharp objects. Serious cuts and punctures can result in loss of blood and infection.

Protective Action:
Serious injuries are to be reported immediately to the Project Manager. The Project Manager is responsible for making First Aid supplies available at the work site to treat minor injuries. Do not move seriously injured workers. All injuries requiring treatment are to be reported to the Project Manager.

5.4 Injury Due to Exposure of Chemical Hazards

Potential Hazards:
Volatile organic vapors from petroleum products, chlorinated solvents or other chemicals may be encountered during excavation activities at the project work site. Inhalation of high concentrations of organic vapors can cause headache, stupor, drowsiness, confusion and other health effects. Skin contact can cause irritation, chemical burn, or dermatitis.

Protective Action:
The presence of organic vapors may be detected by their odor and by monitoring instrumentation. Approved employees will not work in environments where hazardous concentrations of organic vapors are present. Air monitoring (refer to Section 9.0) of the work area will be performed at least every 60 minutes or more often using a Photoionization Detector (PID). Personnel are to leave the work area whenever PID measurements of ambient air exceed 25 ppm consistently for a 5 minute period. In the event that sustained total volatile organic compound (VOC) readings of 25 ppm is encountered personnel should upgrade personal protective equipment to Level C (refer to Section 8.0) and an Exclusion Zone should be established around the work area to limit and monitor access to this area (refer to Section 6.0).

5.5 Injuries Due to Extreme Hot or Cold Weather Conditions

Potential Hazards:
Extreme hot weather conditions can cause heat exhaustion, heat stress and heat stroke or extreme cold weather conditions can cause hypothermia.

Protective Action:
Precaution measures should be taken such as dress appropriately for the weather conditions and drink plenty of fluid. If personnel should suffer from any of the above conditions, proper techniques should be taken to cool down or heat up the body and taken to the nearest hospital if needed.

6.0 Work Zones

In the event that conditions warrant establishing various work zones (i.e., based on hazards - Section 5.4), the following work zones should be established:

Exclusion Zone (EZ):
The EZ will be established in the immediate vicinity and adjacent downwind direction of site activities that elevate breathing zone VOC concentrations to unacceptable levels based on field screening. These site activities include contaminated soil excavation and soil sampling activities. If access to the site is required to accommodate non-project related personnel then an EZ will be established by constructing a barrier around the work area (yellow caution tape and/or construction fencing). The EZ barrier shall encompass the work area and any equipment staging/soil staging areas necessary to perform the associated work. The contractor(s) will be responsible for establishing the EZ and limiting access to approved personnel. Depending on the condition for establishing the EZ, access to the EZ may require adequate PPE (e.g., Level C).

Contaminant Reduction Zone (CRZ):
The CRZ will be the area where personnel entering the EZ will don proper PPE prior to entering the EZ and the area where PPE may be removed. The CRZ will also be the area where decontamination of equipment and personnel will be conducted as necessary.

7.0 Decontamination Procedures

Upon leaving the work area, approved personnel shall decontaminate footwear as needed. Under normal work conditions, detailed personal decontamination procedures will not be necessary. Work clothing may become contaminated in the event of an unexpected splash or spill or contact with a contaminated substance. Minor splashes on clothing and footwear can be rinsed with clean water. Heavily

contaminated clothing should be removed if it cannot be rinsed with water. Personnel assigned to this project should be prepared with a change of clothing whenever on site.

Personnel will use the contractor's disposal container for disposal of PPE.

8.0 Personal Protective Equipment

Generally, site conditions at this work site require level of protection of Level D or modified Level D. However, air monitoring will be conducted to determine if up-grading to Level C PPE is required (refer to Section 9.0). Descriptions of the typical safety equipment associated with Level D and Level C are provided below:

Level D:
Hard hat, safety glasses, rubber nitrile sampling gloves, steel toe construction grade boots, etc.

Level C:
Level D PPE and full or ½-face respirator and tyvek suit (if necessary). [*Note: Organic vapor cartridges are to be changed after each 8-hours of use or more frequently.*]

9.0 Air Monitoring

According to 29 CFR 1910.120(h), air monitoring shall be used to identify and quantify airborne levels of hazardous substances and health hazards in order to determine the appropriate level of employee protection required for personnel working onsite. Air monitoring will consist at a minimum of the procedures described below. Site perimeter and community air monitoring and appropriate response actions will be implemented as described in the New York State Department of Health (NYSDOH) Generic Community Air Monitoring guidance.

The Air Monitor will utilize a photoionization Detector (PID) to screen the ambient air in the work areas for total Volatile Organic Compounds (VOCs) and a DustTrak tm Model 8520 aerosol monitor or equivalent for measuring particulates. Air monitoring of the work areas and EZ, if established, will be performed at least every 60 minutes or more often using a PID, and the DustTrak meter.

If sustained PID readings of greater than 25 ppm are recorded in the breathing zone in the work area or EZ, work should be temporarily ceased and personnel are to leave the work area until satisfactory readings are obtained, the source of vapors identified and addressed through corrective actions or approved personnel may re-enter the work areas wearing at a minimum a ½ face respirator with organic vapor cartridges for an 8-hour duration (i.e., upgrade to Level C PPE). Organic vapor cartridges are to be changed after each 8-hours of use or more frequently, if necessary.

If PID readings are sustained, in the work area, at levels above 50 ppm for a 5 minute average, work will be stopped immediately until safe levels of VOCs are encountered or additional PPE will be required (i.e., Level B).

If dust concentrations exceed the upwind concentration by 150 $\mu g/m^3$ (0.15 mg/m^3) consistently for a 10 minute period within the work area or at the downwind location, then LaBella personnel may not re-enter the work area until dust concentrations in the work area decrease below 150 $\mu g/m^3$ (0.15 mg/m^3), which may be accomplished by the construction manager implementing dust control or suppression measures.

10.0 Emergency Action Plan

In the event of an emergency, employees are to turn off and shut down all powered equipment and leave the work areas immediately. Employees are to walk or drive out of the Site as quickly as possible and wait at the assigned 'safe area'. Follow the instructions of the Site personnel.

Employees are not authorized or trained to provide rescue and medical efforts. Rescue and medical efforts will be provided by local authorities.

11.0 Medical Surveillance

Medical surveillance will be provided to all employees who are injured due to overexposure from an emergency incident involving hazardous substances at this site.

12.0 Employee Training

Personnel who are not familiar with this site plan will receive training on its entire content and organization before working at the Site.

Individuals involved with the investigation must be 40-hour OSHA HAZWOPER trained with current 8-hour refresher certification.

Table 1
Exposure Limits and Recognition Qualities

Compound	PEL-TWA (ppm)(b)(d)	TLV-TWA (ppm)(c)(d)	STEL (ppm)(b)	LEL (%)(e)	UEL (%)(f)	IDLH (ppm)(g)(d)	Odor	Odor Threshold (ppm)	Ionization Potential
Acetone	750	500	NA	2.15	13.2	20,000	Sweet	4.58	9.69
Anthracene	.2	.2	NA	NA	NA	NA	Faint aromatic	NA	NA
Benzene	1	0.5	5	1.3	7.9	3000	Pleasant	8.65	9.24
Benzo (a) pyrene (coal tar pitch volatiles)	0.2	0.1	NA	NA	NA	700	NA	NA	NA
Benzo (a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b) Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (k) Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	10.88
Carbon Disulfide	20	1	NA	1.3	50	500	Odorless or strong garlic type	.096	10.07
Chlorobenzene	75	10	NA	1.3	9.6	2,400	Faint almond	0.741	9.07
Chloroform	50	2	NA	NA	NA	1,000	ethereal odor	11.7	11.42
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethylene	200	200	NA	9.7	12.8	400	Acrid	NA	9.65
1,2-Dichlorobenzene	50	25	NA	2.2	9.2		Pleasant		9.07
Ethyl Alcohol	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100	100	NA	1.0	6.7	2,000	Ether	2.3	8.76
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Alcohol	400	200	500	2.0	12.7	2,000	Rubbing alcohol	3	10.10
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	500	50	NA	12	23	5,000	Chloroform-like	10.2	11.35
Naphthalene	10, Skin	10	NA	0.9	5.9	250	Moth Balls	0.3	8.12
n-propylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphoric Acid	1	1	3	NA	NA	10,000	NA	NA	NA
Polychlorinated Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium Hydroxide	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethane	NA	NA	NA	NA	NA	NA	Sweet	NA	NA
Toluene	100	100	NA	0.9	9.5	2,000	Sweet	2.1	8.82
Trichloroethylene	100	50	NA	8	12.5	1,000	Chloroform	1.36	9.45
1,2,4-Trimethylbenzene	NA	25	NA	0.9	6.4	NA	Distinct	2.4	NA
1,3,5-Trimethylbenzene	NA	25	NA	NA	NA	NA	Distinct	2.4	NA
Vinyl Chloride	1	1	NA	NA	NA	NA	NA	NA	NA
Xylenes (o,m,p)	100	100	NA	1	7	1,000	Sweet	1.1	8.56
Metals									
Arsenic	0.01	0.2	NA	NA	NA	100, Ca	NA	NA	NA
Cadmium	0.2	0.5	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	1	0.5	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.05	0.15	NA	NA	NA	700	NA	NA	NA
Mercury	0.05	0.05	NA	NA	NA	28	NA	NA	NA
Selenium	0.2	0.02	NA	NA	NA	Unknown	NA	NA	NA

(a) Skin = Skin Absorption
(b) OSHA-PEL Permissible Exposure Limit (flame weighted average, 8-hour): NIOSH Guide, June 1990
(c) ACGIH – 8 hour time weighted average from Threshold Limit Values and Biological Exposure Indices for 2003.
(d) Metal compounds in mg/m3
(e) Lower Exposure Limit (%)
(f) Upper Exposure Limit (%)
(g) Immediately Dangerous to Life or Health Level: NIOSH Guide, June 1990.

Notes:
1. All values are given in parts per million (PPM) unless otherwise indicated.
2. Ca = Possible Human Carcinogen, no IDLH information.

APPENDIX 3

Quality Control Plan

Quality Control Program (QCP)

Site Location:

Ellicott Station East
56-70 Ellicott Street
Batavia, New York 14020

July 2020

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

Table of Contents

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1.0 Introduction

LaBella's Quality Control Program (QCP) is an integral part of its approach to environmental investigations. By maintaining a rigorous QC program, our firm is able to provide accurate and reliable data. This QCP should be followed during implementation of environmental investigation and remediation projects and should serve as a basis for quality control methods to be implemented during field programs. Project-specific requirements may apply.

The QC program contains procedures which allow for the proper collection and evaluation of data and documents that QC procedures have been followed during field investigations. The QC program presents the methodology and measurement procedures used in collecting quality field data. This methodology includes the proper use of equipment, documentation of sample collection, and sample handling procedures.

Procedures used in the firm's QC program are compatible with federal, state, and local regulations, as well as, appropriate professional and technical standards.

This QC program includes the following:

- QC Objectives and Checks
- Field Equipment, Handling, and Calibration
- Sampling and Logging Techniques
- Sample Handling, Packaging, and Shipping
- Laboratory Requirements and Deliverables

It should be noted that project-specific work plans (e.g., Remedial Investigation Work Plans) may have project specific details that will differ from the procedures in this QC program. In such cases, the project-specific work plan should be followed (subsequent to regulatory approval).

The characteristics of major importance for the assessment of generated data are accuracy, precision, completeness, representativeness, and comparability. Application of these characteristics to specific projects is addressed later in this document. The characteristics are defined below.

1.1 Accuracy

Accuracy is the degree of agreement of a measurement or average of measurements with an accepted reference or "true" value and is a measure of bias in the system.

1.2 Precision

Precision is the degree of mutual agreement among individual measurements of a given parameter.

1.3 Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected to be obtained under correct normal conditions.

1.4 Representativeness

Representativeness expresses the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition

Careful choice and use of appropriate methods in the field will ensure that samples are representative. This is relatively easy with water or air samples since these components are homogeneously dispersed. In soil and sediment, contaminants are unlikely to be evenly distributed, and thus it is important for the sampler and analyst to exercise good judgment when removing a sample.

1.5 Comparability

Comparability expresses the confidence with which one data set can be compared to another. The data sets may be inter- or intra- laboratory.

2.0 Measurement of Data Quality

2.1 Accuracy

Accuracy of a particular analysis is measured by assessing its performance with "known" samples. These "knowns" take the form of EPA standard reference materials, or laboratory prepared solutions of target analytes spiked into a pure water or sample matrix. In the case of gas chromatography (GC) or GC/MS (mass spectrometry) analyses, solutions of surrogate compounds are used. These solutions can be spiked into every sample and are designed to mimic the behavior of target analytes without interfering with their determination.

In each case the recovery of the analyte is measured as a percentage, correcting for analytes known to be present in the original sample if necessary, as in the case of a matrix spike analysis. For EPA supplied known solutions, this recovery is compared to the published data that accompany the solution.

For the firm's prepared solutions, the recovery is compared to EPA-developed data or the firm’s historical data as available. For surrogate compounds, recoveries are compared to EPA CLP acceptable recovery tables.

If recoveries do not meet required criteria, then the analytical data for the batch (or, in the case of surrogate compounds, for the individual sample) are considered potentially inaccurate. The analyst or his supervisor must initiate an investigation of the cause of the problem and take corrective action. This can include recalibration of the instrument, reanalysis of the QC sample, reanalysis of the samples in the batch, or flagging the data as suspect if the problems cannot be resolved. For highly contaminated samples, recovery of the matrix spike may depend on sample homogeneity. As a rule, analyses are not corrected for recovery of matrix spike or surrogate compounds.

2.2 Precision

Precision of a particular analysis is measured by assessing its performance with duplicate or replicate samples. Duplicate samples are pairs of samples taken in the field and transported to the laboratory as distinct samples. Their identity as duplicates is typically not known to the laboratory. For most purposes, precision is determined by the analysis of replicate pairs (i.e., two samples prepared at the laboratory from one original sample). Often in replicate analysis the sample chosen for replication does not contain target analytes so that quantitation of precision is impossible. For EPA CLP analyses, replicate pairs of spiked samples, known as matrix spike/matrix spike duplicate samples, are used for precision studies. This has the advantage that two real positive values for a target analyte can be compared.

Precision is calculated in terms of Relative Percent Difference (RPD).

- Where X_1 and X_2 represent the individual values found for the target analyte in the two replicate analyses or in the matrix spike/matrix spike duplicate analyses.
- RPDs must be compared to the method RPD for the analysis. The analyst or his supervisor must investigate the cause of RPDs outside stated acceptance limits. This may include a visual inspection of the sample for non-homogeneity, analysis of check samples, etc. Follow-up action may include sample reanalysis or flagging of the data as suspect if problems cannot be resolved.
- During the data review and validation process, field duplicate RPDs are assessed as a measure of the total variability of both field sampling and laboratory analysis.

2.3 Completeness

Completeness for each parameter is calculated as follows:

- The firm's target value for completeness for all parameters is 100%. A completeness value of 95% will be considered acceptable. Incomplete results will be reported to the site managers. In planning the field sample collection, the site manager will plan to collect field duplicates from identified critical areas. This procedure should assure 100% completeness for these areas.

2.4 Representativeness

The characteristic of representativeness is not quantifiable. Subjective factors to be taken into account are as follows:

- The degree of homogeneity of a site;
- The degree of homogeneity of a sample taken from one point in a site; and
- The available information on which a sampling plan is based.

To maximize representativeness of results, sampling techniques and sample locations will be carefully chosen so that they provide laboratory samples representative of the site and the specific area. Within the laboratory, precautions are taken to extract from the sample bottle an aliquot representative of the whole sample. This includes premixing the sample and discarding pebbles

from soil samples.

2.5 Comparability

Comparability of laboratory tests is ensured by utilizing only New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP)- certified laboratories. This certification is the basis for demonstrating proficiency in testing requirements. Using ELAP certified laboratories will result in consistency amongst analytical data within a specific project and across projects.

3.0 Quality Control Targets

Target values for detection limit, percent spike recovery and percent "true" value of known check standards, and RPD of duplicates/replicates are included in the QCP, Analytical Procedures. Note that tabulated values are not always attainable. Instances may arise where high sample concentrations, non-homogeneity of samples, or matrix interferences preclude achievement of target detection limits or other quality control criteria. In such instances, the firm will report reasons for deviations from these detection limits or noncompliance with quality control criteria.

4.0 Soil Boring Advancement & Monitoring Well Installation Procedures

Soil and groundwater sampling shall be conducted in accordance with NYSDEC Division of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation dated May 3, 2010 and any Site-specific work plans.

Prior to drilling, all drill sites will be cleared with appropriate utility companies to avoid potential accidents relating to underground utilities. Utility drawings will be reviewed, if available.

4.1 Drilling Equipment and Techniques

<u>Direct Push Geoprobe Advanced Borings:</u>

Soil borings and monitoring wells will be advanced with a Geoprobe direct push sampling system. The use of direct push technology allows for rapid sampling, observation, and characterization of relatively shallow overburden soils. The Geoprobe utilizes a four to five-foot macrocore sampler, with disposable polyethylene sleeves. Soil cores will be retrieved in four or five-foot sections, and can be easily cut from the polyethylene sleeves for observation and sampling. The macrocore sampler will be decontaminated between boring locations using an alconox and water solution.

Prior to initiating drilling activities, the Macrocores, drive rods, and pertinent equipment, will be steam cleaned or washed with an alconox and water solution. This cleaning procedure will also be used between each boring. Throughout and after the cleaning processes, direct contact between the equipment and the ground surface will be avoided. Plastic sheeting and/or clean support structures (e.g., pallets, sawhorses) will be used.

Test borings will be advanced with 2-inch (or larger) inside diameter (ID) direct push Macrocore through overburden soils. Drilling fluids, other than potable water will not be allowed without

special consideration and agreement from NYSDEC. The use of lubricants is also not allowed unless approved by the NYSDEC representative.

During the drilling, a properly calibrated photoionization detector (PID) will be used to screen soil cores retrieved from the Macrocores.

Direct Push Geoprobe advanced groundwater-monitoring wells typically utilize minimum 1.25-inch threaded flush joint PVC pipe with 0.010-in. slotted screen or pre-packed well screens. PVC piping used for risers and screens will conform to the requirements of ASTM-D 1785 Schedule 40 pipe.. All materials used to construct the wells will be NSF/ASTM approved. Solvent PVC glue shall not be used at any time in the construction of the wells. The bottom of the screen shall be sealed with a treated cap or plug. No lead shot or lead wool is to be employed in sealing the bottom of the well or for sealant at any point in the well. Stainless steel wells or pre-packed PVC wells may be used if specified in the work plan and approved by the NYSDEC.

Hollow-Stem Auger Advanced Borings:

The drilling and installation of soil borings and monitoring wells will be performed using a rotary drill rig which will have sufficient capacity to perform 4 1/4-inch inside diameter (ID) hollow-stem auger drilling in the overburden, retrieve Macrocore or split-spoon samples, and perform necessary rock coring using NX, NQ, HQ or core barrel size as specified in the project-specific work plan. The borehole may be reamed up to 5 1/2-inch diameter prior to monitoring well installation as cased hole in the bedrock, or may be left as open bedrock hole, with regulatory concurrence. Equipment sizes and diameters may vary based on project-specific criteria. Any investigative derived waste generated during the advancement of soil borings and monitoring well installations will be containerized and characterized for proper disposal.

Prior to initiating drilling activities, the augers, rods, Macrocore, split spoons, and other pertinent equipment will be steam cleaned or washed with an alconox and water solution. This cleaning procedure will also be used between each boring. Steam cleaning activities will be performed in a designated on-site decontamination area. During and after the cleaning processes, direct contact between the equipment and the ground surface will be avoided. Plastic sheeting and/or clean support structures (e.g., pallets, sawhorses) will be used.
Test borings will be advanced with 4 1/4-inch (ID) hollow stem augers through overburden, and cored with a NX, NQ, HQ or core barrel size as specified in the project-specific work plan sized diamond core barrels in competent rock, driven by truck-, track-, or trailer-mounted drilling equipment. Alternative methods of drilling or equipment may be allowed or requested for project-specific criteria, but must be approved by the NYSDEC. Drilling fluids, other than water from a NYSDEC-approved source, will not be allowed without special consideration and agreement from NYSDEC. The use of lubricants is also not allowed unless approved by the NYSDEC representative.

During the drilling, a (PID) will be used to screen soils retrieved from the split spoons or Macrocores. In the event that headspace field screening is required to determine the presence of VOCs in soil samples, the following procedure will be utilized:

- Soils from core will be inserted into an airtight glass jar and/or disposable polyethylene bag, and the container will be sealed immediately
- After sealing the container, the soils will be shaken or kneaded for 10-15 seconds to release volatiles into the headspace of the sealed container

- The PID inlet will be inserted into the headspace of the airtight container to screen soil samples for VOCs

During the drilling, visual screening will be utilized to identify any Non-Aqueous Phase Liquid (NAPL) in the soil cores.

Where bedrock wells are required, test borings shall be advanced into rock with NX, NQ, HR (or similar) coring tools. Only water from an approved source shall be used in rock coring. The consultant shall monitor and record the petrology, core recovery, fractures, rate of advance, and water lost or produced in each test boring. The Rock Quality Determination (RQD) value shall be calculated for each 5-foot core. Each core shall be screened with a PID upon extraction. All core samples shall be retained and stored by the consultant in an approved wooden core box for a period of not less than one year.

The method selected may be percussion or rotary drilling. The method and equipment selected must be capable of penetrating the bedrock at each well location to a depth required by the work plan.

Bedrock well installation will involve construction of a rock socket in the weathered bedrock. The socket will be drilled into the top of rock (typically 1-ft. to 5-ft. into the top of rock) at each bedrock well location to allow a permanent steel casing to be grouted securely in place prior to completion of the well. The purpose for this is to provide a seal at the overburden/bedrock interface and into the upper bedrock surface, to prevent the entrance of overburden water into the bedrock. After the grout and casing have set up for a minimum of 12 hours, the remaining bedrock can be NX (or similar) cored through the steel casing to a depth determined by the project-specific work plan.

Bedrock wells will either be open coreholes in the rock or consist of threaded, flush-joint PVC piping. Construction will vary depending on the project and as such, specific construction of the wells will be detailed in the project-specific work plan. Bedrock wells which do utilized PVC piping for risers and screens will conform to the requirements of ASTM-D 1785 Schedule 40 pipe. All materials used to construct the wells will be NSF/ASTM approved.

Screen and riser sections shall be joined by flush-threaded coupling to form watertight unions that retain 100% of the strength of the casing. Solvent PVC glue shall not be used at any time in the construction of the wells. The bottom of the screen shall be sealed with a treated cap or plug. No lead shot or lead wool is to be employed in sealing the bottom of the well or for sealant at any point in the well.

4.1.1 Artificial Sand Pack

When utilized, granular backfill will be chemically and texturally clean, inert, siliceous, and of appropriate grain size for the screen slot size and the host environment The sand pack will be installed using a tremie pipe, when possible (i.e., a tremie pipe may not fit into smaller, 2-in. diameter boreholes). When utilized, the well screen and casing will be installed, and the sand pack placed around the screen and casing to a depth extending at least 2-ft.. A pre-packed well screen may be used if pre-approved by the NYSDEC.

An artificial sand pack will not be utilized in bedrock wells without screens (i.e., open borehole

wells).

4.1.2 Bentonite Seal

A minimum 2-ft. thick seal will be placed directly on top of the sand pack, and care will be taken to avoid bridging. In the event that Site geology does not allow for a 2-ft. seal (e.g., only 1-ft. of space remains between the top of the sand pack and ground surface), the remaining space in the annulus will be filled with bentonite.

4.1.3 Grout Mixture

Upon completion of the bentonite seal, the well may be grouted with a non-shrinking cement grout (e.g., Volclay^{R}) mix to be placed from the top of the bentonite seal to the ground surface. The cement grout shall consist of a mixture of Portland cement (ASTM C 150) and water, in the proportion of not more than 7 gallons of clean water per bag of cement (1 cubic foot or 94 pounds). Additionally, 3% by weight of bentonite powder may be added.

4.1.4 Surface Protection

At all times during the progress of the work, precautions shall be used to prevent tampering with or the entrance of foreign material into the well. Upon completion of the well, a suitable cap shall be installed to prevent material from entering the well. Where permanent wells are to be installed, the well riser shall be protected by a flush mounted road box set into a concrete pad or locking well cap for stick-up wells. A concrete pad, sloped away from the well, shall be constructed around the flush mount road box or stick-up casing at ground level.

Any well that is to be temporarily removed from service or left incomplete due to delay in construction shall be capped with a watertight cap.

4.2 Surveying

Coordinates and elevations will be established for each monitoring well and sampling location. Elevations to the closest 0.01 foot shall be used for the survey. These elevations shall be referenced to a regional, local, or project-specific datum. The location, identification, coordinates, and elevations of the wells will be plotted on maps with a scale large enough to show their location with reference to other structures at each site.

4.3 Well Development

After completion of the well, but not sooner than 24 hours after grouting is completed, development will be accomplished using pumping, bailing, or surge blocking. No dispersing agents, acids, disinfectants, or other additives will be used during development or introduced into the well at any other time. During development, water will be removed throughout the entire water column by periodically lowering and raising the pump intake (or bailer stopping point).

Development water will be either properly contained and treated as waste until the results of chemical analysis of samples are obtained or discharged on Site as determined by the Site-specific work plans and/or consultation with the NYSDEC representatives on Site.

The development process will continue until removal of a minimum of 110% of the water lost

during drilling, three well volumes; whichever is greater, or as specified in the work plan. In the event that limited recharge does not allow for the recovery of all drilling water lost in the well or three (3) well volumes, the well will be allowed to stabilize to conditions deemed representative of groundwater conditions. Stabilization periods will vary by project but will be confirmed with the NYSDEC prior to sampling.

4.4 PFAS Soil Sampling Procedure

Soil samples for PFAS analysis will be collected using PFAS-Free equipment. Samples will be collected in bottleware provided by the laboratory. Because PFAS are found in numerous everyday items, the following special precautions will be taken during sampling activities:

- No use of Teflon®-containing materials (e.g., Teflon® tubing, bailers, tape, sample jar lid liners, plumbing paste).
- No use of low density polyethylene (LDPE)-containing materials.
- No Tyvek® clothing will be worn by samplers.
- Clothes treated with stain-resistant or rain-resistant coatings (e.g., Gortex®) will be not be worn by samplers.
- All clothing worn by sampling personnel must have been laundered multiple times.
- No fast food wrappers, disposable cups or microwave popcorn will be within the vicinity of the wells/ samples.
- There will be no use of chemical (blue) ice packs, aluminum foil, or Sharpies® within the vicinity of the wells/ samples.
- No use of sunscreen, insect repellants, cosmetic, lotions or moisturizers will be allowed by sampling personnel the day of sampling.
- If any of the above items are handled by the field personnel prior to sampling activities, field personnel will wash their hands thoroughly with soap and water prior to any sampling activities.
- Powder-free nitrile gloves will be worn during all sample collection activities.

Quality assurance/ quality control (QA/QC) samples for PFAS sampling will include one (1) field duplicate, one (1) matrix spike / matrix spike duplicates (MS/MSD) and one (1) equipment blank. The procedures and rationale for collecting these samples are described below.

- **Field duplicate** – Sample will be used to assess the variability in concentrations of samples from the same well due to the combined effects of sample processing in the field and laboratory as well as chemical analysis.

- **Matrix spike/matrix spike duplicate** – Sample will be used to provide information about the effect of the sample matrix on the design and measurement methodology used by the laboratory.

- **Equipment blank** – Sample will be collected to help identify possible contamination from sampling equipment (i.e., shovel, soil core, etc.).

PFAS samples will be submitted to Alpha Analytical Laboratories, which is an Environmental Laboratory Accreditation Program (ELAP) certified laboratory, for analysis of the full PFAS target analyte list (21 compounds listed in the NYSDEC Guidance) via modified USEPA Method 537

with a method detection limit not to exceed 1 ug/kg. Note, the laboratory utilized will be ELAP certified for PFOA and PFOS in drinking water by EPA method 537 or ISO 25101 as ELAP does not currently offer certification for PFAS compounds in matrices other than finished drinking water.

5.0 Geologic Logging and Sampling

At each investigative location, borings will be advanced through overburden using either a drill rig and hollow-stem auger or direct push technology (split spoons or Macrocore). Soils will be evaluated for visual and olfactory evidence of impairment (i.e., staining, odors, and elevated PID readings) by a qualified individual. Sampling devices will be decontaminated according to procedures outlined in the Decontamination section of this document. When utilized, split-spoon samplers will be driven into the soil using a minimum 140-pound safety hammer and allowed to free-fall 30-inches, in accordance with ASTM-D 1586-84 specifications. The number of blows required to drive the sampler each 6-inches of penetration will be recorded. When required, samples will be stored in the appropriate bottleware (refer to Section 10) until analysis or deemed unnecessary.

In the event that maximum design depth of investigation is reached and hydrogeologic conditions are not suitable for well installation, the maximum drilling depth may be revised.

Boulders and bedrock encountered during well installation may be cored by standard diamond-core drilling methods using an NX, NQ, HQ size core barrel or other if specified in the project-specific work plan. All rock cores recovered will be logged by a qualified individual, and stored in labeled wooden core boxes. The cores will be stored by the firm until the project is completed or for at least one year. Drilling logs will be prepared by a qualified individual who will be present during drilling operations. One copy of each field boring and well construction log and groundwater data, will typically be submitted as part of the investigation summary report (e.g., Remedial Investigation Report). The RQD value shall be calculated for each 5-foot section. Information provided in the logs shall include, but not be limited to, the following:

- Date(s), test hole identification, and project identification;
- Name of individual developing the log;
- Name of driller and assistant(s);
- Drill, make and model, auger size;
- Identification of alternative drilling methods used and justification thereof (e.g., rotary drilling with a specific bit type to remove material from within the hollow stem augers);
- Standard penetration test (ASTM D-1586) blow counts;
- Field diagram of each monitoring well installed with the depth to bottom of well/ screen, top of screen, length of riser, depth of steel casing, depths of sand pack, bentonite seal, grout, type of well completion etc.;
- Depth of each change of stratum;
- Identification of the material of which each stratum is composed, according to the USCS system or standard rock nomenclature, as appropriate;
- Depth interval from which each sample was taken, sample identification, and sample time;
- Depth at which hole diameters (bit sizes) change;

- Depth at which groundwater is encountered;
- Drilling fluid and quantity of water lost during drilling;
- Depth or location of any loss of tools or equipment;
- Depths of any fractures, joints, faults, cavities, or weathered zones

6.0 Groundwater Sampling Procedures

The groundwater in all new monitoring wells will be allowed to stabilize for at least 1week following development prior to sampling. Water levels will be measured to within 0.01 feet prior to purging and sampling. Sampling of each well will typically be accomplished in one of two ways; active or passive.

Active Sampling:

Active sampling includes bailing or pumping. Purging will be completed prior to active sampling if specified in the project-specific work plan. During purging, the following will be recorded in field books or groundwater sampling logs:

- date
- purge start time
- weather conditions
- presence of NAPL, if any, and approximate thickness
- pump rate
- pH
- dissolved oxygen
- temperature
- conductivity
- redox
- turbidity
- depth of well
- depth to water
- depth to pump intake
- purge end time
- volume of water purged

During low flow sampling, the water quality parameters including pH, conductivity, temperature, dissolved oxygen, redox, water level drawdown, and turbidity will be recorded at five (5) minute intervals. Samples will be collected after the parameters have stabilized for three (3) consecutive 5-minute intervals to within the specified ranges below:

- Water level drawdown (<0.3')
- Turbidity (+/- 10%, < 50-NTU for Metals Samples)
- pH (+/-0.1)
- Temperature (+/- 3%)
- Specific conductivity (+/- 3%)
- Dissolved Oxygen (+/- 10%)
- Oxidation reduction potential (+/- 10 millivolts)

Passive Sampling:

Groundwater samples will be collected via passive methods (i.e., no-purge) according to the following procedures and in the volumes specified in Table 10-1:

Samples will be collected via passive diffusion bag (PDB) samplers. PDB samplers are made of low-density polyethylene plastic tubing (typically 4 mil), filled with laboratory grade (ASTM Type II) deionized water and sealed at both ends.

- Pre-filled PDBs will not be stored for longer than 30 days and will be kept stored at room temperature in a sealed plastic bag until ready to use.
- PDBs filled in the field will be used immediately and not stored for future use.
- PDB samplers will only be used to collect groundwater samples which will be analyzed for VOCs.
- Mesh covers will be utilized for open rock holes as to not puncture the PDB and will be secured to the bag using zip-ties.
- PDB samplers will be deployed by hanging in the well at the depth(s) specified in the project-specific work plan. The depth at which the PDB is deployed will be recorded on the groundwater sampling form. The PDB samplers will be deployed at least 14 days prior to sampling;
- When transferring water from the PDB to sample containers, care will be taken to avoid agitating the sample, since agitation promotes the loss of volatile constituents;
- Gloves will be changed between collection of each PDB and tools used to open the PDB will be decontaminated with an alconox and potable water solution between each PDB;
- Any volume not used will be treated as investigation derived waste;
- Any observable physical characteristics of the groundwater (e.g., color, sheen, odor, turbidity) at the time of sampling will be recorded; and
- Weather conditions (i.e., air temperature, sky condition, recent heavy rainfall, drought conditions) at the time of sampling will be recorded.

6.1 PFAS Groundwater Sampling Procedure

Samples for PFAS will be collected using PFAS-Free equipment, specifically a dedicated disposable high density polyethylene (HDPE) or PVC bailers, and/or low-flow sampling equipment with PFAS-Free components. Samples will be collected in bottleware provided by the laboratory. Because PFAS are found in numerous everyday items, the following special precautions will be taken during sampling activities:

- No use of Teflon®-containing materials (e.g. Teflon® tubing, bailers, tape, sample jar lid liners, plumbing paste);
- No use of low density polyethylene (LDPE)-containing materials;
- No Tyvek® clothing will be worn by samplers;
- Clothes treated with stain-resistant or rain-resistant coatings (e.g., Gortex®) will not be worn by samplers;
- All clothing worn by sampling personnel must have been laundered multiple times;
- No fast food wrappers, disposable cups or microwave popcorn will be within the vicinity of the wells/samples;
- There will be no use of chemical (blue) ice packs, aluminum foil, or Sharpies® within the

vicinity of the wells/samples;

- No use of sunscreen, insect repellants, cosmetics, lotions or moisturizers will be allowed by sampling personnel the day of sampling;
- If any of the above items are handled by the field personnel prior to sampling activities, field personnel will wash their hands thoroughly with soap and water prior to any sampling activities; and
- Powder-free nitrile gloves will be worn during all sample collection activities.

NYSDEC's Technical Guidance for Site Investigation and Remediation (DER-10) specifies technical guidance applicable to DER's remedial programs. Given the prevalence and use of PFAS, DER has developed "best management practices" specific to sampling for PFAS. These "best management practices" are presented below as media-specific sampling procedures, which will be adhered to as part of this project. Field sampling for PFAS performed under DER remedial programs will follow the appropriate procedures outlined for soils, sediments or other solids (Appendix B of NYSDEC's "Guidelines for Sampling and Analysis of PFAS", January 2020), non-potable groundwater (Appendix C of NYSDEC's "Guidelines for Sampling and Analysis of PFAS", January 2020), and surface water (Appendix D of NYSDEC's "Guidelines for Sampling and Analysis of PFAS", January 2020).

6.1.1 Sampling Protocols for PFAS in Soils, Sediments and Solids

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1. The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by NYSDEC'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 use for equipment decontamination will be verified in advance to be PFAS-free through laboratory analysis or certification. NYSDEC's PFAS sampling guidance document

specifies that previous results of "non-detect" for PFAS from the UCMR3 water supply testing program are acceptable as verification.

Sampling Techniques

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

When the sample is obtained, it will be deposited into a stainless steel bowl for mixing prior to filling the sample container. The soil will 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.

Shipping

Immediately place samples in a cooler maintained at 4 ± 2° Celsius using ice only. Cold packs are not acceptable and will not be used to maintain a stable cooler temperature.

Personal Protection Equipment (PPE)

For this sampling event, Level D PPE is anticipated to be appropriate. The sampler will 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 will 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 field notes.

6.1.2 Sampling Protocols for PFAS in Monitoring Wells

Laboratory Analysis and Containers

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

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

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by NYSDEC's Division of Environmental Remediation. No sampling equipment components or sample containers will come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including plumbers tape and sample bottle cap liners with a PTFE layer. A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions:

- Stainless steel inertia pump with HDPE tubing
- Peristaltic pump equipped with HDPE tubing and silicone tubing
- Stainless steel bailer with stainless steel ball
- Bladder pump (identified as PFAS-free) with HDPE tubing

Equipment Decontamination

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

Sampling Techniques

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

Shipping

Immediately place samples in a cooler maintained at 4 ± 2° Celsius using ice only. Cold packs are not acceptable and will not be used to maintain a stable cooler temperature.

Personal Protection Equipment (PPE)

For this sampling event, Level D PPE is anticipated to be appropriate. The sampler will 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 will 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 field notes.

6.1.3 Sampling Protocols for PFAS in Surface Water

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1. The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by NYSDEC's Division of Environmental Remediation. No sampling equipment components or sample containers will come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer. A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions:

- Stainless steel cup

Equipment Decontamination

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

Sampling Techniques

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

Personal Protection Equipment (PPE)

For this sampling event, Level D PPE is anticipated to be appropriate. The sampler will 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 will 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 field notes.

Quality assurance/ quality control (QA/QC) samples for PFAS sampling will include field duplicates, matrix spike / matrix spike duplicates (MS/MSD) and equipment blanks. The procedures and rationale for collecting these samples are described below.

- **Field duplicate** – Sample will be used to assess the variability in concentrations of samples from the same well due to the combined effects of sample processing in the field and laboratory as well as chemical analysis. Field duplicates will be collected at a rate of one (1) field duplicate per sample batch, with a minimum frequency of one (1) duplicate per twenty (20) samples. The duplicate shall consist of an additional sample at a given location.

- **Matrix spike/matrix spike duplicate (MS/MSD)** – Sample will be used to provide information about the effect of the sample matrix on the design and measurement methodology used by the laboratory. MS/MSD samples will be collected at a rate of one (1) MS/MSD per sample batch, with a minimum frequency of one (1) MS/MSD per twenty samples. The MS/MSD shall consist of an additional two (2) samples at a given location and identified on the COC.

- **Equipment blank** – Sample will be collected to help identify possible contamination from sampling equipment (i.e., bailer). One equipment blank will be collected by pouring laboratory certified analyte-free deionized water over a bailer into the sample container. Equipment blank samples will be collected at a rate of one (1) sample per matrix per day that sampling is conducted, with a minimum frequency of one (1) equipment blank sample per twenty (20) samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory-provided PFAS-free water and passing the water over or through the sampling device and into laboratory-provided sample containers.

PFAS samples will be submitted to an Environmental Laboratory Accreditation Program (ELAP) certified laboratory for analysis of the full PFAS target analyte list (21 compounds listed in the NYSDEC Guidance) via modified USEPA Method 537 with a method detection limit not to exceed 2 ng/L in water or 0.5 µg/kg in soil/sediment/solids. Note, the laboratory utilized will

be ELAP certified for PFOA and PFOS in drinking water by EPA method 537 or ISO 25101 as ELAP does not currently offer certification for PFAS compounds in matrices other than finished drinking water.

7.0 Soil Vapor Intrusion Sampling Procedures

Soil vapor intrusion (SVI) sampling may be necessary within on-Site buildings once construction is completed. All SVI sampling will be conducted in accordance with the *NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006 and subsequent updates. SVI sampling would be conducted as follows:

SVI Investigation Activities:

1. Sampling points will be selected based on assumed development, subsurface conditions, and off-Site properties of concern. Sampling points will be installed in the floor slab to collect sub-slab vapor samples. To install sub-slab vapor points, a 5/8-inch diameter hole will be drilled all the way through the floor slab using a rotary hammer drill to a depth of no more than 2 inches below the bottom of the concrete slab. The sampling point will be constructed by inserting a 5/8" diameter polyethylene tube and barbed fitting probe (Vapor Pin®) into the drilled hole.
2. At the time of installation of sub-slab vapor points, each sub-slab point will be monitored for volatile organic compounds (VOCs) using a handheld photoionization detector (PID). Field screening results will be recorded for each sub-slab vapor point.
3. After installation of the probes, one (1) to three (3) volumes (i.e. volume of the sample probe and tube) will be purged prior to collecting the samples to ensure samples collected are representative. Flow rates for purging will not exceed 0.2 liters per minute to minimize the ambient air infiltration during sampling.
4. During purging of the sample point, a tracer gas evaluation will also be conducted to verify the integrity of the sub-slab vapor probe seal. An appropriate tracer gas will be used (e.g. sulfur hexafluoride [SF7], helium, etc.). An enclosure will be constructed around the soil gas sampling point (e.g. plastic bag, plastic bucket, etc.) and sealed around the point casing. Subsequently, the enclosure will be enriched with the tracer gas. In the event that the purged soil gas is measured at a concentration of 10% or greater, the sample point will be resealed and retested prior to sampling.
5. Sub-slab monitoring/testing points will initially be evaluated for pressure (via a micro-manometer) prior to collecting sub-slab soil gas samples. Sub-slab vapor samples will be collected over the same general time period and in the same manner at all locations to minimize possible discrepancies. At each sub-slab vapor sample location an indoor air sample will also be collected. The 'co-located' indoor air samples will be collected from approximately 3- to 5-feet above the floor slab and will also be collected in the same manner and general time period as the sub-slab sample. In addition, during each sampling event, an outdoor air sample will also be collected to evaluate the ambient air conditions. The outdoor ambient air sample will be collected upwind of the testing area, based on prevailing wind direction.
6. All sub-slab, indoor, and outdoor air samples will be collected using 1-liter Summa Canisters® that are equipped with pre-calibrated laboratory supplied flow regulators set for a sampling time of eight (8) hours. The summa Canisters® will be certified clean by the

laboratory. The Summa Canisters® will be connected to the sub-slab soil vapor sampling point via inert tubing (e.g. polyethylene, stainless steel, or Teflon®).

Building Survey

Prior to sampling, a Soil Vapor Intrusion Preliminary Building Assessment and Site Reconnaissance form (from the NYSDOH SVI Guidance) will be completed to account for materials that may have VOCs which could impact the testing results. This form includes (but is not limited to) the following information which will be recorded during the sampling work and will be utilized with interpreting laboratory results:

- Currently stored volatile chemicals will be identified;
- The use of heating or air conditioning systems during sampling will be noted;
- Floor plan sketches will be drawn that include the floor layout with sampling locations, chemical storage areas, garages, doorways, stairways, location of basement sumps or subsurface drains and utility perforations through building foundations, HVAC system air supply and return registers, compass orientation (north), footings that create separate foundation sections, and any other pertinent information will be completed; and
- Outdoor plot sketches will be drawn that include the building Site, area streets, the outdoor (ambient) air sampling location, compass orientation (north), and paved areas.

Sampling Notes

During sample collection, the following information will be documented:

- Sample identification;
- Date and time of sample collection;
- Sampling depth;
- Identity of sampler(s);
- Sampling methods and devices;
- Purge volumes;
- Volume of soil vapor extracted;
- Vacuum before and after samples are collected;
- Apparent moisture content (dry, moist, saturated, etc.) of the sampling zone;
- Chain of custody protocols used to track samples from sampling point to analysis;
- Sketch of the Site and sampling locations relative to area streets, neighboring properties and structures (with estimated distance to the Site), outdoor ambient air sample location(s), if applicable, and orientation (north arrow);
    - Weather conditions (e.g. precipitation, outdoor temperature, barometric pressure, wind speed and direction) will be noted for the past 24 to 48 hours;
- Any pertinent observations will be recorded (e.g. odors).

8.0 Field Documentation

8.1 Daily Logs/ Field Notebook

Daily logs are necessary to provide sufficient data and observations to enable participants to

reconstruct events that occurred during the project and to refresh the memory of the field personnel if called upon to give testimony during legal proceedings. Daily logs may be kept in a project-specific notebook labelled with the project name/ number and contact information.

The daily log is the responsibility of the field personnel and will include:

- Name of person making entry;
- Start and end time of work;
- Names of team members on-site;
- Changes in required levels of personnel protection:
  - Level of protection originally used;
  - Changes in protection, if required; and
  - Reasons for changes.
- Air monitoring locations, start and end times, and equipment identification numbers;
- Summary of tasks completed;
- Summary of samples collected including location, matrix, etc.;
- Field observations and remarks;
- Weather conditions, wind direction, etc.;
- Any deviations from the work plan;
- Initials/ signature of person recording the information.

As with any data logbooks, no pages will be removed for any reason. If corrections are necessary, these must be made by drawing a single line through the original entry (so that the original entry can still be read) and writing the corrected entry alongside. The correction must be initialed and dated. Corrected errors may require a footnote explaining the correction.

Sample documents, forms, or field notebooks are not to be destroyed or thrown away, even if they are illegible or contain inaccuracies that require a replacement document. If an error is made on a document assigned to one individual, that individual may make corrections simply by crossing a line through the error and entering the corrected information. The incorrect information should not be obliterated. Any subsequent error discovered on a document should be corrected by the person who made the entry. All corrections must be initialed and dated.

8.2 Photographs

Photographs will be taken to document the work. Documentation of a photograph is crucial to its validity as a representation of an existing situation. Photographs should be documented with date, location, and description of the photograph.

9.0 Investigation Derived Waste

Purpose:

The purposes of these guidelines are to ensure the proper holding, storage, transportation, and disposal of materials that may contain hazardous wastes. Investigation-derived waste (IDW)

included the following:

- Drill cuttings, drilling mud solids;
- Water produced during drilling;
- Well development and purge waters, unused PDB waters;
- Decontamination waters and associated solids;

IDW will be managed in substantial accordance with DER-10 and all applicable local, State and Federal regulations.

Procedure:

1. Contain all investigation-derived wastes in Department of Transportation (DOT)-approved 55-gallon drums, roll-off boxes, or other containers suitable for the wastes.
2. Place different media in separate drums (i.e., do not combine solids and liquids).
3. To the extent practicable, separate solids from drilling muds, decontamination waters, and similar liquids. Place solids within separate containers.
4. Transfer all waste containers to a staging area. Access to this area will be controlled. Waste containers must be transferred to the staging area as soon as practicable after the generating activity is complete.
5. Label all containers with regard to contents, origin, and date of generation. Use indelible ink for all labeling.
6. Collect samples for waste characterization purposes, use boring/well sample analytical data for characterization.
7. For wastes determined to be hazardous in character, be aware on accumulation time limitations. Coordinate the disposal of these wastes with the Owner and NYSDEC.
8. Dispose of investigation-derived wastes as follows;
    - Soil, water, and other environmental media for which analysis does not detect organic constituents, and for which inorganic constituents are at levels consistent with background, may be spread on-site (pending NYSDEC approval) or otherwise treated as a non-waste material.
    - Soils, water, and other environmental media in which organic compounds are detected or metals are present above background will be disposed as industrial waste or hazardous waste, as appropriate. Alternate disposition must be consistent with applicable State and Federal laws.
    - Personal protective equipment, disposable bailers, and similar equipment may be disposed as municipal waste, unless waste characterization results mandate disposal as industrial wastes
9. If waste is determined to be listed hazardous waste, it must be handled as hazardous waste as described above, unless a contained-in determination is accepted by the NYSDEC.

10.0 Decontamination Procedures

Sampling methods and equipment have been chosen to minimize decontamination requirements and to prevent the possibility of cross-contamination. Decontamination of equipment will be performed between discrete sampling locations. Equipment used to collect samples between composite sample locations will not require decontamination between collection of samples. All drilling equipment will be decontaminated after the completion of each drilling location. Special attention will be given to the drilling assembly and augers.

Split spoons and other non-disposable equipment will be decontaminated between each sampling location. The sampler will be cleaned prior to each use, by one of the following procedures:

- Initially cleaned of all foreign matter;
- Sanitized with a steam cleaner;

OR

- Initially cleaned of all foreign matter;
- Scrubbed with brushes in alconox solution;
- Triple rinsed; and
- Allowed to air dry.

Other sampling equipment including but not limited to low-flow sampling pumps, surface soil sampling trowel, water level meters, etc. will be decontaminated between sample location using an alconox solution. Consumables including gloves, tubing, bailers, string, etc. will be dedicated to one sample location and will not be reused.

11.0 Sample Containers

The containers required for sampling activities are pre-washed and ordered directly from a laboratory, which has the containers prepared in accordance with USEPA bottle washing procedures. The following tables detail sample volumes, containers, preservation and holding time for typical analytes.

Table 11-1
Groundwater Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Holding Time Until Extraction/ Analysis
VOCs	40-ml glass vial with Teflon-backed septum	Two (2); fill completely, no headspace	Cool to 4° C (ice in cooler), Hydrochloric acid to pH <2	14 days
Semi-volatile Organic Compounds (SVOCs)	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Pesticides	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Polychlorinated biphenyls (PCBs)	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Metals	250-ml HDPE	One (1); fill completely	Cool to 4° C (ice in cooler) Nitric acid to pH <2	180 days (28 for mercury)
Cyanide	1,000-mL HDPE		Cool to 4° C (ice in cooler) Nitric acid to pH <2	14 days
1,4-Dioxane	40-ml glass vial with Teflon-backed septum	Three (3); fill completely, no headspace	Cool to 4° C (ice in cooler), Hydrochloric acid to pH <2	14 days
PFAS	250-mL HDPE, no Teflon	Two (2); fill completely	Cool to 4° C (ice in cooler), Trizma	14 days

Note:
All sample bottles will be prepared in accordance with USEPA bottle washing procedures.
Consult with laboratory as bottleware may vary by laboratory.
Holding time begins at the time of sample collection.

TABLE 11-2
Soil Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Holding Time Until Extraction/ Analysis
VOCs	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	14 days
VOCs via EPA 5035	40 mL vials with sodium bisulfate, methanol, and/or DI water	Three (3), 5 grams each	Cool to 4° C (ice in cooler)	2 days*
SVOCs	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	7/40 days
PCBs	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	7/40 days
Pesticides	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	14/40 days
Metals	4-oz. glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	180 days (28 for mercury)
Cyanide	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	14 days
1,4-Dioxane	40 mL vials with sodium bisulfate, methanol, and/or DI water	Three (3), 5 grams each	Cool to 4° C (ice in cooler)	2 days*
PFAS	8-oz HDPE, no Teflon	One (1); fill as completely as possible	Cool to 4° C (ice in cooler)	28 days

Note:
**Or freeze within holding time.*
All sample bottles will be prepared in accordance with USEPA bottle washing procedures.
Consult with laboratory as bottleware may vary by laboratory.
Holding time begins at the time of sample collection.

Table 11-3
Air Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Holding Time Until Extraction/ Analysis
VOCs	1 – Liter Summa® Canister	One (1) 1-Liter 1.4- Liter for MS/MSD	N/A	14 days

Note:
All sample bottles will be prepared in accordance with USEPA bottle washing procedures.
Consult with laboratory as bottleware may vary by laboratory.
Holding time begins at the time of sample collection.

12.0 Sample Custody and Shipment

12.1 Sample Identification

All containers of samples collected from the project will be identified using the following format on a label or tag fixed to the sample container:

AA-BB-CC-DD-EE

AA: This set of initials indicates an abbreviation for the Site from which the sample was collected.
BB This set of initials represents the type of sample (e.g., SB for soil boring and MW for monitoring well)
CC: These initials identify the unique sample location number.
DD: These initials identify the sample start depth (if soil sample)
EE These initials identify the sample end depth (if soil sample)

Each sample will be labeled, chemically preserved (if required) and sealed immediately after collection. To minimize handling of sample containers, labels will be filled out prior to sample collection when possible. The sample label will be filled out using waterproof ink and will be firmly affixed to the sample containers. The sample label will give the following information:

- Date and time of collection
- Sample identification
- Analysis required
- Project name/number
- Preservation

Sample tags attached to or affixed around the sample container must be used to properly identify all samples collected in the field. The sample tags are to be placed on the bottles so as not to obscure any QC lot numbers on the bottles; sample information must be printed in a legible manner using waterproof ink. Field identification must be sufficient to enable cross-reference with the logbook. For chain-of-custody purposes, all QC samples are subject to exactly the same custodial procedures and documentation as "real" samples.

12.2 Chain of Custody

This section describes standard operating procedures for sample identification and chain-of-custody to be utilized for all field activities. The purpose of these procedures is to ensure that the quality of the samples is maintained during their collection, transportation, and storage through analysis. All chain-of-custody requirements comply with standard operating procedures indicated in USEPA sample handling protocol.

Sample identification documents must be carefully prepared so that sample identification and chain-of-custody can be maintained and sample disposition controlled. Sample identification documents include:

- Field notebooks;
- Sample label; and
- Chain-of-custody records.

The primary objective of the chain-of-custody procedures is to provide an accurate written or computerized record that can be used to trace the possession and handling of a sample from collection to completion of all required analyses. A sample is in custody if it is:

- In someone's physical possession;
- In someone's view;
- Locked up; or
- Kept in a secured area that is restricted to authorized personnel.

As few persons as possible should handle samples. Sample bottles will be obtained pre-cleaned from the laboratory. Sample containers should only be opened immediately prior to sample collection. The sample collector is personally responsible for the care and custody of samples collected until they are transferred to another person or dispatched properly under chain-of-custody rules. The sample collector will record sample data in the field notebook and/or field logs.

The chain-of-custody record must be fully completed in duplicate, using black carbon paper where possible, by the field technician who has been designated by the project manager as responsible for sample shipment to the appropriate laboratory for analysis. In addition, if samples are known to require rapid turnaround in the laboratory because of project time constraints or analytical concerns (e.g., extraction time or sample retention period limitations, etc.), the person completing the chain-of-custody record should note these constraints on the chain of custody.

12.3 Transfer of Custody and Shipment

The coolers in which the samples are packed must be accompanied by a chain-of-custody record. When transferring samples, the individuals relinquishing and receiving them must sign, date, and note the time on the chain-of-custody record. This record documents sample custody transfer.

Shipping containers must be sealed with custody seals for shipment to the laboratory. The method of shipment, name of courier, and other pertinent information are entered on the chain-of-custody.

All shipments must be accompanied by the chain-of-custody record identifying their contents. The original record accompanies the shipment. The other copies are distributed appropriately to the site manager.

12.4 Custody Seals

Custody seals are preprinted adhesive-backed seals. Sample shipping containers (coolers, cardboard boxes, etc., as appropriate) are sealed in as many places as necessary to ensure security. Seals must be signed and dated before shipment. On receipt at the laboratory, the custodian must check (and certify, by completing the package receipt log and LABMIS entries) that seals on boxes and bottles are intact. Strapping tape should be placed over the seals to ensure that seals are not accidentally broken during shipment.

13.5 Sample Packaging

Samples must be packaged carefully to avoid breakage or contamination and must be shipped to the laboratory at proper temperatures. The following sample packaging requirements will be followed:

- Sample bottle lids must never be mixed. All sample lids must stay with the original containers.
- The label should not cover any bottle preparation QC lot numbers.
- All sample bottles are placed in a plastic bag and/or individual bubble wrap sleeves to minimize the potential for cross-contamination and breaking.
- Shipping coolers must be partially filled with packing materials and ice when required, to prevent the bottles from moving during shipment.
- The sample bottles must be placed in the cooler in such a way as to ensure that they do not directly come in contact with other samples. Ice will be added to the cooler to ensure that the samples reach the laboratory at temperatures no greater than 4°C.
- Any remaining space in the cooler should be filled with inert packing material. Under no circumstances should material such as sawdust, sand, etc., be used.
- A chain of custody record must be placed in a plastic bag inside the cooler. Custody seals must be affixed to the sample cooler.

13.6 Sample Shipment

Shipping containers are to be custody-sealed for shipment as appropriate. The container custody seal will consist of tape wrapped around the package and custody seals affixed in such a way that access to the container can be gained only by cutting the filament tape and breaking the seal. Chain of custody seals shall be placed on the container, signed, and dated prior to taping the container to ensure the chain of custody seals will not be destroyed during shipment. In addition, the coolers must also be labeled and placarded in accordance with DOT regulations if shipping medium and high hazard samples.

Field personnel will make arrangements for transportation of samples to the lab. The lab must be notified as early as possible regarding samples intended for Saturday delivery. The transportation and handling of samples must be accomplished in a manner that not only protects the integrity of the sample, but also prevents any detrimental effects due to the possible hazardous nature of samples. Regulations for packaging, marking, labeling, and shipping hazardous materials are promulgated by the United States DOT in the Code of Federal Regulation, 49 CFR 171 through

177. All samples will be delivered to the laboratory and analyzed within the holding times specified by the analytical method for that particular analyte.

All chain-of-custody requirements must comply with standard operating procedures in the USEPA sample handling protocol.

13.7 Laboratory Custody Procedures

A designated sample custodian accepts custody of the shipped samples and verifies that the sample identification number matches that on the chain-of-custody record and traffic reports, if required. Pertinent information as to shipment, pickup, and courier is entered on the chain of custody or attached forms.

13.0 Deliverables

This section will describe laboratory requirement and procedures to be followed for laboratory analysis. Samples collected in New York State will be analyzed by a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP)-certified laboratory. When required, analyses will be conducted in accordance with the most current NYSDEC Analytical Services Protocol (ASP). For example, ASP Category B reports will be completed by the laboratory for samples representing the final delineation of the Remedial Investigation, confirmation samples, samples to determine closure of a system, and correlation samples taken using field testing technologies analyzed by an ELAP-certified laboratory to determine correlation to field results. Data Usability Summary Reports will be completed by a third party for samples requiring ASP Category B format reports. Electronic data deliverables (EDDs) will also be generated by the laboratory in EQUIS format for samples requiring ASP Category B format reports.

NYSDEC DER-10 DUSR requirements are as follows:

a) Background. The Data Usability Summary Report (DUSR) provides a thorough evaluation of analytical data with the primary objective to determine whether or not the data, as presented, meets the site/project specific criteria for data quality and data use.

    1. The development of the DUSR must be carried out by an experienced environmental scientists, such as the project Quality Assurance Officer, who is fully capable of conducting a full data validation. The DUSR is developed from:

        i. A DEC ASP Category B Data Deliverable; or
        ii. The *USEPA Contract Laboratory Program National Functional Data Validation Standard Operating Procedures for Data Evaluation and Validation.*

    2. The DUSR and the data deliverables package will be reviewed by DER staff. If full third party data validation is found to be necessary (e.g. pending litigation) this can be carried out at a later data on the same data package used for the development of the DUSR.

b) Personnel Requirements. The person preparing the DUSR must be pre-approved by DER. The person must submit their qualifications to DER documenting experience in analysis and

data validation. Data validator qualifications are available on DEC's website identified in the table of contents.

c) Preparation of a DUSR. The DUSR is developed by reviewing and evaluating the analytical data package. In order for the DUSR to be acceptable, during the course of this review the following questions applicable to the analysis being reviewed must be answered in the affirmative.

    1. Is the data package complete as defined under the requirements for the most current DEC ASP Category B or USEPA CLP data deliverables?
    2. Have all holding times been met?
    3. Do all the QC data; blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications?
    4. Have all of the data been generated using established and agreed upon analytical protocols?
    5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?
    6. Have the correct data qualifiers been used and are they consistent with the most current DEC ASP?
    7. Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data package been attached to the DUSR?

d) Documenting the validation process in the DUSR. Once the data package has been reviewed and the above questions asked and answered the DUSR proceeds to describe the samples and the analytical parameters, including data deficiencies, analytical protocol deviations and quality control problems are identified and their effect on the data is discussed.

14.0 Equipment Calibration

All instruments and equipment used during sampling and analysis will be operated, calibrated, and maintained according to the manufacturer's guidelines and recommendations as well as criteria set forth in the applicable analytical methodology references. Operation, calibration, and maintenance will be performed by personnel properly trained in these procedures. Section 11 lists the major instruments to be used for sampling and analysis. In addition, brief descriptions of calibration procedures for major field and laboratory instruments follow.

15.1 Photovac/MiniRae Photoionization Detector (PID)

Standard operating procedures for the PID require that routine maintenance and calibration be performed every six months. Field calibration will be performed on a daily basis. The packages used for calibration are non-toxic analyzed gas mixtures available in pressurized containers. All calibration procedures will follow the manufacturer recommendations.

15.2 Conductance, Temperature, and pH Tester

Temperature and conductance instruments are factory calibrated. Temperature accuracy can be checked against an NBS certified thermometer prior to field use if necessary. Conductance accuracy may be checked with a solution of known conductance and recalibration can be instituted, if necessary.

15.3 0_2/Explosimeter

The specific meter used at the time of work shall be calibrated in accordance with manufacturer recommendations. The model 260 0_2/ Explosimeter is described below.

The primary maintenance item of the Model 260 is the rechargeable 2.4 volt (V) nickel cadmium battery. The battery is recharged by removing the screw cap covering receptacle and connecting one end of the charging cable to the instrument and the other end to a 115V AC outlet.

The battery can also be recharged using a 12V DC source. An accessory battery charging cable is available, one end of which plugs into the Model 260 while the other end is fitted with an automobile cigarette lighter plug.

Recommended charging time is 16 hours.

Before the calibration of the combustible gas indicator can be checked, the Model 260 must be in operating condition. Calibration check-adjustment is made as follows:

1. Attach the flow control to the recommended calibration gas tank.
2. Connect the adapter-hose to the flow control.
3. Open flow control valve.
4. Connect the adapter-hose fitting to the inlet of the instrument; after about 15 seconds the LEL meter pointer should be stable and within the range specified on the calibration sheet accompanying the calibration equipment. If the meter pointer is not in the correct range, stop the flow; remove the right hand side cover. Turn on the flow and adjust the "S" control with a small screwdriver to obtain a reading as specified on the calibration sheet.
5. Disconnect the adapter-hose fitting from the instrument.
6. Close the flow control valve.
7. Remove the adapter-hose from the flow control.
8. Remove the flow control from the calibration gas tank.
9. Replace the side cover on the Model 260.

CAUTION: Calibration gas tank contents are under pressure. Use no oil, grease, or flammable solvents on the flow control or the calibration gas tank. Do not store calibration gas tank near heat or fire or in rooms used for habitation. Do not throw in fire, incinerate, or puncture. Keep out of reach of children. It is illegal and hazardous to refill this tank. Do not attach the calibration gas tank to any other apparatus than described above. Do not attach any gas tank other than MSA calibration tanks to the regulator.

15.4 Nephelometer (Turbidity Meter)

LaMotte 2020WE Turbidity Meter is calibrated before each use. The default units are set to NTU and the default calibration curve is formazin. A 0 NTU Standard (Code 1480) is included with the meter. To calibrate, rinse a clean tube three times with the blank. Fill the tube to the fill line with the blank. Insert the tube into the chamber, close the lid, and select "scan blank".

TABLE 14-4
List of Major Instruments
for Sampling and Analysis

- MSA 360 O_2 /Explosimeter
- Geotech Geopump II AC/DC Peristaltic Pump
- QED MP50 Controller and QED Sample Pro MicroPurge Bladder Pimp
- Horiba U-53 Multi-Parameter Water Quality Meter
- LaMotte 2020WE Turbidity Meter
- EM-31 Geomics Electromagnetic Induction Device
- Mini Rae Photoionization Detectors (3,000, ppbRAE, etc.)

15.0 Internal Quality Control Checks

QC data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of field equipment. Field-based QC will comprise at least 10% of each data set generated and will consist of standards, replicates, spikes, and blanks. Field duplicates and field blanks will be analyzed by the laboratory as samples and will not necessarily be identified to the laboratory as duplicates or blanks. For each matrix, field duplicates will be provided at a rate of one per 10 samples collected or one per shipment, whichever is greater. Field blanks which may consist of trip, routine field, and/or rinsate blanks will be provided at a rate of one per 20 samples collected for each media, or one per shipment, whichever is greater. Frequency of QC data may vary from project to project; refer to the project-specific work plan for QC requirements.

Calculations will be performed for recoveries and standard deviations along with review of retention times, response factors, chromatograms, calibration, tuning, and all other QC information generated. All QC data, including split samples, will be documented in the site logbook and/or appropriate field logs. QC records will be retained and results reported with sample data.

16.1 Field Blanks

Various types of blanks are used to check the cleanliness of field handling methods. The following types of blanks may be used: the trip blank, the routine field blank, and the field equipment blank. They are analyzed in the laboratory as samples, and their purpose is to assess the sampling and

transport procedures as possible sources of sample contamination. Field staff may add blanks if field circumstances are such that they consider normal procedures are not sufficient to prevent or control sample contamination, or at the direction of the project manager. Rigorous documentation of all blanks in the site logbooks is mandatory.

- **Routine Field Blanks** or bottle blanks are blank samples prepared in the field to access ambient field conditions. They will be prepared by filling empty sample containers with deionized water and any necessary preservatives. They will be handled like a sample and shipped to the laboratory for analysis.
- **Trip Blanks** are similar to routine field blanks with the exception that they are **not** exposed to field conditions. Their analytical results give the overall level of contamination from everything except ambient field conditions. For the RI/FS, one trip blank will be collected with every shipment of water samples for VOC analysis. Each trip blank will be prepared by filling a 40-ml vial with deionized water prior to the sampling trip, transported to the site, handled like a sample, and returned to the laboratory for analysis without being opened in the field. Trip blanks may be provided by the laboratory, shipped with the bottleware, and kept with the sampling containers until analysis.
- **Field Equipment Blanks** are blank samples (sometimes called transfer blanks or rinsate blanks) designed to demonstrate that sampling equipment has been properly prepared and cleaned before field use, and that cleaning procedures between samples are sufficient to minimize cross contamination. If a sampling team is familiar with a particular site, they may be able to predict which areas or samples are likely to have the highest concentration of contaminants. Unless other constraints apply, these samples should be taken last to avoid excessive contamination of sampling equipment.

16.2 Duplicates

Duplicate samples are collected to check the consistency of sampling and analysis procedures. The following types of duplicates may be collected.

- **Blind duplicate** samples consist of a set of two samples collected independently at a sampling location during a single sampling event. Blind duplicates are designed to assess the consistency of the overall sampling and analytical system. Blind duplicate samples should not be distinguishable by the person performing the analysis.
- **Matrix Spike and Matrix Spike Duplicates (MS/MSDs)** consist of a set of three samples collected independently at a sampling location during a single sampling event. These samples are for laboratory quality control checks.

APPENDIX 4

Interim Site Management Plan

ELLICOTT STATION EAST

GENESEE COUNTY

BATAVIA, NEW YORK

INTERIM SITE MANAGEMENT PLAN

NYSDEC Site Number: C819023

Prepared for:

Ellicott Station, LLC

One Batavia City Centre

Batavia, New York 14020

Prepared by:

LaBella Associates, D.P.C.

300 State Street, Suite 201

Rochester, New York 14614

585-454-6110

Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

JUNE 2019

CERTIFICATIONS

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

_____ QEP

7/10/2019 DATE

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List of Acronyms

AS	Air Sparging
ASP	Analytical Services Protocol
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CAMP	Community Air Monitoring Plan
C/D	Construction and Demolition
CFR	Code of Federal Regulation
CLP	Contract Laboratory Program
COC	Certificate of Completion
CO2	Carbon Dioxide
CP	Commissioner Policy
DER	Division of Environmental Remediation
EC	Engineering Control
ECL	Environmental Conservation Law
ELAP	Environmental Laboratory Approval Program
ERP	Environmental Restoration Program
EWP	Excavation Work Plan
GHG	Green House Gas
GWE&T	Groundwater Extraction and Treatment
HASP	Health and Safety Plan
IC	Institutional Control
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYCRR	New York Codes, Rules and Regulations
O&M	Operation and Maintenance
OM&M	Operation, Maintenance and Monitoring

OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PID	Photoionization Detector
PRP	Potentially Responsible Party
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Remedial Party
RSO	Remedial System Optimization
SAC	State Assistance Contract
SCG	Standards, Criteria and Guidelines
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SOP	Standard Operating Procedures
SOW	Statement of Work
SPDES	State Pollutant Discharge Elimination System
SSD	Sub-slab Depressurization
SVE	Soil Vapor Extraction
SVI	Soil Vapor Intrusion
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leachate Procedure
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VCA	Voluntary Cleanup Agreement
VCP	Voluntary Cleanup Program

ES EXECUTIVE SUMMARY

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

Site Identification: C819023 (Ellicott Station East)

56-70 Ellicott Street, Batavia, new York

Institutional Controls:	1. The property is anticipated to be cleaned up to restricted residential use. The property may be used for its current use and redevelopment activities until the final remedy is implemented.
	2. All ECs must be operated and maintained as specified in this ISMP.
	3. The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Genesee Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
	4. Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this ISMP.
	5. All future activities that will disturb remaining contaminated material must be conducted in accordance with this ISMP.

	6. Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this ISMP and the BCA.
	7. The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 2 (note that an SVI evaluation was completed as part of the RI), and any potential impacts that are identified must be monitored or mitigated.
	8. Vegetable gardens and farming on the site are prohibited.
Engineering Controls:	1. Existing cover systems (pavement, buildings)

Inspections:	Frequency
1. Cover inspection	TBD
Monitoring:	
1. TBD	TBD
Maintenance:	
1. TBD	TBD
Reporting:	
1. TBD	TBD

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

1.0 INTRODUCTION

1.1 General

This Interim Site Management Plan (ISMP) is a required element of the remedial program for the Ellicott East Station located at 56-70 Ellicott Street (and one unaddressed parcel), Batavia, New York (hereinafter referred to as the "Site"). See Figure 1. The Site is currently in the New York State (NYS) Brownfield Cleanup Program (BCP) Site No. C819023 which is administered by New York State Department of Environmental Conservation (NYSDEC).

Ellicott Station, LLC entered into a Brownfield Cleanup Agreement (BCA) on June 12, 2019 with the NYSDEC to remediate the site. A figure showing the site location and boundaries of this site is provided in Figure 2.

This ISMP was prepared to maintain any existing Institutional and Engineering Controls (ICs and ECs) as well as manage contamination at the site during building demolition and redevelopment activities until a Site Remedy and final SMP are developed and approved by the NYSDEC. Institutional and Engineering Controls (ICs and ECs) may be incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement will be granted to the NYSDEC, and recorded with the Genesee County Clerk, requires compliance with the final SMP and all ECs and ICs placed on the site.

It is important to note that:

- Failure to comply with this ISMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Index #C819023-05-19; Site #C819023) for the site, and thereby subject to applicable penalties.

All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State. A list of contacts for persons involved with the site is provided in Appendix 1 of this ISMP.

This ISMP was prepared by LaBella Associates, D.P.C, on behalf of Ellicott Station, LLC, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May, 2010, and the guidelines provided by the NYSDEC. This ISMP addresses the means for implementing any ICs and/or ECs that will be required prior to placement of an Environmental Easement for the site and the final SMP.

1.2 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements, upgrades to or shut-down of a remedial system, post-remedial removal of contaminated sediment or soil, or other significant change to the site conditions.

1.3 Notifications

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

- 60-day advance notice of any proposed changes in site use that are required under the terms of the BCA, 6NYCRR Part 375 and/or Environmental Conservation Law.
- 7-day advance notice of any field activity associated with the remedial program.
- 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan.

- Notice within 48-hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.

- Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

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

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the Brownfield Cleanup Agreement (BCA), and all approved work plans and reports, including this SMP.

- Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1.3 on the following page includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix 1.

Table 1.3: Notifications*

Name	Contact Information
NYSDEC Project Manager; Mr. Todd Caffoe	585-226-5350, todd.caffoe@dec.ny.gov
NYSDEC Regional HW Engineer; Ms. Bernette Schilling	585-226-5315, bernette.schilling@dec.ny.gov
NYSDEC Site Control; Ms. Kelly Lewandowski	518-402-9547, kelly.lewandowski@dec.ny.gov

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

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

2.1 Site Location and Description

The site is located in Batavia, Genesee County, New York and is identified as Section 084.015 Block 0001 and Lot 004 and Section 084.015 Block 0001 and Lot 005 (i.e. 56-70 Ellicott Street parcel) on the City of Batavia Tax Map (see Figure 2). The site is an approximately 0.81-acre area and is bounded by Ellicott Street to the north, commercial property to the south, Jackson Street to the east, and vacant commercial property/NYSDEC BCP Site #C819021 to the west (see Figure 2 – Site Layout Map). Figure 2 includes the site boundary including tax parcels. The owner of the site parcel at the time of issuance of this ISMP is Ellicott Station, LLC.

2.2 Physical Setting

2.2.1 Land Use

The Site consists of the following: an 11,611 square foot vacant commercial building and asphalt paved parking area. The Site is zoned commercial.

The properties adjoining the Site and in the neighborhood surrounding the Site primarily include commercial properties. The properties immediately south of the Site includes commercial property (Salvation Army Family Store) and undeveloped land; the properties immediately north of the Site include commercial property (Save A Lot); the properties immediately east of the Site include commercial properties (Kwik Fill Gas Station and Angotti Beverage Corporation); and the properties to the west of the Site include commercial properties (vacant commercial properties/NYSDEC BCP Site #C819021 and undeveloped commercial land).

2.2.2 Geology

The general subsurface soil profile observed across the Site consisted of shallow fill materials overlying native glacial deposits. The occurrence and distribution of fill materials and underlying native soils was generally consistent across the portions of the Site investigated during previous environmental investigations.

Surface Materials and Fill

Surface materials (generally 0-1 feet (ft) below the ground surface (bgs)) consisted of either asphalt and sub-base (gravel or crushed stone) or concrete and sub-base, throughout the Site. The only exception to this was a grass covered area located west of the site building.

Primary fill soils distributed immediately beneath the surface materials varied in composition, but typically consisted of silt/sand/gravel mixtures, with lesser, varying amounts of urban fill including intermixed brick fragments and asphalt. The observed thickness of the fill materials averaged 0 to 10 ft bgs.

Bedrock

A bedrock evaluation has not been completed. However, based on investigation work completed at the adjacent BCP site to the west, bedrock appears to be located approximately 30-ft to 32-ft bgs. Based on geologic mapping obtained from the New York State Museum, bedrock beneath the Site is most likely Devonian aged Marcellus Shale or underlying Onondaga Limestone.

2.2.3 Hydrogeology

A hydrogeologic investigation has not been completed. However, based on work completed at the adjacent BCP site to the west, groundwater is generally present between 7 and 9 ft bgs and groundwater flow is generally towards the northwest.

2.3 Investigation and Remedial History

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

The following environmental reports were previously prepared for the site.

2.3.1 Phase II ESA, 56-70 Ellicott Street and Two Unaddressed Parcels at Ellicott Street completed by LaBella, October 2014

It should be noted the Phase II ESA included two (2) other parcels which are not a part of the BCP Site; as such, off-Site data is not included herein. Testing was not completed at the unaddressed parcel included in the BCP Site during this investigation. A summary of the findings is included below; refer to the attached Figure 3 for soil testing locations and compounds detected above applicable guidance values at the Site. Testing results are summarized in Table 2.3.1 (attached) and boring logs are included in Appendix 2.

This investigation included the advancement of nine (9) soil borings and the laboratory analysis of three (3) soil samples at the Site for the below-listed parameters (refer to Figure 3). The soil samples were collected from depths ranging between 8 and 12 ft bgs.

- United States Environmental Protection Agency (USEPA) Target Compound List (TCL) and NYSDEC Commissioner Policy 51 (CP-51) list volatile organic compounds (VOCs);
- USEPA TCL semi-volatile organic compounds (SVOCs);
- Resource Conservation and Recovery Act (RCRA) metals;
- Polychlorinated biphenyls (PCBs); and,
- Pesticides

Contaminants identified at the Site include petroleum, chlorinated solvents, SVOCs, and metals in soil. Two (2) areas of petroleum impacts as indicated by elevated PID readings were identified. Elevated PID readings up to 580.1 parts per million (ppm) and strong petroleum odors were identified in boring SB-4 advanced in the northern portion of the Site. Strong to mild gasoline odors and PID readings up to 280.3 ppm were identified in boring SB-7B, advanced in the eastern portion of the Site proximate the former gasoline filling station. Borings surrounding SB-7B (SB-7 and SB-7A) encountered shallow refusal, between 1 ft and 3 ft bgs. Petroleum compounds were detected in soil samples SB-4 and SB-7B. The compounds detected do not exceed Unrestricted Use SCOs; however, shallow refusal and fill material encountered at borings SB-7 and SB-7A indicate the potential for USTs to be present in the eastern portion of the Site which previously operated as a gasoline filling station.

In addition to petroleum, trichloroethene (TCE) was detected in soil in boring SB-2 at 8-10 ft bgs. The concentration detected does not exceed Unrestricted Use SCOs; however, the source of the TCE in soil is unknown and groundwater samples were not collected from the Site. It should be noted that SB-2 was advanced immediately to the west of the portion of the Site building which was previously utilized for automotive repair.

Two (2) heavy metals (lead and mercury) and several PAHs were detected in boring SB-2 at concentrations at or above Unrestricted Use SCOs. One (1) PAH, (benzo(a)pyrene) was also identified in boring SB-2 at a concentration which exceeds SCOs for Commercial Use, which is the intended future use for the Site. Fill material was not noted in boring SB-02; as such, the source of heavy metals and PAHs is unknown. However, it should be noted that rail lines and coal storage were previously located in the western portion of the Site. Refer to Figure 3 for a summary of previous soil testing.

2.3.2 Supplemental Subsurface Investigation, Ellicott Station East, 56-70 Ellicott Street, Batavia, New York, completed by LaBella, March 2018

The investigation consisted of the excavation of three (3) test pits, collection of surface soil samples, advancement of twenty (20) soil borings, installation of temporary groundwater monitoring wells and laboratory analysis of soil and groundwater samples. This investigation was performed to identify subsurface impacts (in addition to those identified as part of a 2014 Phase II ESA). Boring and well logs are included in Appendix 2. A summary of the findings is included below; refer to the attached Figures 3 (soil) and 4 (groundwater) for testing locations and compounds detected above applicable guidance values at the Site. Testing results are also summarized in the following attached tables:

- Table 2.3.2A – VOC in Soil
- Table 2.3.2B – SVOC in Soil
- Table 2.3.2C – Metals in Soil
- Table 2.3.2D – PCBs in Soil
- Table 2.3.2E – VOC in Groundwater
- Table 2.3.2F – SVOC in Groundwater

Petroleum impacts to soil and groundwater were identified in three (3) areas of the Site. These areas are outlined below:

- *Hydraulic Lifts*: Field observations (petroleum odors and a sheen on groundwater) identified impacts beneath the southwestern portion of the Site building, in the vicinity of several hydraulic lifts. However, petroleum-related compounds were not identified above Unrestricted SCOs or groundwater standards in samples collected from this location, indicating these impacts are highly weathered.
- *Orphan USTs*: Four (4) orphan, 1,000-gallon underground storage tanks (USTs) were discovered within an underground concrete vault on the eastern-most portion of the Site, in which a gasoline filling station was historically located. Field observations (petroleum odors and a sheen on groundwater) indicate impacts are present in this area of the Site, potentially associated with the orphan USTs. Several petroleum-related VOCs were identified in soil in

this area at concentrations above Unrestricted Use and Protection of Groundwater SCOs. In addition, several petroleum-related compounds were identified above NYCRR Part 703 groundwater standards in this area of the Site.

- *Apparent Vent Pipe*: Soil borings advanced in the parking lot to the north of the Site and in the vicinity of an apparent vent pipe identified field evidence of impairment (petroleum odors and a sheen on groundwater). Petroleum-related compounds were also identified at concentrations above Unrestricted Use and Protection of Groundwater SCOs. In addition, several petroleum-related compounds were identified above NYCRR Part 703 groundwater standards in this area. It is unknown if additional orphan USTs are present in this portion of the Site.

Based on the petroleum impacts identified, NYSDEC Spill #1710379 was opened on February 16, 2018 and as of the date of this report, is active.

- Urban fill material including a combination of ash, cinders, brick, concrete, wood and slag were identified in the majority of borings and test pits completed at the Site generally between depths of 0.5-ft bgs and 3-ft bgs. Samples of urban fill material were collected for laboratory analysis from the two (2) surface soil sample locations and boring LBA-SB26. Laboratory analysis of these samples as well as a similar sample collected during the 2014 Phase II ESA identified a combination of heavy metals and SVOCs at concentrations above Unrestricted Use SCOs. In addition, copper, lead and benzo(a)pyrene were identified in one (1) or more of these samples at concentrations above Commercial Use SCOs.

- Total PCBs were identified at a concentration above the Unrestricted Use SCO in shallow soil sample LBA-SS01 (0 to 2-in). PCBs were also identified in sample LBA-SS01 (2-in. to 24-in.), although at a concentration below the Unrestricted Use SCO. The source of the PCBs is unknown.

2.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site are as follows:

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

Surface Water

RAOs for Public Health Protection

- Prevent ingestion of water impacted by contaminants.

- Prevent contact or inhalation of contaminants from impacted water bodies.
- Prevent surface water contamination which may result in fish advisories.

RAOs for Environmental Protection

- Restore surface water to ambient water quality criteria for the contaminant of concern.
- Prevent impacts to biota from ingestion/direct contact with surface water causing toxicity and impacts from bioaccumulation through the marine or aquatic food chain.

Sediment

RAOs for Public Health Protection

- Prevent direct contact with contaminated sediments.
- Prevent surface water contamination which may result in fish advisories.

RAOs for Environmental Protection

- Prevent releases of contaminant(s) from sediments that would result in surface water levels in excess of (ambient water quality criteria).
- Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity or impacts from bioaccumulation through the marine or aquatic food chain.
- Restore sediments to pre-release/background conditions to the extent feasible.

Soil Vapor

RAOs for Public Health Protection

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

2.5 Remaining Contamination

Remedial actions (primarily in the form of IRMs) are planned for the Site. A summary of remaining contamination following the completion of IRMs will be included in the final SMP.

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

3.1 General

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

This plan provides:

- A description of all IC/ECs on the site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Excavation Work Plan (EWP) (as provided in Appendix 2) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the site remedy, as determined by the NYSDEC.

3.2 Institutional Controls

A series of ICs is required to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the site to restricted residential or commercial uses only. Adherence to these ICs on the site will be required by the Environmental Easement and will be implemented under the final SMP. The IC boundaries are shown on Figure 2. These ICs are:

The property may be used for: its current use and redevelopment activities until the final remedy is implemented;

- All ECs must be operated and maintained as specified in this ISMP;
- All ECs must be inspected at a frequency and in a manner defined in the ISMP.
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Genesee County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this ISMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this ISMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this ISMP;
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 2, and any potential impacts that are identified must be monitored or mitigated; and
- Vegetable gardens and farming on the site are prohibited.

3.3 Engineering Controls

3.3.1 Cover (or Cap)

Exposure to remaining contamination at the site is prevented by a cover system placed over the site. The proposed redevelopment will require demolition of the site building. Areas in which impervious surfaces are not present will be covered by a minimum of 24 inches of clean soil. The final SMP will provide comprehensive details for the final cover system to be constructed as part of redevelopment. The Excavation Work Plan (EWP) provided in Appendix 2 outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection of this cover are provided in the Monitoring and Sampling Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and associated Community Air Monitoring Plan (CAMP) prepared for the site and provided in Appendix 3.

3.3.2 Sub-slab Depressurization Systems (SSDS)

A soil vapor intrusion assessment has not been completed for the site at this time. The need for the SSDS will be determined at the time of the selected remedy.

3.3.3 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC DER-10.

4.0 MONITORING AND SAMPLING PLAN

Required monitoring associated with evaluating the overall performance and effectiveness of the remedy will be determined following remedy selection and implementation. If warranted, a Monitoring and Sampling Plan will be included in the final SMP.

5.0 OPERATION AND MAINTENANCE PLAN

If operation and maintenance of any ECs are required following the final remedy, an Operation and Maintenance Plan will be included in the final SMP.

6.0 PERIODIC ASSESSMENT/EVALUATIONS

6.1 Climate Change Vulnerability Assessment

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

The final SMP will provide a summary of vulnerability assessments that will be conducted for the site during periodic assessments, and briefly summarizes the vulnerability of the site and/or engineering controls to severe storms/weather events and associated flooding.

6.2 Green Remediation Evaluation

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during all stages of the remedial program including site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. The final SMP will provide a summary of any green remediation evaluations to be completed for the site during site management, and as reported in the Periodic Review Report (PRR).

6.3 Remedial System Optimization

A Remedial Site Optimization (RSO) study will be addressed in the final SMP.

7.0 REPORTING REQUIREMENTS

7.1 Site Management Reports

Any relevant inspections will be reported in the Monthly Progress Reports (MPRs). Any monitoring required and associated forms will be included in the final SMP.

7.1.1 Certification of Institutional and Engineering Controls

The RI has not been completed, and as such, a remedy has not been selected for the Site. Any ICs/ECs selected as the remedy will include the required certification language and will be included in the final SMP.

7.2 Corrective Measures Work Plan

If any component of any existing EC is found to have failed, a Corrective Measures Work Plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the Corrective Measures Work Plan until it has been approved by the NYSDEC.

7.3 Remedial Site Optimization Report

In the event that an RSO is to be performed, an RSO report must be submitted to the Department for approval. A general outline for the RSO report will be provided in the final SMP.

8.0 REFERENCES

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

NYSDEC DER-10 – "Technical Guidance for Site Investigation and Remediation".

NYSDEC, 1998. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. June 1998 (April 2000 addendum).

Phase II Environmental Site Assessment, 56-70 Ellicott Street and Two Unaddressed Parcels at Ellicott Street completed by LaBella Associates, D.P.C. (October 2014

Supplemental Subsurface Investigation, Ellicott Station East, 56-70 Ellicott Street, Batavia, New York completed by LaBella, March 2018

TABLES

Table 2.3.1
56-70 and Two Unaddressed Parcels at Ellicott Street, Batavia, New York
Phase II Environmental Site Assessment
Summary of Subsurface Soil Analytical Results
(Detected Compounds Only)

Sample ID	SB2	SB4	SB7B	SB8	SB10	SB13	SB16	SB18A	SB20	Part 375 Unrestricted Use SCOs	Part 375 Commercial Use SCOs	CP-51 SCG
Depth	**8-10 ft. bgs**	**10-12 ft. bgs**	**10-12 ft. bgs**	**8-10 ft. bgs**	**8-10 ft. bgs**	**8-10 ft. bgs**	**8-10 ft. bgs**	**8-10 ft. bgs**	**8-9.8 ft. bgs**			
Sample Date	**8/6/2014**	**8/6/2014**	**8/6/2014**	**8/6/2014**	**8/7/2014**	**8/7/2014**	**8/7/2014**	**8/7/2014**	**8/7/2014**			
Volatile Organic Compounds (ug/kg)												
Methylene Chloride	7.4	ND	3.7	15	ND	11.9	2.5	2.6	8	50	500,000	NL
Acetone	3.8	ND	ND	ND	ND	ND	ND	ND	ND	50	500,000	NL
Naphthalene	ND	ND	ND	ND	463	ND	ND	ND	ND	NL	NL	12,000
n-Butylbenzene	ND	1,270	ND	ND	ND	ND	ND	ND	ND	12,000	NL	12,000
n-Propylbenzene	ND	ND	6.7	ND	ND	ND	ND	ND	ND	3,900	500,000	3,900
1,2,4-Trimethylbenzene	ND	ND	ND	ND	1,270	ND	ND	ND	ND	3,600	190,000	3,600
Benzene	ND	ND	1.2	9.2	ND	5.8	0.96	ND	5.4	60	44,000	60
Toluene	6.6	ND	ND	ND	ND	10.3	ND	ND	9.5	700	500,000	700
Xylene (total)	5.2	ND	ND	ND	ND	7.3	ND	ND	6.6	260	500,000	260
Trichloroethene	4.1	ND	ND	ND	ND	5.2	ND	ND	4.2	470	200,000	NL
Semi-Volatile Organic Compounds (ug/kg)												
Naphthalene	293	ND	ND	ND	235	ND	ND	ND	ND	12,000	500,000	12,000
2-Methylnaphthalene	362	ND	ND	ND	ND	ND	ND	ND	ND	NL	NL	NL
Acenaphthene	ND	ND	ND	ND	ND	ND	153	ND	ND	20,000	500,000	20,000
Dibenzofuran	140	ND	ND	ND	ND	ND	152	ND	ND	NL	NL	NL
Fluorene	ND	ND	ND	ND	ND	ND	219	ND	ND	30,000	500,000	30,000
Phenanthrene	755	ND	ND	ND	ND	ND	1,390	ND	ND	100,000	500,000	100,000
Anthracene	215	ND	ND	ND	ND	ND	515	ND	ND	100,000	500,000	100,000
Carbazole	ND	ND	ND	ND	ND	ND	237	ND	ND	NL	NL	NL
Fluoranthene	752	ND	ND	ND	ND	ND	1,420	ND	ND	100,000	500,000	100,000
Pyrene	911	ND	ND	ND	ND	ND	984	ND	ND	100,000	500,000	100,000
Benzo(a)anthracene	825	ND	ND	ND	ND	ND	670	ND	ND	1,000	5,600	1,000
Chrysene	847	ND	ND	ND	ND	ND	631	ND	ND	1,000	56,000	1,000
Benzo(b)fluoranthene	908	ND	ND	ND	ND	ND	465	ND	ND	1,000	5,600	1,000
Dibenzo(a,h)anthracene	227	ND	ND	ND	ND	ND	ND	ND	ND	330	560	330
Benzo(k)fluoranthene	**818**	ND	ND	ND	ND	ND	415	ND	ND	800	56,000	800
Benzo(a)pyrene	***1,120***	ND	ND	ND	ND	ND	512	ND	ND	1,000	1,000	1,000
Indeno(1,2,3-cd)pyrene	**772**	ND	ND	ND	ND	ND	236	ND	ND	500	5,600	500
Benzo(g,h,i)perylene	721	ND	ND	ND	ND	ND	236	ND	ND	100,000	500,000	100,000
PCBs (ug/kg)												
No detections were identified.												
Pesticides (ug/kg)												
No detections were identified.												
Metals (mg/kg)												
Arsenic	9.8	1.9	9.7	4	4.8	5.9	4.4	4.4	5.9	13	16	NA
Barium	188	13	66.5	41.1	17.8	26.8	19.7	29.1	20.1	350	400	NA
Chormium	10.5	5.4	16	10.3	6.8	11.5	8.4	11.3	12	30	1,500	NA
Lead	63	6.4	33.4	37.3	6.9	12.7	14.4	9.7	9.4	63	1,000	NA
Mercury	0.36	<0.034	0.077	0.075	<0.032	<0.036	<0.037	<0.029	<0.038	0.18	2.8	NA

NL=Not listed
NA=Not applicable
ND=Not Detected
ug/kg=micrograms per kilogram
mg/kg=milligrams per kilogram
Part 375 Soil Cleanup Objectives=NYSDEC, Division of Environmental Remediation, 6 NYCRR Part 375 Environmental Remediation Programs Subpart 375-6.8 (12/14/06)
CP-51 SCG=NYSDEC Commissioner Policy 51 Soil Cleanup Guidance (10/21/10)

	Detected above Part 375 Unrestricted Use SCOs
Italics	Detected above Part 375 Commercial Use SCOs
Bold	Detected above CP-51 SCG

Table 2.3.2A
Supplemental Subsurface Investigation
56-70 Elliott Street, Batavia, NY
Summary of Targeted Volatile Organic Compounds in Soil

Sample ID	NYCRR Part 375 Unrestricted Use SCOs	NYCRR Part 375 Commercial Use SCOs	NYCRR Part 375 Protection of Groundwater SCOs	Units	LBA-SS01 (0-2')		LBA-SS01 (2-24')		LBA-SS02 (0-2')		LBA-SS02 (2-24')		LBA-SB23 (13')		LBA-SB28 (3.5')		LBA-SB29 (10')		LBA-SB30 (10')		LBA-SB31 (10')		LBA-SB35 (10.5')		LBA-SB36 (9')		LBA-SB37 (11')		LBA-SB38 (10.5')		LBA-SB39 (11')		BLIND DUP-1 (LBA-SS01)	
Sample Depth (ft bgs)					0-2'		2-24'		0-2'		2-24'		13'		3.5'		10'		10'		10'		10.5'		9'		11'		10.5'		11'		N/A	
Sample Date					2/6/2018		2/6/2018		2/6/2018		2/6/2018		2/6/2018		2/9/2018		2/9/2018		2/9/2018		2/9/2018		2/15/2018		2/15/2018		2/15/2018		2/15/2018		2/15/2018		2/6/2018	
Volatile organic compounds					Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results		Results	
1,1,1-Trichloroethane	0.68	500	0.68	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
1,1,2,2-Tetrachloroethane	NL	NL	NL	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
1,1,2-Trichloroethane	NL	NL	NL	mg/kg	0.12	U	0.0016	U	0.0016	U	0.0018	U	0.086	U	0.0017	U	**0.00039**	J	0.0014	U	0.077	U	1.8	U	0.41	U	0.08	U	0.063	U	2.8	U	0.0016	U
1,1-Dichloroethane	0.27	240	0.27	mg/kg	0.12	U	0.0016	U	0.0016	U	0.0018	U	0.086	U	0.0017	U	0.0015	U	0.0014	U	0.077	U	1.8	U	0.41	U	0.08	U	0.063	U	2.8	U	0.0016	U
1,1-Dichloroethene	0.33	500	0.33	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
1,2,4-Trichlorobenzene	NL	NL	NL	mg/kg	0.4	U	0.0054	U	0.0054	U	0.0058	U	0.29	U	0.0057	U	0.005	U	0.0045	U	0.26	U	5.9	U	1.4	U	0.27	U	0.21	U	9.3	U	0.0054	U
1,2,4-Trimethylbenzene	3.6	190	3.6	mg/kg	**0.41**		0.0054	U	**0.0003**	J	**0.00023**	J	11		**0.0009**	J	**0.00023**	J	**0.0027**	J	**0.49**		53		**0.16**	J	4.9		4.6		44		0.0054	U
1,2-Dibromo-3-chloropropane	NL	NL	NL	mg/kg	0.4	U	0.0054	U	0.0054	U	0.0058	U	0.29	U	0.0057	U	0.005	U	0.0045	U	0.26	U	5.9	U	1.4	U	0.27	U	0.21	U	9.3	U	0.0054	U
1,2-Dibromoethane	NL	NL	NL	mg/kg	0.32	U	0.0043	U	0.0044	U	0.0047	U	0.23	U	0.0046	U	0.004	U	0.0036	U	0.21	U	4.7	U	1.1	U	0.21	U	0.17	U	7.4	U	0.0043	U
1,2-Dichlorobenzene	1.1	500	1.1	mg/kg	0.4	U	0.0054	U	0.0054	U	0.0058	U	0.29	U	0.0057	U	0.005	U	0.0045	U	0.26	U	5.9	U	1.4	U	0.27	U	0.21	U	9.3	U	0.0054	U
1,2-Dichloroethane	0.02	30	0.02	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
1,2-Dichloropropane	NL	NL	NL	mg/kg	0.28	U	0.0038	U	0.0038	U	0.0041	U	0.2	U	0.004	U	0.0035	U	0.0032	U	0.18	U	4.1	U	0.95	U	0.19	U	0.15	U	6.5	U	0.0038	U
1,3,5-Trimethylbenzene	8.4	190	8.4	mg/kg	**0.17**	J	0.0054	U	**0.00043**	J	**0.00025**	J	**0.27**	J	**0.0006**	J	**0.00023**	J	**0.00073**	J	**0.15**	J	9.1		1.4	U	**1.2**		**0.18**	J	**2.6**	J	0.0054	U
1,3-Dichlorobenzene	2.4	280	2.4	mg/kg	0.4	U	0.0054	U	0.0054	U	0.0058	U	0.29	U	0.0057	U	0.005	U	0.0045	U	0.26	U	5.9	U	1.4	U	0.27	U	0.21	U	9.3	U	0.0054	U
1,4-Dichlorobenzene	1.8	130	1.8	mg/kg	0.4	U	0.0054	U	**0.00024**	J	0.0058	U	0.29	U	0.0057	U	0.005	U	0.0045	U	0.26	U	5.9	U	1.4	U	0.27	U	0.21	U	9.3	U	0.0054	U
2-Butanone	0.12	500	0.12	mg/kg	0.8	U	0.011	U	0.011	U	0.012	U	0.57	U	0.011	U	0.01	U	0.009	U	0.52	U	12	U	2.7	U	0.54	U	0.42	U	19	U	0.011	U
2-Hexanone	NL	NL	NL	mg/kg	0.8	U	0.011	U	0.011	U	0.012	U	0.57	U	0.011	U	0.01	U	0.009	U	0.52	U	12	U	2.7	U	0.54	U	0.42	U	19	U	0.011	U
4-Methyl-2-pentanone	NL	NL	NL	mg/kg	0.8	U	0.011	U	0.011	U	0.012	U	0.57	U	0.011	U	0.01	U	0.009	U	0.52	U	12	U	2.7	U	0.54	U	0.42	U	19	U	0.011	U
Acetone	0.05	500	0.05	mg/kg	0.8	U	0.011	U	**0.0053**	J	**0.0037**	J	0.57	U	**0.0066**	J	**0.0097**	J	**0.02**		0.52	U	12	U	2.7	U	0.54	U	0.42	U	19	U	**0.0099**	J
Benzene	0.06	44	0.06	mg/kg	0.065	J	0.0011	U	0.0011	U	0.0012	U	0.057	U	**0.0016**		0.001	U	**0.00048**	J	**0.011**	J	1.2	U	0.27	U	**0.041**	J	**0.0084**	J	9.5		0.0011	U
Bromodichloromethane	NL	NL	NL	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
Bromoform	NL	NL	NL	mg/kg	0.32	U	0.0043	U	0.0044	U	0.0047	U	0.23	U	0.0046	U	0.004	U	0.0036	U	0.21	U	4.7	U	1.1	U	0.21	U	0.17	U	7.4	U	0.0043	U
Bromomethane	NL	NL	NL	mg/kg	0.16	U	0.0022	U	0.0022	U	0.0023	U	**0.055**	J	0.0023	U	0.002	U	0.0018	U	**0.052**	J	2.4	U	**0.13**	J	**0.047**	J	**0.03**	J	**0.68**	J	0.0022	U
Carbon disulfide	NL	NL	NL	mg/kg	0.8	U	0.011	U	0.011	U	0.012	U	0.57	U	0.011	U	**0.002**	J	**0.0017**	J	0.52	U	12	U	2.7	U	0.54	U	0.42	U	19	U	0.011	U
Carbon tetrachloride	0.76	22	0.76	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
Chlorobenzene	1.1	500	1.1	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
Chloroethane	NL	NL	NL	mg/kg	0.16	U	0.0022	U	0.0022	U	0.0023	U	0.11	U	0.0023	U	0.002	U	0.0018	U	0.1	U	2.4	U	0.54	U	0.11	U	0.084	U	3.7	U	0.0022	U
Chloroform	0.37	350	0.37	mg/kg	0.12	U	0.0016	U	0.0016	U	0.0018	U	0.086	U	0.0017	U	0.0015	U	0.0014	U	0.077	U	1.8	U	0.41	U	0.08	U	0.063	U	2.8	U	0.0016	U
Chloromethane	NL	NL	NL	mg/kg	0.4	U	0.0054	U	0.0054	U	0.0058	U	**0.053**	J	0.0057	U	0.005	U	0.0045	U	**0.041**	J	5.9	U	1.4	U	**0.047**	J	**0.034**	J	9.3	U	0.0054	U
cis-1,2-Dichloroethene	0.25	500	0.25	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
cis-1,3-Dichloropropene	NL	NL	NL	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
Cyclohexane	NL	NL	NL	mg/kg	**0.24**	J	0.022	U	0.022	U	0.023	U	**6.6**		**0.0033**	J	**0.00053**	J	**0.00049**	J	1	U	**28**		**0.26**	J	**0.057**	J	**0.16**	J	**45**		0.022	U
Dibromochloromethane	NL	NL	NL	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
Dichlorodifluoromethane	NL	NL	NL	mg/kg	0.8	U	0.011	U	0.011	U	0.012	U	0.57	U	0.011	U	0.01	U	0.009	U	0.52	U	12	U	2.7	U	0.54	U	0.42	U	19	U	0.011	U
Ethylbenzene	1	390	1	mg/kg	**0.14**		0.0011	U	**0.00041**	J	**0.0002**	J	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	3.4		0.27	U	**0.7**		**0.018**	J	35		0.0011	U
Freon-113	NL	NL	NL	mg/kg	1.6	U	0.022	U	0.022	U	0.023	U	1.1	U	0.023	U	0.02	U	0.018	U	1	U	24	U	5.4	U	1.1	U	0.84	U	37	U	0.022	U
Isopropylbenzene	NL	NL	NL	mg/kg	**0.072**	J	0.0011	U	**0.00048**	J	**0.00025**	J	**0.22**		0.0011	U	**0.00046**	J	**0.00027**	J	0.052	U	**26**		**2.4**		**0.13**		**0.2**		**21**		0.0011	U
Methyl Acetate	NL	NL	NL	mg/kg	**0.99**	J	0.022	U	0.022	U	0.023	U	1.1	U	0.023	U	0.02	U	0.018	U	1	U	24	U	5.4	U	1.1	U	0.84	U	37	U	0.022	U
Methyl cyclohexane	NL	NL	NL	mg/kg	**0.84**		0.0043	U	0.0044	U	0.0047	U	**7.3**		**0.0092**		**0.00038**	J	**0.00075**	J	**0.015**	J	**280**		**3.6**		**0.13**	J	**0.42**		**96**		0.0043	U
Methyl tert butyl ether	0.93	500	0.93	mg/kg	0.16	U	0.0022	U	0.0022	U	0.0023	U	0.11	U	**0.018**		**0.0002**	J	0.0018	U	0.1	U	2.4	U	0.54	U	**0.0098**	J	0.084	U	3.7	U	0.0022	U
Methylene chloride	0.05	500	0.05	mg/kg	0.8	U	0.011	U	0.011	U	0.012	U	0.57	U	0.011	U	0.01	U	0.009	U	0.52	U	12	U	2.7	U	0.54	U	0.42	U	19	U	0.011	U
n-Butylbenzene	12	500	12	mg/kg	**0.059**	J	0.0011	U	**0.00039**	J	0.0012	U	**6.2**		0.0011	U	0.001	U	**0.00035**	J	**0.081**		17		**2.2**		**0.3**		**0.94**		42		0.0011	U
n-Propylbenzene	3.9	500	3.9	mg/kg	**0.11**		0.0011	U	**0.00055**	J	**0.00036**	J	**2.8**		0.0011	U	0.001	U	0.0009	U	**0.061**		44		4.9		**0.54**		**1.2**		98		**0.00024**	J
Naphthalene	12	500	12	mg/kg	**0.34**	J	0.0054	U	**0.0002**	J	0.0058	U	0.29	U	**0.0004**	J	**0.00027**	J	**0.00055**	J	**0.18**	J	17		**5.9**		**2.9**		0.21	U	110		0.0054	U
o-Xylene	NL	NL	NL	mg/kg	**0.42**		0.0022	U	**0.00068**	J	0.0023	U	0.11	U	**0.00067**	J	**0.00034**	J	**0.003**		**0.064**	J	2.4	U	0.54	U	**0.45**		**0.014**	J	**1.9**	J	0.0022	U
p-Isopropyltoluene	NL	NL	NL	mg/kg	**0.041**	J	0.0011	U	**0.00038**	J	**0.00025**	J	**1.3**		0.0011	U	0.001	U	0.0009	U	**0.028**	J	**17**		**0.85**		**0.071**		**0.052**		**3.7**		0.0011	U
p/m-Xylene	NL	NL	NL	mg/kg	**0.74**		0.0022	U	**0.00063**	J	0.0023	U	0.11	U	**0.00055**	J	**0.00044**	J	**0.0025**		**0.027**	J	**9.2**		0.54	U	**2.1**		**0.11**		**23**		0.0022	U
sec-Butylbenzene	11	500	11	mg/kg	**0.052**	J	0.0011	U	**0.00046**	J	**0.00035**	J	**2**		0.0011	U	0.001	U	**0.00021**	J	**0.062**		31		**1.4**		0.054	U	**0.26**		15		0.0011	U
Styrene	NL	NL	NL	mg/kg	0.16	U	0.0022	U	**0.0005**	J	0.0023	U	0.11	U	0.0023	U	0.002	U	0.0018	U	0.1	U	2.4	U	0.54	U	0.11	U	0.084	U	3.7	U	0.0022	U
tert-Butylbenzene	5.9	500	5.9	mg/kg	**0.022**	J	0.0054	U	**0.00045**	J	**0.0003**	J	0.29	U	0.0057	U	0.005	U	0.0045	U	0.26	U	**1.5**	J	**0.18**	J	0.27	U	0.21	U	9.3	U	0.0054	U
Tetrachloroethene	1.3	150	1.3	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
Toluene	0.7	500	0.7	mg/kg	**0.4**		0.0016	U	**0.0004**	J	**0.00027**	J	0.086	U	**0.00047**	J	0.0015	U	**0.00027**	J	0.077	U	1.8	U	0.41	U	**0.039**	J	0.063	U	2	J	**0.00022**	J
trans-1,2-Dichloroethene	0.19	500	0.19	mg/kg	0.12	U	0.0016	U	0.0016	U	0.0018	U	0.086	U	0.0017	U	0.0015	U	0.0014	U	0.077	U	1.8	U	0.41	U	0.08	U	0.063	U	2.8	U	0.0016	U
trans-1,3-Dichloropropene	NL	NL	NL	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
Trichloroethene	0.47	200	0.47	mg/kg	0.08	U	0.0011	U	0.0011	U	0.0012	U	0.057	U	0.0011	U	0.001	U	0.0009	U	0.052	U	1.2	U	0.27	U	0.054	U	0.042	U	1.9	U	0.0011	U
Trichlorofluoromethane	NL	NL	NL	mg/kg	0.4	U	0.0054	U	0.0054	U	0.0058	U	0.29	U	0.0057	U	0.005	U	0.0045	U	0.26	U	5.9	U	1.4	U	0.27	U	0.21	U	9.3	U	0.0054	U
Vinyl chloride	0.02	13	0.02	mg/kg	0.16	U	0.0022	U	0.0022	U	0.0023	U	0.11	U	0.0023	U	0.002	U	0.0018	U	0.1	U	2.4	U	0.54	U	0.11	U	0.084	U	3.7	U	0.0022	U
Total VOCs	NA	NA	NA	mg/kg	**5.111**		None Detected		**0.0118**		**0.00616**		**37.798**		**0.04229**		**0.01517**		**0.034**		**1.262**		**516.2**		**21.98**		**13.6618**		**8.2264**		**549.38**		**0.01036**	

NOTES:
All values displayed in milligrams per kilograms (mg/kg) or parts per million (ppm)
Bold type indicates that the compound was detected at a concentration above its respective laboratory method detection limit.
Yellow highlight indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objective (SCO).
Red font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Commercial Use SCO
Underlined font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO).
VOCs analyzed by USEPA Method 8260

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Table 2.3.2B
Supplemental Subsurface Investigation
56-70 Ellicott Street, Batavia, NY
Summary of Targeted Semi-Volatile Organic Compounds in Soil

Sample ID	NYCRR Part 375 Unrestricted Use SCOs	NYCRR Part 375 Commercial Use SCOs	NYCRR Part 375 Protection of Groundwater SCOs	Units	LBA-SS01 (0-2')		LBA-SS01 (2-24')		LBA-SS02 (0-2')		LBA-SS02 (2-24')		LBA-SB23 (0.5-3.5')		LBA-SB26 (0.75-3.5')		LBA-SB30 (10')		LBA-SB31 (10')		LBA-SB35 (10.5-12')		LBA-SB37 (3-4')		BLIND DUP-1 (LBA-SS01)	
Sample Depth (ft bgs)					0-2'		2-24'		0-2'		2-24'		0.5-3.5'		0.75-3.5'		10'		10'		10.5-12'		3-4'		N/A	
Sample Date					2/6/2018		2/6/2018		2/6/2018		2/6/2018		2/15/2018		2/8/2018		2/9/2018		2/9/2018		2/15/2018		2/15/2018		2/6/2018	
Semivolatile organic compounds					Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier	Results	Qualifier
Acenaphthene	20	500	98	mg/kg	**0.1**	J	**0.045**	J	1.4	U	**0.031**	J	0.14	U	**0.026**	J	0.16	U	0.15	U	0.16	U	**0.027**	J	**0.06**	J
Acenaphthylene	100	500	107	mg/kg	**0.11**	J	**0.073**	J	1.4	U	**0.058**	J	0.14	U	**0.064**	J	0.16	U	0.15	U	0.16	U	**0.049**	J	**0.097**	J
Anthracene	100	500	1000	mg/kg	**0.37**		**0.16**		1	U	**0.13**		0.1	U	**0.11**	J	0.12	U	0.11	U	0.12	U	**0.17**		**0.25**	
Benzo(a)anthracene	1	5.6	1	mg/kg	**1.9**		**0.77**		1	U	**0.44**		0.1	U	**0.43**		0.12	U	0.11	U	0.12	U	**0.68**		**0.88**	
Benzo(a)pyrene	1	1	22	mg/kg	**2.1**		**1**		1.4	U	**0.54**		0.14	U	**0.36**		0.16	U	0.15	U	0.16	U	**0.53**		**1**	
Benzo(b)fluoranthene	1	5.6	1.7	mg/kg	**2.7**		**1.2**		**0.41**	J	**0.7**		0.1	U	**0.53**		0.12	U	0.11	U	0.12	U	**0.72**		**1.2**	
Benzo(ghi)perylene	100	500	1000	mg/kg	**1.6**		**0.62**		1.4	U	**0.43**		**0.035**	J	**0.24**		0.16	U	0.15	U	0.16	U	**0.31**		**0.79**	
Benzo(k)fluoranthene	0.8	56	1.7	mg/kg	**0.86**		**0.38**		1	U	**0.19**		0.1	U	**0.15**		0.12	U	0.11	U	0.12	U	**0.18**		**0.5**	
Chrysene	1	56	1	mg/kg	**1.6**		**0.7**		**0.23**	J	**0.45**		**0.03**	J	**0.39**		0.12	U	0.11	U	0.12	U	**0.54**		**0.89**	
Dibenzo(a,h)anthracene	0.33	0.56	1000	mg/kg	**0.37**		**0.17**		1	U	**0.071**	J	0.1	U	**0.066**	J	0.12	U	0.11	U	0.12	U	**0.074**	J	**0.16**	
Fluoranthene	100	500	1000	mg/kg	**2.6**		**0.88**		**0.3**	J	**0.74**		**0.023**	J	**0.75**		0.12	U	0.11	U	0.12	U	**1.3**		**1.5**	
Fluorene	30	500	386	mg/kg	**0.1**	J	**0.058**	J	1.8	U	**0.047**	J	0.18	U	**0.045**	J	0.2	U	0.19	U	0.2	U	**0.035**	J	**0.088**	J
Indeno(1,2,3-cd)pyrene	0.5	5.6	8.2	mg/kg	**1.8**		**0.74**		1.4	U	**0.37**		0.14	U	**0.27**		0.16	U	0.15	U	0.16	U	**0.36**		**0.8**	
Phenanthrene	100	500	1000	mg/kg	**1.4**		**0.53**		1	U	**0.47**		0.1	U	**0.53**		0.12	U	0.11	U	0.12	U	**0.54**		**1**	
Pyrene	100	500	1000	mg/kg	**2.2**		**0.83**		**0.25**	J	**0.64**		**0.022**	J	**0.62**		0.12	U	0.11	U	0.12	U	**1.1**		**1.2**	
Total SVOCs:	NA	NA	NA	mg/kg	**19.81**		**8.156**		**1.19**		**5.307**		**0.11**		**4.581**		None Detected		None Detected		None Detected		**6.615**		**10.415**	

NOTES:

All values displayed in milligrams per kilograms (mg/kg) or parts per million (ppm)

Bold type indicates that the compound was detected at a concentration above its respective laboratory method detection limit.

Yellow highlight indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objective (SCO).

Red font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Commercial Use SCO

Underlined font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO).

SVOCs analyzed by USEPA Method 8270

NL indicates no listed Stadard Value

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Table 2.3.2C
Supplemental Subsurface Investigation
56-70 Ellicott Street, Batavia, NY
Summary of Targeted Metals in Soil

Sample ID	NYCRR Part 375 Unrestricted Use SCOs	NYCRR Part 375 Commercial Use SCOs	NYCRR Part 375 Protection of Groundwater SCOs	Units	LBA-SS01 (0-2")		LBA-SS01 (2-24")		LBA-SS02 (0-2")		LBA-SS02 (2-24")		LBA-SB23 (0.5-3.5')		LBA-SB26 (0.75-3.5')		LBA-SB37 (3-4')		BLIND DUP-1 (LBA-SS01)	
Sample Depth (ft bgs)					0-2"		2-24"		0-2"		2-24"		0.5-3.5'		0.75-3.5'		3-4'		N/A	
Sample Date					2/6/2018		2/6/2018		2/6/2018		2/6/2018		2/15/2018		2/8/2018		2/15/2018		2/6/2018	
Metals					Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum, Total	NL	NL	NL	mg/kg	**2260**		**3270**		**543**		**2890**		**2010**		**4110**		**835**		**1900**	
Antimony, Total	NL	NL	NL	mg/kg	**0.461**	J	4.57	U	4.36	U	4.71	U	4.04	U	**2.06**	J	4.68	U	4.46	U
Arsenic, Total	13	16	16	mg/kg	**5.18**		**10.9**		0.871	U	**6.94**		**1.56**		**11.9**		**7.23**		**3.83**	
Barium, Total	350	400	820	mg/kg	**51.2**		**102**		**7.59**		**115**		**19.1**		**383**		**16.2**		**36.3**	
Beryllium, Total	7.2	590	47	mg/kg	**0.213**	J	**0.411**	J	0.436	U	**0.301**	J	**0.105**	J	**0.551**		**0.14**	J	**0.196**	J
Cadmium, Total	2.5	9.3	7.5	mg/kg	**0.586**	J	0.914	U	**0.218**	J	0.942	U	0.809	U	**0.275**	J	0.937	U	**0.125**	J
Calcium, Total	NL	NL	NL	mg/kg	**53700**		**43200**		**196000**		**16900**		**151000**		**36500**		**2590**		**76500**	
Chromium, Total	30	1500	NL	mg/kg	**8.17**		**6.18**		**6.44**		**4.98**		**3.9**		**12.5**		**2.13**		**5.95**	
Cobalt, Total	NL	NL	NL	mg/kg	**3.59**		**4.49**		**2.55**		**2.71**		**2.14**		**8.16**		**4.34**		**3**	
Copper, Total	50	270	1720	mg/kg	**403**		**65**		**8.5**		**30.2**		**9.96**		**147**		**19.6**		**29.8**	
Iron, Total	NL	NL	NL	mg/kg	**10400**		**15100**		**3760**		**11200**		**7680**		**27000**		**13400**		**8090**	
Lead, Total	63	1000	450	mg/kg	**181**		**242**		**4.53**		**193**		**9.06**		**1550**		**14.2**		**121**	
Magnesium, Total	NL	NL	NL	mg/kg	**13400**		**7020**		**5910**		**4810**		**17500**		**7700**		**359**		**8280**	
Manganese, Total	1600	10000	2000	mg/kg	**162**		**153**		**122**		**103**		**280**		**282**		**32.6**		**152**	
Mercury, Total	0.18	2.8	0.73	mg/kg	**0.23**		**0.78**		0.07	U	**0.26**		**0.04**	J	**0.58**		**0.069**	J	**0.43**	
Nickel, Total	30	310	130	mg/kg	**10.5**		**9.45**		**3.91**		**6.83**		**6.49**		**13.7**		**10.1**		**7.27**	
Potassium, Total	NL	NL	NL	mg/kg	**296**		**383**		**198**	J	**278**		**388**		**588**		**184**	J	**274**	
Selenium, Total	3.9	1500	4	mg/kg	**0.559**	J	**0.959**	J	**0.279**	J	**0.763**	J	**0.21**	J	**1.4**	J	**1.08**	J	**0.625**	J
Silver, Total	2	1500	8.3	mg/kg	**0.337**	J	0.914	U	0.871	U	0.942	U	0.809	U	0.95	U	0.937	U	0.893	U
Sodium, Total	NL	NL	NL	mg/kg	**116**	J	**220**		**93.4**	J	**98**	J	**120**	J	**165**	J	**132**	J	**87.8**	J
Thallium, Total	NL	NL	NL	mg/kg	1.77	U	1.83	U	1.74	U	1.88	U	1.62	U	1.9	U	1.87	U	1.79	U
Vanadium, Total	NL	NL	NL	mg/kg	**8.42**		**13.2**		**7.37**		**10.2**		**6.24**		**14.2**		**6.27**		**8.61**	
Zinc, Total	109	10000	2480	mg/kg	**157**		**97.4**		**65.1**		**95.8**		**25.3**		**683**		**13.8**		**69**	

NOTES:

All values displayed in milligrams per kilograms (mg/kg) or parts per million (ppm)

Bold type indicates that the compound was detected at a concentration above its respective laboratory method detection limit.

Yellow highlight indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objective (SCO).

Red font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Commercial Use SCO

Underlined font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO).

Metals analyzed by USEPA Method 6010/7470

NL indicates no listed Stadard Value

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Table 2.3.2D
Supplemental Subsurface Investigation
56-70 Ellicott Street, Batavia, NY
Summary of Targeted Polychlorinated Biphenyls in Soil

Sample ID	NYCRR Part 375 Unrestricted Use SCOs	NYCRR Part 375 Commercial Use SCOs	NYCRR Part 375 Protection of Groundwater SCOs	Units	LBA-SS01 (0-2")		LBA-SS01 (2-24")		LBA-SS02 (0-2")		LBA-SS02 (2-24")		LBA-SB29 (10')		LBA-SB31 (10')		BLIND DUP-1 (LBA-SS01)	
Sample Depth (ft bgs)					0-2"		2-24"		0-2"		2-24"		10'		10'		N/A	
Sample Date					2/6/2018		2/6/2018		2/6/2018		2/6/2018		2/9/2018		2/9/2018		2/6/2018	
PCBs					Results		Results		Results		Results		Results		Results		Results	
PCB 1016	NL	NL	NL	mg/kg	0.0379	U	0.039	U	0.0348	U	0.0389	U	0.0398	U	0.0381	U	0.0381	U
PCB 1221	NL	NL	NL	mg/kg	0.0379	U	0.039	U	0.0348	U	0.0389	U	0.0398	U	0.0381	U	0.0381	U
PCB 1232	NL	NL	NL	mg/kg	0.0379	U	0.039	U	0.0348	U	0.0389	U	0.0398	U	0.0381	U	0.0381	U
PCB 1242	NL	NL	NL	mg/kg	0.0379	U	0.039	U	0.0348	U	0.0389	U	0.0398	U	0.0381	U	0.0381	U
PCB 1248	NL	NL	NL	mg/kg	0.0379	U	0.039	U	0.0348	U	0.0389	U	0.0398	U	0.0381	U	0.0381	U
PCB 1254	NL	NL	NL	mg/kg	0.0379	U	**0.00375**	J	0.0348	U	0.0389	U	0.0398	U	0.0381	U	**0.0459**	
PCB 1260	NL	NL	NL	mg/kg	0.139		**0.00534**	J	0.0348	U	0.0389	U	0.0398	U	0.0381	U	**0.08**	
PCB 1262	NL	NL	NL	mg/kg	0.0379	U	0.039	U	0.0348	U	0.0389	U	0.0398	U	0.0381	U	0.0381	U
PCB 1268	NL	NL	NL	mg/kg	0.0379	U	0.039	U	0.0348	U	0.0389	U	0.0398	U	0.0381	U	0.0381	U
Total PCBs	0.1	1	3.2	mg/kg	**0.139**		**0.00909**		None Detected		None Detected		None Detected		None Detected		**0.126**	

NOTES:
All values displayed in milligrams per kilograms (mg/kg) or parts per million (ppm)
Bold type indicates that the compound was detected at a concentration above its respective laboratory method detection limit.
Yellow highlight indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objective (SCO).
Red font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Commercial Use SCO
Underlined font indicates that the compound was detected at a concentration above its respective NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO).
PCBs analyzed by USEPA Method 8082
NL indicates no listed Stadard Value

Table 2.3.2E
Supplemental Subsurface Evaluation
Ellicott Street East, 56-70 Ellicott Street, Batavia, New York
Summary of Targeted Volatile Organic Compounds in Groundwater

Sample ID	NYCRR Part 703 Groundwater Quality Standards	LBA-MW1		LBA-MW2		LBA-MW3		LBA-MW4		LBA-MW5		LBA-MW6		LBA-MW7		LBA-MW8		LBA-MW9		Blind Duplicate (LBA-MW9)		LBA-MW10		LBA-MW11	
Screened Interval (ft bgs)		8.9' - 13.9'		10.8 - 15.8'		10' - 15'		10' - 15'		5.5' - 10.5'		10' - 15'		8.2' - 13.2'		9.5' - 14.5'		9.5' - 14.5'		9.5' - 14.5'		8' - 13'		10' - 15'	
Sample Date		2/20/2018		2/20/2018		2/20/2018		2/20/2018		2/21/2018		2/21/2018		2/20/2018		2/20/2018		2/21/2018		2/21/2018		2/21/2018		2/21/2018	
Volatile organic compounds		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1-Trichloroethane	5	**0.8**	J	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1,2,2-Tetrachloroethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	1	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
1,1-Dichloroethane	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2,4-Trichlorobenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trimethylbenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**120**		2.5	U	2.5	U	**3.1**		**3**		**5.8**		**29**	
1,2-Dibromo-3-Chloropropane	0.04	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dibromomethane	0.0006	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,2-Dichlorobenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloroethane	0.6	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	1	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
1,3,5-Trimethylbenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**2**	J	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**6.3**	
1,3-Dichlorobenzene	3	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dichlorobenzene	3	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl ethyl ketone (2-butanone)	50*	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Hexanone	50*	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone (MIBK)	NL	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	50*	**1.6**	J	5	U	**1.5**	J	5	U	**1.5**	J	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Benzene	1	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	**0.62**		**0.49**	J	**0.94**		**2.2**	
Bromodichloromethane	50*	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromoform	50*	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Bromomethane	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Carbon Disulfide	60*	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Carbon tetrachloride	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloroethane	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloroform	7	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloromethane	NL	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
cis -1,2-Dichloroethene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
cis-1,3-dichloropropene	0.4	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cyclohexane	NL	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	**9.4**	J	**8.4**	J	**2.4**	J	**0.38**	J
Dibromofluoromethane	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Dichlorodifluoromethane	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**7.7**	
1,1,2-Trichlorotrifluoroethane (freon 113)	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Isopropylbenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**2.8**		2.5	U	2.5	U	**4.7**		**4.4**		**21**		**0.91**	J
Methyl Acetate	NL	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Methyl Cyclohexane	NL	10	U	10	U	10	U	10	U	10	U	**48**		10	U	10	U	**33**		**33**		**11**		**0.77**	J
Methyl tert-butyl ether	10*	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methylene Chloride	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
n-Butylbenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**25**		2.5	U	2.5	U	**0.94**	J	**0.94**	J	**1.2**	J	**0.7**	J
n - Propylbenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**26**		2.5	U	2.5	U	**5.9**		**5.7**		**19**		**2.5**	
Naphthalene	10*	**1.9**	J	2.5	U	2.5	U	2.5	U	2.5	U	**3.2**		2.5	U	2.5	U	**2.2**	J	**1.7**	J	**2.7**		**17**	
o-xylene	5	2.5	U	2.5	U	2.5	U	2.5	U	**0.73**	J	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**12**	
p-Isopropyltoluene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**6.3**		2.5	U	2.5	U	**1.4**	J	**1.5**	J	**1**	J	2.5	U
m,p-xylene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**1.1**	J	**1**	J	2.5	U	**27**	
sec-Butylbenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**11**		2.5	U	2.5	U	**1.2**	J	**1.3**	J	**2.6**		2.5	U
Styrene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
tert-Butylbenzene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Tetrachloroethene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	**2.2**	J
trans-1,2-Dichloroethene	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
trans-1,3-Dichloropropene	0.4	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichloroethene	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Trichlorofluoromethane	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Vinyl chloride	2	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Total VOCs:	NA	4.3		None Detected		1.5		None Detected		2.23		242.3		None Detected		None Detected		63.56		61.43		67.64		108.66	

NOTES:
All values displayed in micrograms per liter (ug/L) or parts per billion (ppb)
"<" - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).
Yellow highlight indicates that the compound was detected at a concentration above its respective 6 NYCRR Part 703 Groundwater Quality Standard or Guidance Value
* indicates no Part 703 Standard, Guidance Value is listed
VOCs analyzed by USEPA Method 8260
NL Indicates Not Listed

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Table 2.3.2F
Supplemental Subsurface Evaluation
Ellicott Street East, 56-70 Ellicott Street, Batavia, New York
Summary of Targeted Semi-Volatile Organic Compounds in Groundwater

Sample ID		LBA-MW2		LBA-MW4		LBA-MW9		Blind Duplicate	
Screened Interval (ft bgs)	NYCRR Part 703 Groundwater Quality Standards	10.8 - 15.8'		10' - 15'		9.5' - 14.5'			
Sample Date		2/20/2018		2/20/2018		2/21/2018		2/21/2018	
Semivolatile organic compounds		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acenaphthene	20*	0.1	U	0.1	U	0.1	U	0.1	U
Acenapthylene	NL	0.1	U	0.1	U	0.1	U	0.1	U
Anthracene	50*	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(a)anthracene	0.002*	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(a)pyrene	Not detectable	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(b)fluoranthene	0.002*	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(g,h,i)perylene	NL	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(k)fluoranthene	0.002*	0.1	U	0.1	U	0.1	U	0.1	U
Chrysene	0.002*	0.1	U	0.1	U	0.1	U	0.1	U
Dibenz(a,h)anthracene	NL	0.1	U	0.1	U	0.1	U	0.1	U
Fluoranthene	50*	0.1	U	0.1	U	0.1	U	0.1	U
Fluorene	50*	0.1	U	0.1	U	0.1	U	0.1	U
Indeno(1,2,3-cd)pyrene	0.002*	0.1	U	0.1	U	0.1	U	0.1	U
Phenanthrene	50*	**0.04**	J	0.1	U	**0.02**	J	**0.02**	J
Pyrene	50*	0.1	U	0.1	U	0.1	U	0.1	U
Total SVOCs	NA	0.04		None Detected		0.02		0.02	

NOTES:
All values displayed in micrograms per liter (ug/L) or parts per billion (ppb)
"<" - Indicates compound was not detected above the indicated laboratory method detection limit (MDL).
Yellow highlight indicates that the compound was detected at a concentration above its respective 6 NYCRR Part 703 Groundwater Quality Standard or Guidance Value
* indicates no Part 703 Standard, Guidance Value is listed
SVOCs analyzed by USEPA Method 8270
NL Indicates Not Listed

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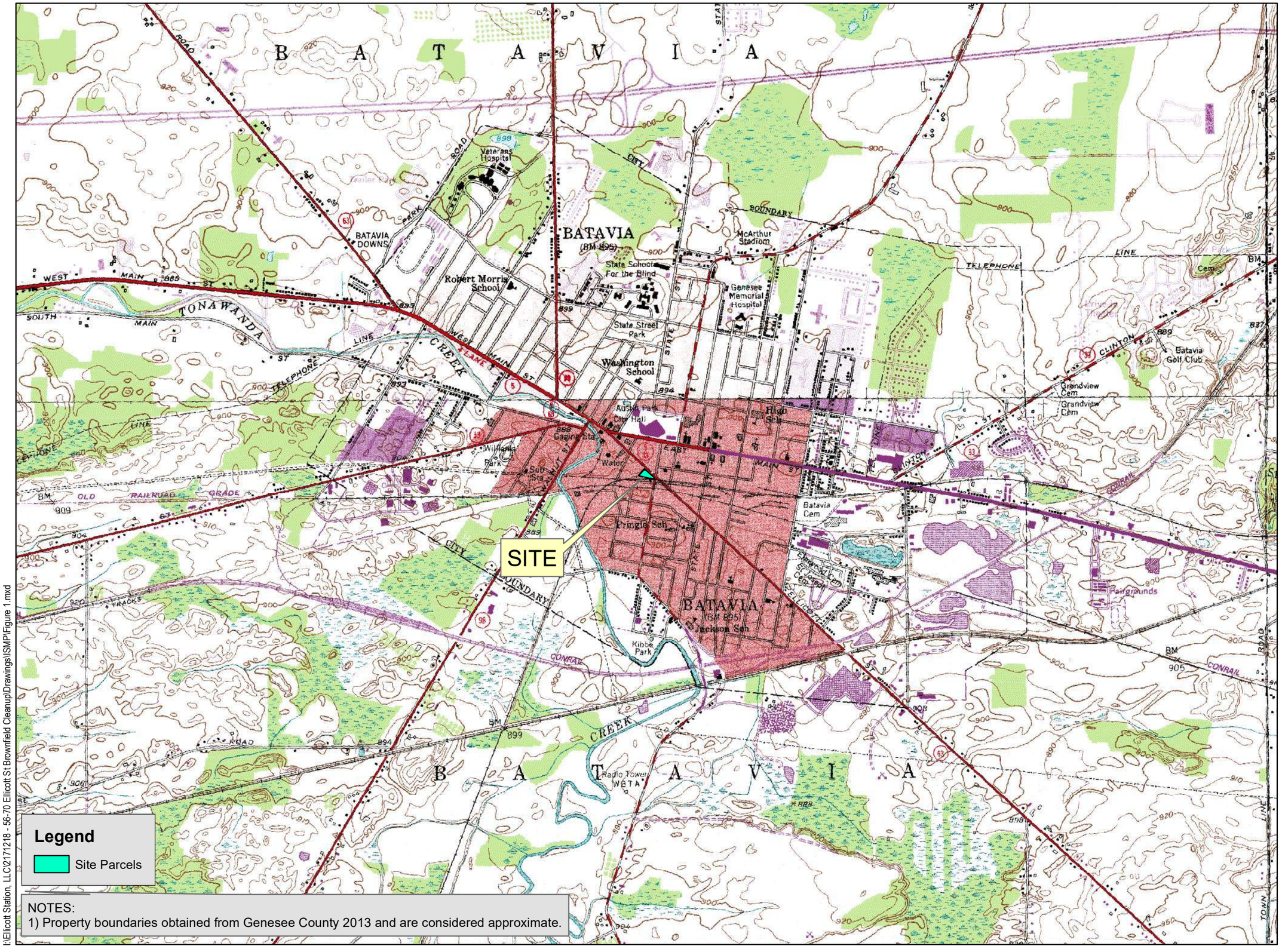
FIGURES



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0 1,000 2,000
Feet
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PROJECT:
INTERIM SITE MANAGEMENT PLAN

ELLICOTT STATION EAST
56-70 ELLICOTT STREET
BATAVIA, NY 14020

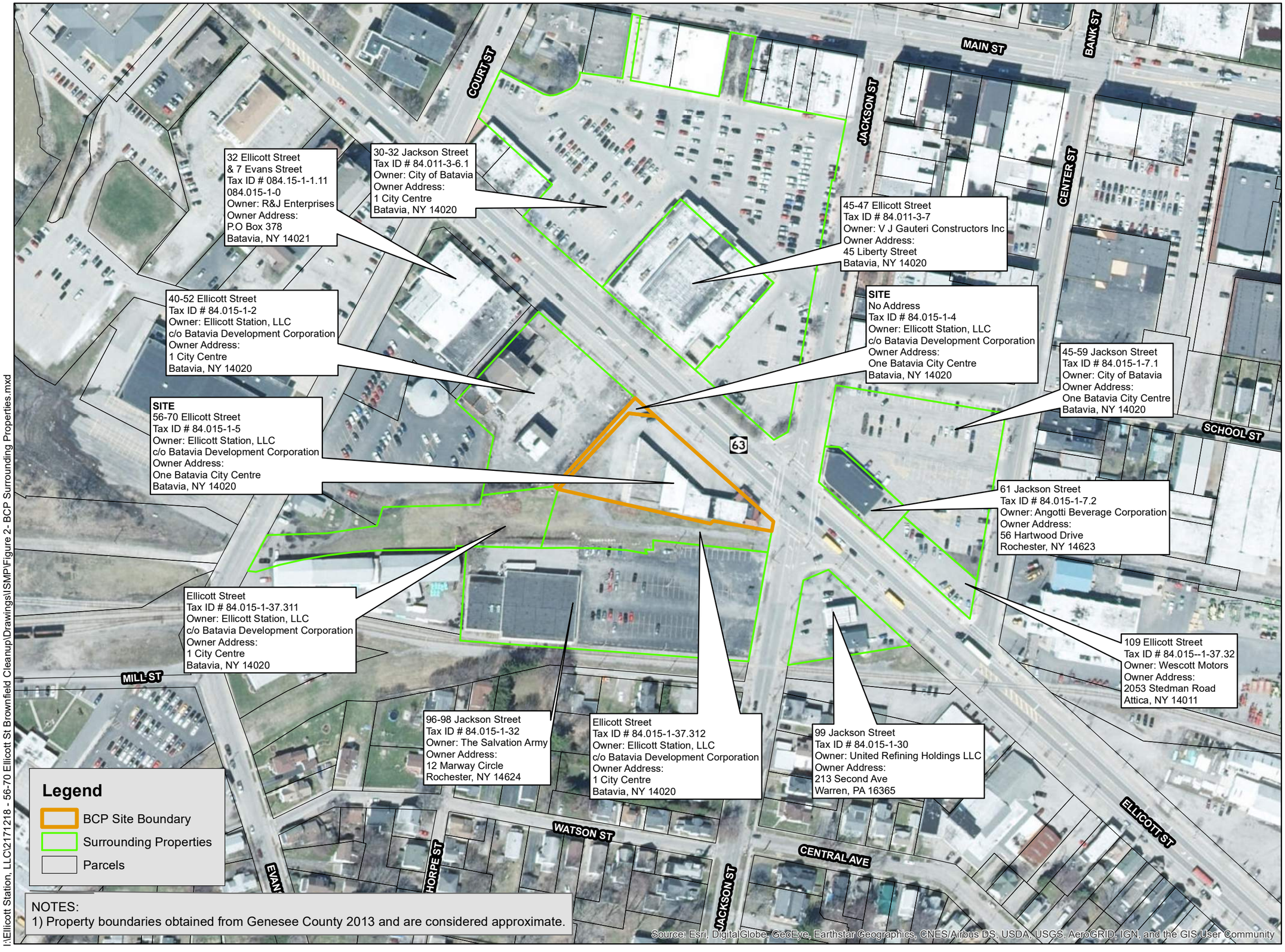
DRAWING NAME:
BCP SITE LOCATION MAP

PROJECT/DRAWING NUMBER:
2171218

FIGURE 1

6/20/2019

I:\Ellicott Station, LLC\2171218 - 56-70 Ellicott St Brownfield Cleanup\Drawings\ISMP\Figure 1.mxd



I:\Ellicott Station, LLC\2171218 - 56-70 Ellicott St Brownfield Cleanup\Drawings\SMP\Figure 2- BCP Surrounding Properties.mxd

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BATAVIA, NY 14020

DRAWING NAME:

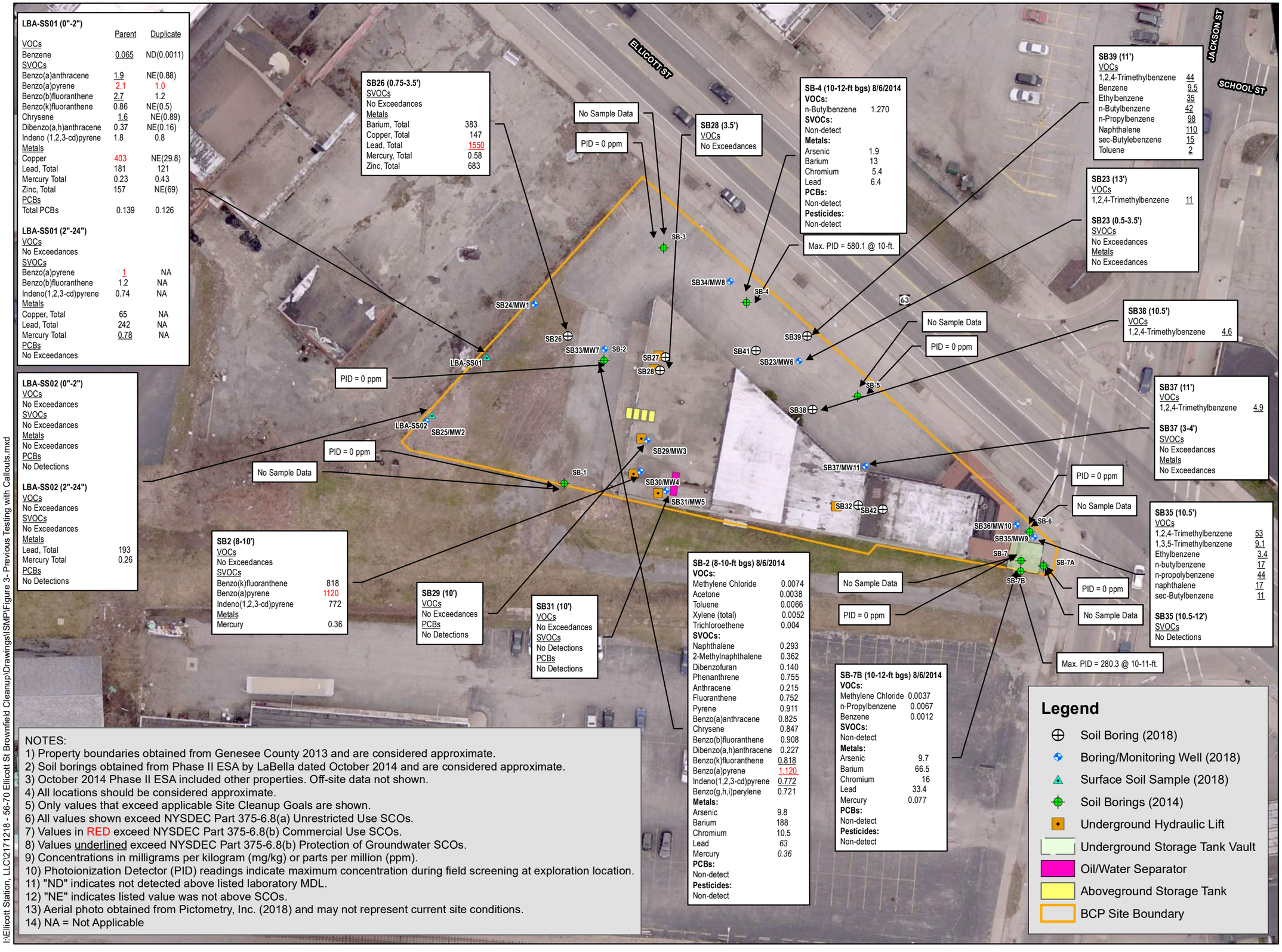
BCP SITE AND SURROUNDING PROPERTIES

PROJECT/DRAWING NUMBER:

2171218

FIGURE 2

6/20/2019



LBA-SS01 (0"-2")

	Parent	Duplicate
VOCs		
Benzene	0.065	ND(0.0011)
SVOCs		
Benzo(a)anthracene	1.9	NE(0.88)
Benzo(a)pyrene	2.1	1.0
Benzo(b)fluoranthene	2.7	1.2
Benzo(k)fluoranthene	0.86	NE(0.5)
Chrysene	1.6	NE(0.89)
Dibenzo(a,h)anthracene	0.37	NE(0.16)
Indeno (1,2,3-cd)pyrene	1.8	0.8
Metals		
Copper	403	NE(29.8)
Lead, Total	181	121
Mercury Total	0.23	0.43
Zinc, Total	157	NE(69)
PCBs		
Total PCBs	0.139	0.126

LBA-SS01 (2"-24")

VOCs
No Exceedances
SVOCs

Benzo(a)pyrene	1
Benzo(b)fluoranthene	1.2
Indeno(1,2,3-cd)pyrene	0.74

Metals

Copper, Total	65
Lead, Total	242
Mercury Total	0.78

PCBs
No Exceedances

LBA-SS02 (0"-2")
VOCs
No Exceedances
SVOCs
No Exceedances
Metals
No Exceedances
PCBs
No Detections

LBA-SS02 (2"-24")
VOCs
No Exceedances
SVOCs
No Exceedances
Metals

Lead, Total	193
Mercury Total	0.26

PCBs
No Detections

SB26 (0.75-3.5')
SVOCs
No Exceedances
Metals

Barium, Total	383
Copper, Total	147
Lead, Total	1550
Mercury, Total	0.58
Zinc, Total	683

SB28 (3.5')
VOCs
No Exceedances

SB-4 (10-12-ft bgs) 8/6/2014
VOCs:

n-Butylbenzene	1.270

SVOCs:
Non-detect
Metals:

Arsenic	1.9
Barium	13
Chromium	5.4
Lead	6.4

PCBs:
Non-detect
Pesticides:
Non-detect

SB39 (11')
VOCs

1,2,4-Trimethylbenzene	44
Benzene	9.5
Ethylbenzene	35
n-Butylbenzene	42
n-Propylbenzene	98
Naphthalene	110
sec-Butylebenzene	15
Toluene	2

SB23 (13')
VOCs

1,2,4-Trimethylbenzene	11

SB23 (0.5-3.5')
SVOCs
No Exceedances
Metals
No Exceedances

SB38 (10.5')
VOCs

1,2,4-Trimethylbenzene	4.6

SB37 (11')
VOCs

1,2,4-Trimethylbenzene	4.9

SB37 (3-4')
SVOCs
No Exceedances
Metals
No Exceedances

SB35 (10.5')
VOCs

1,2,4-Trimethylbenzene	53
1,3,5-Trimethylbenzene	9.1
Ethylbenzene	3.4
n-butylbenzene	17
n-propolybenzene	44
naphthalene	17
sec-Butylbenzene	11

SB35 (10.5-12')
SVOCs
No Detections

SB2 (8-10')
VOCs
No Exceedances
SVOCs

Benzo(k)fluoranthene	818
Benzo(a)pyrene	1120
Indeno(1,2,3-cd)pyrene	772

Metals

Mercury	0.36

SB29 (10')
VOCs
No Exceedances
PCBs
No Detections

SB31 (10')
VOCs
No Exceedances
SVOCs
No Detections
PCBs
No Detections

SB-2 (8-10-ft bgs) 8/6/2014
VOCs:

Methylene Chloride	0.0074
Acetone	0.0038
Toluene	0.0066
Xylene (total)	0.0052
Trichloroethene	0.004

SVOCs:

Naphthalene	0.293
2-Methylnaphthalene	0.362
Dibenzofuran	0.140
Phenanthrene	0.755
Anthracene	0.215
Fluoranthene	0.752
Pyrene	0.911
Benzo(a)anthracene	0.825
Chrysene	0.847
Benzo(b)fluoranthene	0.908
Dibenzo(a,h)anthracene	0.227
Benzo(k)fluoranthene	0.818
Benzo(a)pyrene	1.120
Indeno(1,2,3-cd)pyrene	0.772
Benzo(g,h,i)perylene	0.721

Metals:

Arsenic	9.8
Barium	188
Chromium	10.5
Lead	63
Mercury	0.36

PCBs:
Non-detect
Pesticides:
Non-detect

SB-7B (10-12-ft bgs) 8/6/2014
VOCs:

Methylene Chloride	0.0037
n-Propylbenzene	0.0067
Benzene	0.0012

SVOCs:
Non-detect
Metals:

Arsenic	9.7
Barium	66.5
Chromium	16
Lead	33.4
Mercury	0.077

PCBs:
Non-detect
Pesticides:
Non-detect

NOTES:
1) Property boundaries obtained from Genesee County 2013 and are considered approximate.
2) Soil borings obtained from Phase II ESA by LaBella dated October 2014 and are considered approximate.
3) October 2014 Phase II ESA included other properties. Off-site data not shown.
4) All locations should be considered approximate.
5) Only values that exceed applicable Site Cleanup Goals are shown.
6) All values shown exceed NYSDEC Part 375-6.8(a) Unrestricted Use SCOs.
7) Values in RED exceed NYSDEC Part 375-6.8(b) Commercial Use SCOs.
8) Values underlined exceed NYSDEC Part 375-6.8(b) Protection of Groundwater SCOs.
9) Concentrations in milligrams per kilogram (mg/kg) or parts per million (ppm).
10) Photoionization Detector (PID) readings indicate maximum concentration during field screening at exploration location.
11) "ND" indicates not detected above listed laboratory MDL.
12) "NE" indicates listed value was not above SCOs.
13) Aerial photo obtained from Pictometry, Inc. (2018) and may not represent current site conditions.
14) NA = Not Applicable

Legend

- Soil Boring (2018)
- Boring/Monitoring Well (2018)
- Surface Soil Sample (2018)
- Soil Borings (2014)
- Underground Hydraulic Lift
- Underground Storage Tank Vault
- Oil/Water Separator
- Aboveground Storage Tank
- BCP Site Boundary

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N W E S

0 25 50 Feet

1 inch = 50 feet

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ELLICOTT STATION, LLC

PROJECT:
INTERIM SITE MANAGEMENT PLAN

ELLICOTT STATION EAST
56-70 ELLICOTT STREET
BATAVIA, NY 14020

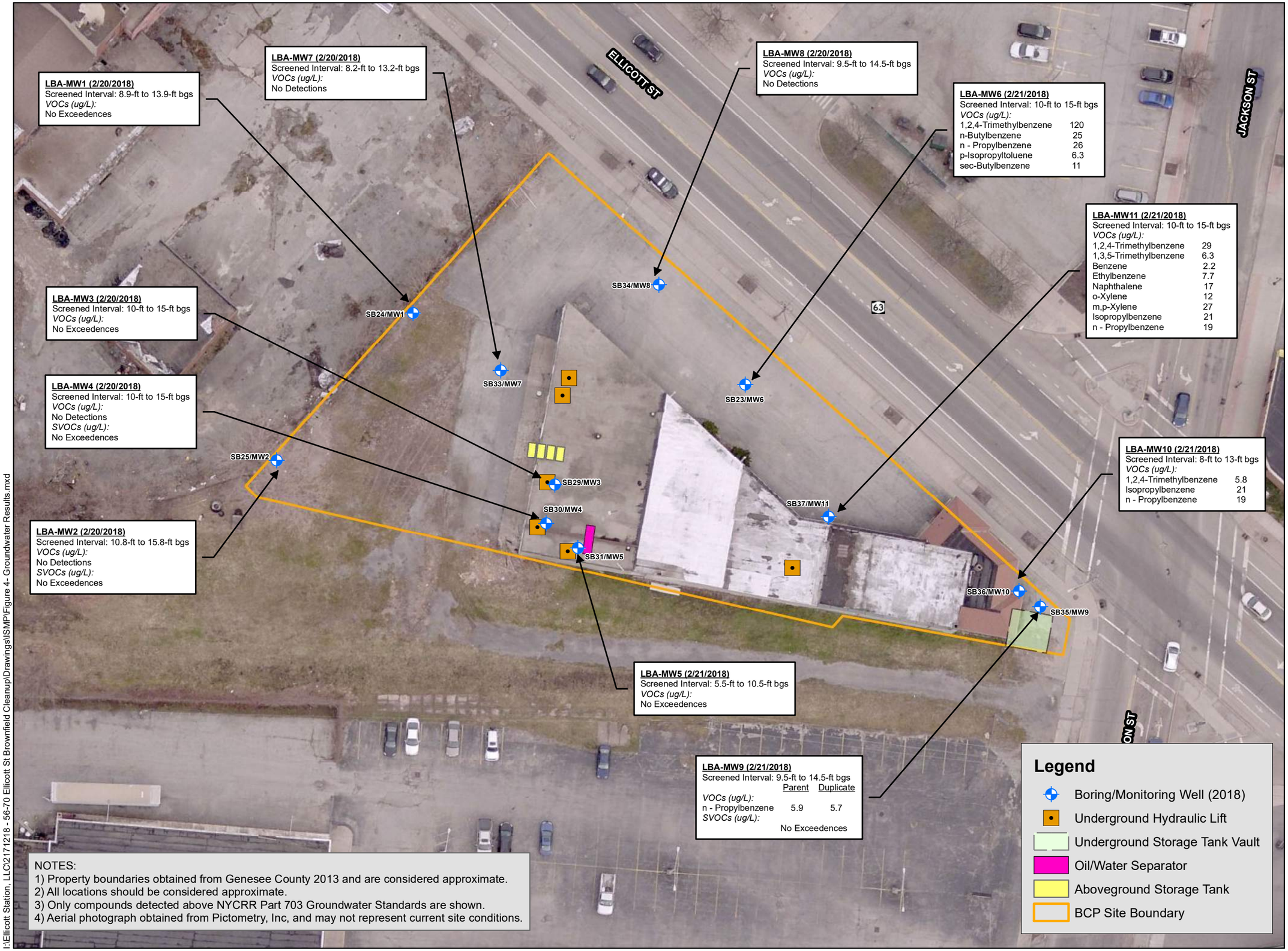
DRAWING NAME:
PREVIOUS SOIL TESTING AND RESULTS

PROJECT/DRAWING NUMBER:
2171218

FIGURE 3

6/20/2019

I:\Ellicott Station, LLC\2171218 - 56-70 Ellicott St Brownfield Cleanup\Drawings\SMP\Figure 3- Previous Testing with Callouts.mxd



I:\Ellicott Station, LLC\2171218 - 56-70 Ellicott St Brownfield Cleanup\Drawings\SMP\Figure 4- Groundwater Results.mxd

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Feet
1 inch = 40 feet

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PROJECT:
INTERIM SITE MANAGEMENT PLAN

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56-70 ELLICOTT STREET
BATAVIA, NY 14020

DRAWING NAME:
PREVIOUS GROUNDWATER TESTING AND RESULTS

PROJECT/DRAWING NUMBER:
2180745

FIGURE 4

6/20/2019

APPENDIX 1

LIST OF SITE CONTACTS

APPENDIX 1 – LIST OF SITE CONTACTS

Name	Phone/Email Address
Site Owner: Ellicott Station LLC Attn: Kevin Hays	716-332-5959 kevinh@savarinocompanies.com
Remedial Party: Ellicott Station LLC Attn: Kevin Hays	716-332-5959 kevinh@savarinocompanies.com
Qualified Environmental Professional Daniel Noll, LaBella Associates	585-295-6611 dnoll@labellapc.com
NYSDEC DER Project Manager: Todd Caffoe	585-226-5350 todd.caffoe@dec.ny.gov
NYSDEC Regional HW Engineer: Bernette Schilling	585-226-5315 bernette.schilling@dec.ny.gov
NYSDEC Site Control Kelly Lewandowski	518-402-9547 kelly.lewandowski@dec.ny.gov

APPENDIX 2

PHASE II ESA BORING AND WELL LOGS

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #1
SHEET 1 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #1
GROUND SURFACE ELEVATION
START DATE: 8/8/2014

TIME 10:30

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		15"		0-6" Asphalt 6-2' Black silty gravel (coarse, fine, sub-angular, loose, moist)	0	No odors or staining throughout entire boring.
2		15"		Black silty gravel (coarse, fine, sub-angular, loose, moist)	0	
4		20"		Grey clayey silt (medium plasticity, moist)	0	
6		20"		6-7' Grey clayey silt (medium plasticity, moist) 7-8' Brown silty sand (coarse, medium, fine, loose, moist)	0	
8		15"		Brown sand (medium, fine, loose, wet)	0	
10		15"		Brown gravelly sand (coarse, medium, fine, loose, wet)	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 12 feet due to groundwater interface.
				12 Feet	10 Feet	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #2
SHEET 2 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #2
GROUND SURFACE ELEVATION
START DATE: 8/6/2014

TIME 13:00

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		0"		Fill (asphalt, brick)	0	No odors or staining throughout entire boring.
2		12"		2-3' Fill (asphalt, brick) 3-4' Black gravelly silt (high plasticity, moist)	0	
4		16"		4-5' Grey clayey silt (high plasticity, moist) 5-6' Brown sandy silt (high plasticity, moist)	0	
6		16"		Brown sandy silt (high plasticity, moist)	0	
8		18"		Brown-black silty sand (coarse, medium, fine, loose, wet)	0	
10		18"		Grey gravelly silt (high plasticity, wet)	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 12 feet due to groundwater interface.
				12 feet	10 feet	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
66-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #3
SHEET 3 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #3
GROUND SURFACE ELEVATION
START DATE: 6/6/2014

TIME 13:15

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		0"		0-1' Asphalt 1-2' Fill (brick)	0	No odors or staining throughout entire boring.
2		0"		Fill (brick)	0	
4		24"		Grey-brown clayey silt (medium plasticity, moist)	0	
6		24"		Brown silty sand (medium, fine, loose, moist)	0	
8		18"		Brown silty sand (medium, fine, loose, moist)	0	
10		18"		Brown gravelly sand (coarse, medium, fine, loose, wet)	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 12 feet due to groundwater interface.
				12 feet	10 feet	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #4
SHEET 4 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #4
GROUND SURFACE ELEVATION
START DATE: 8/6/2014

TIME 13:55

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		13"		0-6" Asphalt 6-2' Brown gravelly silt (madium plasticity, moist)	0	No odors or staining.
2		13"		Brown gravelly silt (madium plasticity, moist)	0	No odors or staining.
4		20"		Brown gravelly silt (medium plasticity, moist)	0	No odors or staining.
6		20"		Black-brown silty sand (coarse, medium, fine, loose, moist)	0	No odors or staining.
8		20"		Grey-brown gravelly silt (mediumm plasticity, moist)	0	No odors or staining.
10		20"		Gray-brown silty sand (medium, fine, loose, wet)	580.1	Strong petroleum odors.
12		9"		Grey-brown silty sand (medium, fine, loose, wet)	21.3	Slight petroleum odors.
14		9"		Gray-brown silty sand (medium, fine, loose, wet)	0	No odors or staining.

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 16 feet due to petroleum odors in boring.
				16 feet	10 feet	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Uneddressed Percels at Ellicott Street
Betavle, New York

BORING: #5
SHEET 5 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LeBelle Environmentel, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #5
GROUND SURFACE ELEVATION
START DATE: 8/6/2014

TIME 14:20

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		12"		0-1' Asphalt 1-2' Bleck-brown eendy eilt (medium plesticity, moist)	0	No odors or steining throughout entire boring.
2		14"		Black-brown sandy silt (medium plasticity, moist)	0	
4		22"		Black-brown sendy silt (medium plesticity, moist)	0	
6		22"		Grey-brown clayey silt (medium pleeticity, moist)	0	
8		12"		Brown silty sand (coarse, medium, fine, loose, moist)	0	
10		12"		Grey gravelly send (coarse, medium, fine, loose, wet)	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 12 feet due to groundweter interfece.
				12 feet	10 feet	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Uneddressed Percels at Ellicott Street
Betevie, New York

BORING: #6
SHEET 6 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LeBelle Environmentel, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #6
GROUND SURFACE ELEVATION
START DATE: 8/6/2014

TIME 15:15

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		0"		Fill (asphalt, brick)	0	No odors or staining throughout entire boring.
2		0"		Fill (asphalt, brick)	0	
4		0"		Fill (asphalt, brick)	0	
6		0"		6-7' Fill (asphalt, brick)	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 7 feet due to densely packed rock fragments.
				7 feet		

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #7
SHEET 7 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #7
GROUND SURFACE ELEVATION
START DATE: 8/6/2014

TIME 15:30

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		12"		0-6" Asphalt 6-2' Brown sand (medium, fine, loose, moist)	0	No odors or staining throughout entire boring.
2		6"		2-3' Brown sand (medium, fine, loose, moist)	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring refusal at 3 feet; possible underground storage tank. Possible vent pipe and fill port proximate boring. Crowing in asphalt proximate boring.
				3 feet		

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #7A
SHEET 7A OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #7A
GROUND SURFACE ELEVATION
START DATE: 8/6/2014

TIME 15:40

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		6"		0-6" Asphalt 6-1' Brown sand (medium, fine, loose, moist)	0	No odors or staining throughout entire boring.

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring refusal at 1 foot; possible underground storage tank.
				1 foot		

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #7B
SHEET 7B OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #7B
GROUND SURFACE ELEVATION
START DATE: 8/6/2014

TIME 15:50

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		9"		0-6" Asphalt 6-2' Black gravelly silt (medium plasticity, moist)	0	No odors or staining.
2		9"		Black gravelly silt (medium plasticity, moist)	0	No odors or staining.
4		18"		Black gravelly silt (medium plasticity, moist)	0	No odors or staining.
6		18"		Grey clayey silt (low plasticity, moist)	0	No odors or staining.
8		13"		Grey clayey silt (medium plasticity, moist)	0	No odors or staining.
10		13"		Grey silty sand (medium, fine, loose, moist)	280.3 (10-11') and 0 (11-12')	Mild to strong gasoline odors (10-11'). No odors or staining (11-12').

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 12 feet due to groundwater interface.
				12 feet	10 feet	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #9
SHEET 9 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #9
GROUND SURFACE ELEVATION
START DATE: 8/6/2014

TIME 16:40

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE: SAMPLE DEPTH	SAMPLE: SAMPLE NO. AND RECOVERY	SAMPLE: STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		10"		Black gravelly silt (medium plasticity, moist)	0	No odors or staining throughout entire boring.
2		10"		Black gravelly silt (medium plasticity, moist)	0	
4		13"		Black gravelly silt (medium plasticity, moist)	0	
6		13"		Grey silty sand (medium, fine, loose, moist)	0	
8		13"		Grey silty sand (medium, fine, loose, moist)	0	
10		13"		Grey silt sand (coarse, medium, fine, loose, wet)	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 12 feet due to groundwater interface.
				12 feet	10 feet	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #10
SHEET 10 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #10
GROUND SURFACE ELEVATION
START DATE: 8/7/2014

TIME 8:15

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		8"		0-6" Asphalt 6-2' Black gravelly silt (low plasticity, moist)	0	No odors or staining.
2		8"		Black gravelly silt (low plasticity, moist)	0	No odors or staining.
4		22"		Brown silty sand (coarse, medium, fine, loose, moist)	0	No odors or staining.
6		22"		Grey clayey silt (medium plasticity, moist)	0	No odors or staining.
8		20"		Grey silty sand (coarse, medium, fine, loose, wet)	0.3	Slight gasoline odors.
10		20"		Grey gravelly silt (low plasticity, wet)	0	No odors or staining.

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 12 feet due to groundwater interface.
				12 feet	10 feet	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #11
SHEET 11 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #11
GROUND SURFACE ELEVATION
START DATE: 8/7/2014

TIME 9:00

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		10"		0-1' Asphalt 1-2' Black gravelly silt (low plasticity, moist)	0	No odors or staining throughout entire boring.
2		10"		Black gravelly silt (low plasticity, moist)	0	
4		21"		Grey-brown silty sand (coarse, medium, fine, loose, moist)	0	
6		21"		Grey clayey silt (medium plasticity, moist)	0	
8		19"		Brown-grey silty sand (coarse, medium, fine, loose, wet)	0	
10		19"		Grey gravelly sand (coarse, medium, fine, loose, wet)	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 12 feet due to groundwater interface.
				12 feet	10 feet	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #12
SHEET 12 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #12
GROUND SURFACE ELEVATION
START DATE: 8/7/2014

TIME 9:15

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		9"		Black gravelly silt (low plasticity, moist)	0	No odors or staining throughout entire boring.
2		9"		Black-brown silty sand (coarse, medium, fine, loose, moist)	0	
4		13"		Black-brown silty sand (coarse, medium, fine, loose, moist)	0	
6		13"		Black-brown silty sand (coarse, medium, fine, loose, moist)	0	
8		13"		Black-brown silty sand (coarse, medium, fine, loose, wet)	0	
10		13"		Grey gravelly sand (coarse, medium, fine, loose, wet)	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 12 feet due to groundwater interface.
				12 feet	10 feet	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #15
SHEET 15 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #15
GROUND SURFACE ELEVATION
START DATE: 8/7/2014

TIME 10:20

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE DEPTH	SAMPLE NO. AND RECOVERY	STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		18"		Black gravelly silt (low plasticity, moist)	0	No odors or staining throughout entire boring.
2		18"		Brown silty sand (coarse, medium, fine, loose, moist)	0	
4		18"		Brown silty sand (coarse, medium, fine, loose, moist)	0	
6		18"		Brown silty sand (coarse, medium, fine, loose, moist)	0	
8		20"		Brown silty sand (coarse, medium, fine, loose, wet)	0	
10		20"		Grey gravelly sand (medium, fine, loose, wet)	0	

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELASPED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Boring to 12 feet due to groundwater interface.
				12 feet	10 feet	

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LABELLA Associates, D.P.C.

300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
56-70 and Two Unaddressed Parcels at Ellicott Street
Batavia, New York

BORING: #16
SHEET 16 OF 22
JOB: 214755
CHKD BY: CK

CONTRACTOR:
DRILLER: LaBella Environmental, LLC
LABELLA REPRESENTATIVE: Chris Kibler

BORING LOCATION: #16
GROUND SURFACE ELEVATION
START DATE: 8/7/2014

TIME 10:50

TYPE OF DRILL RIG: Geoprobe 54 LT
AUGER SIZE AND TYPE:
OVERBURDEN SAMPING METHOD:

DRIVE SAMPLER TYPE:
INSIDE DIAMETR:
OTHER:

DEPTH	SAMPLE: SAMPLE DEPTH	SAMPLE: SAMPLE NO. AND RECOVERY	SAMPLE: STRATA CHANGE	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		15"		Brown-black silt (low plasticity, moist)	0	No odors or staining throughout entire boring.
2		15"		Brown sandy silt (low plasticity, moist)	0	
4		20"		Brown sandy silt (low plasticity, moist)	0	
6		20"		Brown silty sand (coarse, medium, fine, loose, moist)	0	
8		20"		Brown silty sand (coarse, medium, fine, loose, wet)	0	
10		20"		Grey silty sand (medium, fine, loose, wet)	0	

WATER LEVEL DATA: DATE	TIME	ELASPED TIME	DEPTH (FT): BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				12 feet	10 feet

NOTES:
Boring to 12 feet due to groundwater interface.

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-23/MW-6
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/8/2018 & 2/15/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/8/18
END DATE: 02/15/2018 (2nd attempt)
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				0-4"; asphalt; 0-0.75' asphalt/base		*Refusal at 3.5' bgs on concrete.
				4"-6", cmf gravel base		
1				0.5', brown cmf SAND, some silt, some cmf gravel, moist FILL		*No staining to 3.5' bgs.
	29" (first attempt)			0.75'; brown mf SAND and SILT, some mf gravel		
2				2'; same as above (SAA) with heavy rust staining	0' - 5' bgs:	*Coal Storage
				2.3', black cinder-like material 2" thick (coal-like) FILL	0 ppm	
3				2.5', brown silt, sand and cmf gravel FILL		
4	40"/60" 2nd attempt (5' cores)			4', c gravel/cobbles		
				4'-5', brown SILT, trace f sand, concrete fragment, moist FILL		
5			5' bgs	5', brown silty CLAY, trace f sand, iron mottling (Native?)		
6					6' bgs: 0 ppm	
7	39"		7' bgs	7', brown f sand and silt	7' bgs: 0 ppm	
8				8', brown f sand and silt with cmf gravel	8' bgs: 0 ppm	
9				9' cmf SAND, some silt, some gravel	9' bgs: 0 ppm	
10					10' bgs: 0 ppm	
				10.5'; saturated brown mf SAND and cmf gravel, little silt, saturated		
11					11' bgs: 885 ppm	
				11.5', grey discoloration, sheen on water, strong petroleium odor		
12					12' bgs: 1,175 ppm	
		1 for VOC		12.5'-13'; black discoloration, sheen, strong odor		
13		(12.5-13 bgs')		13', mf SAND, grey-brown, trace gravel	13' bgs: 1,389 ppm	
			13.5' bgs	13.5', gravelly, brown		
14					14' bgs: 12.3 ppm	
15					15' bgs: 0 ppm	
				Bottom of Exploration - 15-ft bgs		
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				16.0	

NOTES:
Abandoned after 2 attempts; frost making it difficult for rig. Collected soil from 0.5-3.5' bgs. Set well at 15' bgs; screen from 15'-10' bgs; sand to 8' bgs; TD = 15' 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
NA = Not Applicable
SAA = Same As Above

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: LBA-SB-23/MW-6

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-24/MW-1
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/8/18

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/8/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	33"			0-3"; topsoil/loam	0	2.5', wood
1				4", dark brown SILT, some cmf gravel, little f sand, moist FILL 1', same as above (SAA) with coal-like fragments (little)	0	
2				2'; olive-brown SILT, little clay, trace f sand, moist FILL?	0	
3			2' bgs	2.75', light brown mf SAND, some silt, little mf gravel 3.5', SILT wilth mf sand, little mf gravel, moist FILL	0	
4	40"		4.2' bgs	4.2', dark brown SILT, little clay with roots, trace mf gravel, trace f sand, moist NATIVE	0	
5						
6			6' bgs	6', grey-brown silty clay, iron mottling	4' - 8': 0 ppm	
7				7.3', orange SILT, little f sand, trace f gravel, most-wet, rust		
8						
9	23"		8.5' bgs	8.5', med. Brown mf SAND, some silt, some mf gravel, most-wet		no evidence of impairment
10				10'; saturated 10.5'; grey-brown cmf sand, little silt, little mf gravel (alluvial) rounded, saturated	8' - 12': 0 ppm	
11						
12						
13	44"				12' - 16': 0 ppm	
14			14' bgs	14', grey-brown SILT, little f sand, little mf gravel, saturated (sticky)		
15						
16				Bottom of Exploration - 16-ft bgs		
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Set 1" miniwell with 5' screen section; screen = 13.9 - 8.9'; sand = 13.9 = 8.9'
				16.0		

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
SAA = Same As Above	little = 10 - 20%	F = Fine	SR = Subrounded
	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-24/MW-1

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-25/MW-2
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/8/18

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/8/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE: SAMPLE RECOVERY (INCHES)	SAMPLE: SAMPLE NO. AND DEPTH	SAMPLE: STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	20"			0', dark brown SILT, little mf sand, little mf gravel, moist FILL, brick fragments	0' - 4': 0 ppm	
1				1', dark grey-brown SILT and mf SAND, some cmf gravel, moist, brick fragments, wire, slag, black deposits (coal-like), FILL, ash/cinder layer 1"-2" thick		
2						
3						
4				4.5', black lense (discoloration, no odor), SAA but some mf sand		
5						
6	36"		6' bgs	6', light brown SILT, some clay, trace f sand, iron mottling, moist (native?)	4' - 8': 0 ppm	
7				7.3', dark brown SILT and f sand, little mf gravel, most-wet		
8						
9	28"		8.5' bgs	8.5', grey-brown f SAND, little silt, trace f gravel, wet	8' - 12': 0 ppm	
10				10'; saturated		
11				11.5'; mf gravel lense, rounded		
12				12.1;' grey-brown cmf SAND, trace to little silt, little cmf gravel, saturated		
13	44"				12' - 16': 0 ppm	
14						
15						
16				Bottom of Exploration - 16-ft bgs		
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	set 1" well at 15.8'; screen interval = 15.8-10.8'; sand: 15.8-8'
				16.0		

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
SAA = Same As Above	little = 10 - 20%	F = Fine	SR = Subrounded
	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-25/MW-2

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-26
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/8/18

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/8/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	31"			0', grey-brown SILT and cmf gravel, little sand, moist FILL 0.75'; black SILT, some coal-like fragments, brick fragments, masonry fragments, little f gravel, little f sand, moist FILL	0' - 4': 0 ppm	Sample 0.75-3.5'
4	24"		3.5' bgs	3.5'; light brown SILT and mf sand, little cmf gravel and broken stone, moist FILL		sample top of silt/clay 5'-7'
6			6' bgs	6';dark brown SILT, some clay, organics, moist	4' - 8': 0 ppm	
7			7' bgs	7.', olive-grey silty CLAY, iron mottling, moist-wet 8.1', grey-brown f SAND, trace to little silt, saturated 9'; cmf SAND (as above) and little mf gravel, saturated	8' - 12': 0 ppm	
12	30"					
15				15.5'; as above with some cmf gravel		
16				Bottom of Exploration - 16-ft bgs		
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
				16'		

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

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	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-26

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-27
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/9/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				0-5", concrete		void (6") under conrete floor
1	9"			0.45'; cmf gravel, little mf sand, dry		
2			2' bgs		0' - 4': 0 ppm	possible metals, SVOC sample
3				37.25"; with black coal-like fragments, brick fragments		
4				4'; brown SILT and cmf sand, some cmf gravel, most, FILL		
5			FILL			
6	20"				4' - 8': 0 ppm	
7						
8						
9						
10	41"			10.3'; with slag (FILL), black coal-like fragments	8' - 12': 0 ppm	
11			10.5' bgs	10.5'; brown mf SAND, little mf gravel (rounded to sun-angular), saturated, native		
12						
13				13'; f SAND, little cmf gravel, saturated	12-16': 0 ppm	
14	25"					
15				15.5'; as above with some cmf gravel		
16				Bottom of Exploration - 16-ft bgs		
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
				16'		

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

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and = 35 - 50%
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R = Rounded
A = Angular
SR = Subrounded
SA = Subangular

BORING: LBA-SB-27

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-28
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/9/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	17"			0-5", concrete	0' - 1.8': 0 ppm	Refusal at 1.8' (first atttempt)
1				0.45'; brown SILT and cmf gravel, some mf sand, moist FILL		
2				1'; black cinder-SILT-like material, coal-lilke fragments, brick, FILL	1': 0 ppm	
3				**Re-drill 5' West of lift**		
4				0.5'; brown SILT and mf sand, some cmf gravel, brick frags, moist	2': 1.7 ppm	
5				2', black cinder-like/coal-like fragments, moist		
6	N/A				3': 3.4 ppm	
7					3.5': 4.9 ppm	sweet odor (solvent, naptha.)?
8						
9						
10	N/A					
11						
12						
13						
14	N/A					
15						
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Refusal at 1.8' (1st attempt); 2nd attempt = refusal at 3.7'; no concrete or stone in shoe
				3.7'		

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
SAA = Same As Above	little = 10 - 20%	F = Fine	SR = Subrounded
	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-28

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-29/MW-3
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/9/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	35"	1-10'		0-5", concrete floor 0.45'; dark brown SILT, some mf sand, some cmf gravel, trace clay, black coal-like fragments, brick fragments, moist FILL	0' - 4': 0 ppm	At 4', oil-like odor
4	37"		4'	4'; black SILT, little f sand, little mf gravel, some clay, moist, oil-like odor	4' - 8': 0 ppm	
8	40"		8'	8'; light grey SILT, some clay, some f sand, saturated, sheen on GW, oil-like odor	8' - 12': 0 ppm	
11	44"		11'	11'; grey, cmf SAND and silt, little cmf gravel, saturated grades from cmf SAND to f SAND at 12' to cmf SAND at 14'		
15			14.8'	14.8'; grey SILT, some clay, little f sand, saturated		
16				Bottom of Exploration - 16-ft bgs		
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				16'	

NOTES:
Installed well at 15'; Screen = 15-10'; sand = 15-8'

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
NA = Not Applicable
SAA = Same As Above

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: LBA-SB-29/MW-3

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-30/MW-4
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/9/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	30"	2'		0-5", black and brown SILT and cmf sand, some cmf gravel, black coal-like fragments, brick, moist FILL	0' - 4': 0 ppm	Collected black sample at 2' bgs.
1						
2						
3						
4			4.5'	4.5'; grey-black SILT, some f sand, little f gravel, saturated (perched), faint oil-like odor		
5						
6	29"		6'	6'; olive-grey silty clay, trace f sand, med. Plasticity, iron mottling (native), wet	4' - 8': 0 ppm	
7			6.75'	6.75'; grey-brown f SAND and silt		
8						
9				9.75'; saturated; sheen on GW, oil-like odor		
10	30"			10.5'; CLAY lense (grey)	8' - 12': 0 ppm (?)	
11				11'; f SAND (grey-brown)		
12				11.5'; cmf SAND, some silt, little mf gravel (rounded to sub-angular), saturated grades to mf sand		
13						
14	44"				12' - 16': 0 ppm	
15				15'; light grey-brown silt, some clay, little f sand, saturated, no sheen		
16				Bottom of Exploration - 16-ft bgs		
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				16'	

NOTES:
Installed 1" miniwell to 15'; Screen = 15-10'; sand = 15-8'; bentonite

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
SAA = Same As Above

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: LBA-SB-30/MW-4

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-31/MW-5
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/9/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0–3	25"			0-5", black and brown SILT and cmf sand, some cmf gravel, black coal-like fragments, brick, moist FILL	0' - 4': 0 ppm	Collected black sample at 2' bgs.
4–5	36"			4.5'; grey-black SILT, some f sand, little f gravel, saturated (perched), faint oil-like odor		
6			6'	6'; olive-grey silty clay, trace f sand, med. Plasticity, iron mottling (native), wet	4' - 8': 0 ppm	
7				6.75'; grey-brown f SAND and silt		
8			7.5'	7.5'; sandy SILT		
9–10	27"	10'		9.5'; saturated black cmf SAND and silt 10'; light grey f SAND and silt, saturated, no sheen on GW, oily odor	9.5': 3.5 ppm 10': 3.8 ppm 10.5': 2.5 ppm 11': 0 ppm	
11				Refusal at 11' bgs		
12–20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				11'	

NOTES:
Refusal at 11' bgs; installed 1" miniwell; Screen = 10-5.5'; sand to 3'; bentonite to floor (caved 0.5')

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
SAA = Same As Above

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: LBA-SB-31/MW-5

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-32
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/9/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	2"			0-6"; concrete floor		
1				cmf gravel, no soil recovery; refusal on apparent concrete slab at 1.5'	0' - 1.5': 0 ppm (bore-hole)	
2				Refusal at second concrete slab at 1.5' bgs		
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				1.5'	

NOTES:
No soil recovered from 0.5-1.5'

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
SAA = Same As Above

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: LBA-SB-32

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-33/MW-7
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/15/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	29"			0-5"; asphalt/base 0.5'; brown mf SAND, some silt, some cmf gravel, moist, FILL	0' - 4': 0 ppm	Collected black sample at 2' bgs.
1						
2						
3				2.5'; concrete to 4' bgs		
4				4': dark brown f SAND and silt, little mf gravel, moist FILL		
5	42"		5.2'	4.9'; brick 5.2'; olive-light grey silty CLAY, iron mottling, moist native	4' - 8': 0 ppm	
6						
7						
8				Grades to:		
9			8.8'	8.8'; grey-brown cmf SAND; some cmf gravel, little silt, moist	8' - 12': 0 ppm	
10				10'; saturated		
11	37"		11'	11-11.5'; light grey SILT and f sand, little mf gravel, trace dlay, saturated	12' - 16': 0 ppm	
12						
13						
14						
15				Bottom of Exploration - 15-ft bgs		
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				15'	

NOTES:
10'-15'; sleeve stock in core barrel, extruder shredded sleeve, therefore exact depths from 10' to 15' bgs are approximate; Installed well; 13.2 - 8.2' Screen; sand to 6"; bentonite

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
SAA = Same As Above	little = 10 - 20%	F = Fine	SR = Subrounded
	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-33/MW-7

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-34/MW-8
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 2/15/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	42"	11'		0-5"; asphalt/base 0.5'; brown mf SAND and silt, some cmf gravel, moist FILL	0' - 5': 0 ppm	Collected black sample at 2' bgs.
1						
2						
3				2.8'; black cinder-like FILL, silt mixed with silt/sand		
4				4': bone fragment		
5			4.5'	4.5'; olive-grey silty clay, iron mottling, moist	5' - 10': 0 ppm	
6						
7	42"					
8						
9			8.5'	8.5'; mf SAND, little silt, trace f gravel, moist-wet	10' - 15': 0 ppm	
10				10.5'; saturated		
11				11'; 3" zone of grey discoloration, no odor		
12	39"					
13						
14			13.8'	13.8'; light brown SILT, little f sand, trace clay, saturated, "sticky"		
15				Bottom of Exploration - 15-ft bgs		
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	well MW-8 to 14.5-9.5' (screen); sand 14.5-7'; bentonite to 0.5'
				15'		

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
SAA = Same As Above	little = 10 - 20%	F = Fine	SR = Subrounded
	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-34/MW-8

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-35/MW-9
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/15/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				0-0.3'; asphalt/base		
1	28"		0.3'	0.3'; brown cmf SAND, some silt, some cmf gravel, moist FILL	0' - 5': 0 ppm	
2						
3						
4						
5			5.5'	5.5'; black cinder-like FILL, slag	6': 0 ppm	
6	19"					
7				7'; brick, concrete FILL	7': 0 ppm	
8				8'-9'; wood, grey discoloration and gasoline-type odor (strong)	8': 0 ppm	
9					9': 355 ppm	gasoline odor
10	38"	10.5'	10'	10'; grey f SAND, some silt, strong petroleum odor, saturated, native	10.5': 256.5 ppm	
11					11': 1,783 ppm	
12					12': 984 ppm	
13				13'; discoloration & odor gone, light brown cmf SAND, some mf gravel, little silt, saturated native.	13': 68 ppm	
14					13.75': 31 ppm 14': 0 ppm	
15				Bottom of Exploration - 15-ft bgs	15': 0 ppm	
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	Set well MW-9 at 14.5; screen 14.5-9.5'; sand 14.5 - 7'
				15'		

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

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	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-35/MW-9

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-36/MW-10
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVI E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/15/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	36"	9'		0-1'; asphalt/base 1'; concrete 1.5'; brown SILT, some cmf sand, some mf gravel, brick, cinder-like material (trace)	0' - 5': 0 ppm	
5	30"			4.9'; piece of slag-like material, brick, FILL	6': 0 ppm 7': 7.8 ppm	
8	41"		7.5'	7.5-8'; grey f SAND, little silt, trace f gravel (round), moist-wet (native), petrol. Odor at 8' 10.5'; saturated	8': 1,383 ppm 9': 1,585 ppm 10': 537 ppm 11': 34 ppm 12': 15 ppm	Strong gasoline odor & sheen
13			13'	13'; cmf SAND, some cmf gravel (rounded)	13': 149 ppm 14': 122 ppm	
15				Bottom of Exploration - 15-ft bgs	15': 0.6 ppm	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
				15'	

NOTES:
Set well at 13'; screen 13-8'; sand to 5', bentonite to grade; PVC will not go past sand/gravel layer.

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
SAA = Same As Above

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

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-37/MW-11
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/15/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	36"	11'		0-0.5'; asphalt/base 0.5-1'; light-grey crusher-run type base 1'; black cinder/f gravel/FILL, little slag, silt	0' - 5': 0 ppm	Strong gasoline odor
3			3'	3'; coal-like material (black)		
4			4'	4'; brown/black slag/cinder/brick FILL, dry-moist		
5	36"		5.5'	5.5'; olive-grey SILT, trace f sand, iron mottling, moist	5.5': 21.4 ppm	
7					7': 18.7 ppm	
8					8': 24.6 ppm	
9			8.5'	10.5'; saturated, sheen, odor	9': 178.9 ppm	
10	47"				10': 131 ppm	
11					11': 140 ppm	
12					12': 151 ppm	
13					13': 7.7 ppm	
14			13.5'	13.5'; cmf SAND, some mf gravel, rust stained, little silt	14': 0 ppm	
15				Bottom of Exploration - 15-ft bgs	15': 0 ppm	
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	set well at 15'; screen 15-10'; sand to 5'.
				15'		

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
SAA = Same As Above	little = 10 - 20%	F = Fine	SR = Subrounded
	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-37/MW-11

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-38
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 2/15/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	32"	10.5'		0-0.5'; asphalt/base		
1				0.5-1'; crusher-run silt/stone	0.5': 0	
					1': 3.7	
2				2'; concrete	2': 4.1	
3			3'	3-3.5'; black cinder/brick/slag FILL	3': 0	
4			4.5'	4.5'; brown/orange-brown mf SAND, little cmf gravel FILL	4': 0	
5	20"				5': 0	
				5.5-6'; wood		
6					6': 0	
7			7'	7'; brown SILT, some clay, little f sand, trace gravel		
8					7-10': 0	
9			9'	9'; orange brown mf sand, some silt, littl mf gravel, moist-wet		
10	38"		10.5'	10.5'; saturated, not orange but grey-brown	10.5': 507	
11				11'; gas odor, grey mf SAND	11': 140 ppm	gas odor
12				12'; sheen	12': 64 ppm	
13					13': 7.3 ppm	
14					14': 6.7 ppm	
15				Bottom of Exploration - 15-ft bgs	15': 1.0 ppm	
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
				15'		

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
SAA = Same As Above	little = 10 - 20%	F = Fine	SR = Subrounded
	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-38

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-39
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/15/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				0-0.3'; asphalt		
1				0.3-1'; crushed stone base		nearly no recovery
2	12"		1'	1'; black mf SAND, cinder, slag, little silt, wood	0-5': 0	
3						
4			4.5'	4.5'; brown/orange-brown mf SAND, little cmf gravel FILL	0	
5						
6				5.5-6'; wood	0	
7	14"		7'	7'; brown SILT, some clay, little f sand, trace gravel		
8					5-10': 0	nearly no recovery
9			9'			
10				10.5'; saturated	10.5': 27	
11		11'			11': 758 ppm	strong petrol. odor
12	31"				12': 228 ppm	
13					13': 713 ppm	
14				14'; light grey-brown	14': 0.8 ppm	
15				Bottom of Exploration - 15-ft bgs	15': 0.6 ppm	
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
				15'		

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

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NA = Not Applicable	some = 20 - 35%	M = Medium	A = Angular
SAA = Same As Above	little = 10 - 20%	F = Fine	SR = Subrounded
	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-39

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-40
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/15/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVI E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/15/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	45"			Grey-brown SILT and cmf gravel, little sand, moist FILL	1': 0	
1						
2				Black SILT, some coal-like fragments, brick fragments, masonry fragments, little f gravel, little f sand, moist FILL	2': 0.5	
3					3': 0.3	
4					4': 0.1	
5	40"		5.5'	5.5'; silt/clay native	5': 0.4	
6						
7						
8					6-10': 0	
9			9'	9'; f sand		
10	41"					
11				10.5'; grey discoloration, sheen, saturated	11': 158 ppm	strong gasoline odor
12					12': 457 ppm	
13					13': 19 ppm	
14				13.5'; brown f SAND, little silt, trace f gravel	14': 8.2 ppm	
15				Bottom of Exploration - 15-ft bgs	15': 0 ppm	
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
				15'		

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
SAA = Same As Above	little = 10 - 20%	F = Fine	SR = Subrounded
	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-40

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-41
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/15/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVI E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/15/18 END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE: SAMPLE RECOVERY (INCHES)	SAMPLE: SAMPLE NO. AND DEPTH	SAMPLE: STRATA CHANGE (FEET BGS)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	40"			Grey-brown SILT and cmf gravel, little sand, moist FILL		
1						
2				Black SILT, some coal-like fragments, brick fragments, masonry fragments, little f gravel, little f sand, moist FILL		
3					0-5': 0	
4				4'; black-brown cinder, coal fragment, fill		
5				4.9'; dark brown SILT, trace f sand, FILL		
6					6': 0.8	
7	48"		6.6'	6.6'; olive-grey silty CLAY, moist, native	7': 0	
8					8': 0	
9			8.7'	8.7'; silt/clay transitions to brown mf SAND, little mf gravel	9': 0	
10	?				10': 0	
11				sleeve was stuck in 10-15' macrocore; cannot remove sleeve; 0.2 ppm in barrel; PID down open borehole = 0.6 ppm; screen 14-15" of soil that fell out of sleeve; no odor or discoloration; 0 ppm		strong gasoline odor
12						
13					10.5-14': NA	
14						
15				Bottom of Exploration - 15-ft bgs	14-15': 0	
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
				15'		

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
SAA = Same As Above	little = 10 - 20%	F = Fine	SR = Subrounded
	trace = 1 - 10%	VF = Very Fine	SA = Subangular

BORING: LBA-SB-41

LaBella
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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Supplemental Subsurface Investigation
Location: 56-70 Ellicott Street
Batavia, NY 14020
Client: Ellicott Station, LLC

BORING: LBA-SB-42
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/9/2018

CONTRACTOR: LaBella Env. LLC
DRILLER:
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 2/9/18
END DATE:
TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe 54LT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push
DRIVE SAMPLER TYPE: Macrocore
INSIDE DIAMETER: 2"
OTHER:

DEPTH (FEET BGS)	SAMPLE			VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET BGS)			
0	0"			0-6"; concrete floor cmf gravel, no soil recovery		
1						
2				Refusal at 1.4' on apparent second concrete slab		
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	No soil recovered from 0.5-1.5'.
				1.4'		

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
SAA = Same As Above

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: LBA-SB-42

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Ellicott Station East
Location:
56-70 Ellicott Street
Batavia, NY 14020

TEST PIT: LBA-SS01
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/6/18

CONTRACTOR: LaBella Environmetal, LLC
OPERATOR:
LABELLA REPRESENTATIVE: Eric Detweiler

TEST PIT LOCATION: see map
GROUND SURFACE ELEVATION NA
START DATE: 2/6/18

DATUM: NA
TYPE OF EQUIPMENT: Excavator

DEPTH (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0			0'; black SILT, some cmf SAND, some cmf gravel, moist, brick fragments, FILL coal-like fragments	0.0 - 0.5	
1			1.8'; grey ash/cinder layer intermixed with fill	0.0 - 1.0	
2			2.0'; grey-brown SILT, some clay, little f sand, trace f gravel, iron mottling, moist, native	0.0 - 2.0	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

WATER LEVEL DATA			DEPTH (FT)	
DATE	TIME	ELAPSED TIME	BOTTOM OF TEST PIT	GROUNDWATER ENCOUNTERED
NA	NA	NA	2.0-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

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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

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Ellicott Station East
Location:
56-70 Ellicott Street
Batavia, NY 14020

TEST PIT: LBA-SS02
SHEET 1 OF 1
JOB: 2180745
CHKD BY:
DATE: 2/6/18

CONTRACTOR: LaBella Environmetal, LLC
OPERATOR:
LABELLA REPRESENTATIVE: Eric Detweiler

TEST PIT LOCATION: see map
GROUND SURFACE ELEVATION NA
START DATE: 2/6/18

DATUM: NA
TYPE OF EQUIPMENT: Excavator

DEPTH (FEET)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0			0'; grey-brown mf SAND, some silt, some cmf gravel, dry with white flecks, FILL		
1			1.0'; dark grey-brown SILT and mf SAND, some cmf gravel, moist, brick fragments, wire, black deposits (coal-like), FILL	0 - 2.5'	
2			2.0'; same as above with ash/cinder layer 1"-2" thick, slag, brick		
			2.5'; med. brown cmf SAND, little silt, trace cobbles, some cmf gravel, moist, native		
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

WATER LEVEL DATA			DEPTH (FT)	
DATE	TIME	ELAPSED TIME	BOTTOM OF TEST PIT	GROUNDWATER ENCOUNTERED
NA	NA	NA	2.5-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

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some = 20 - 35%
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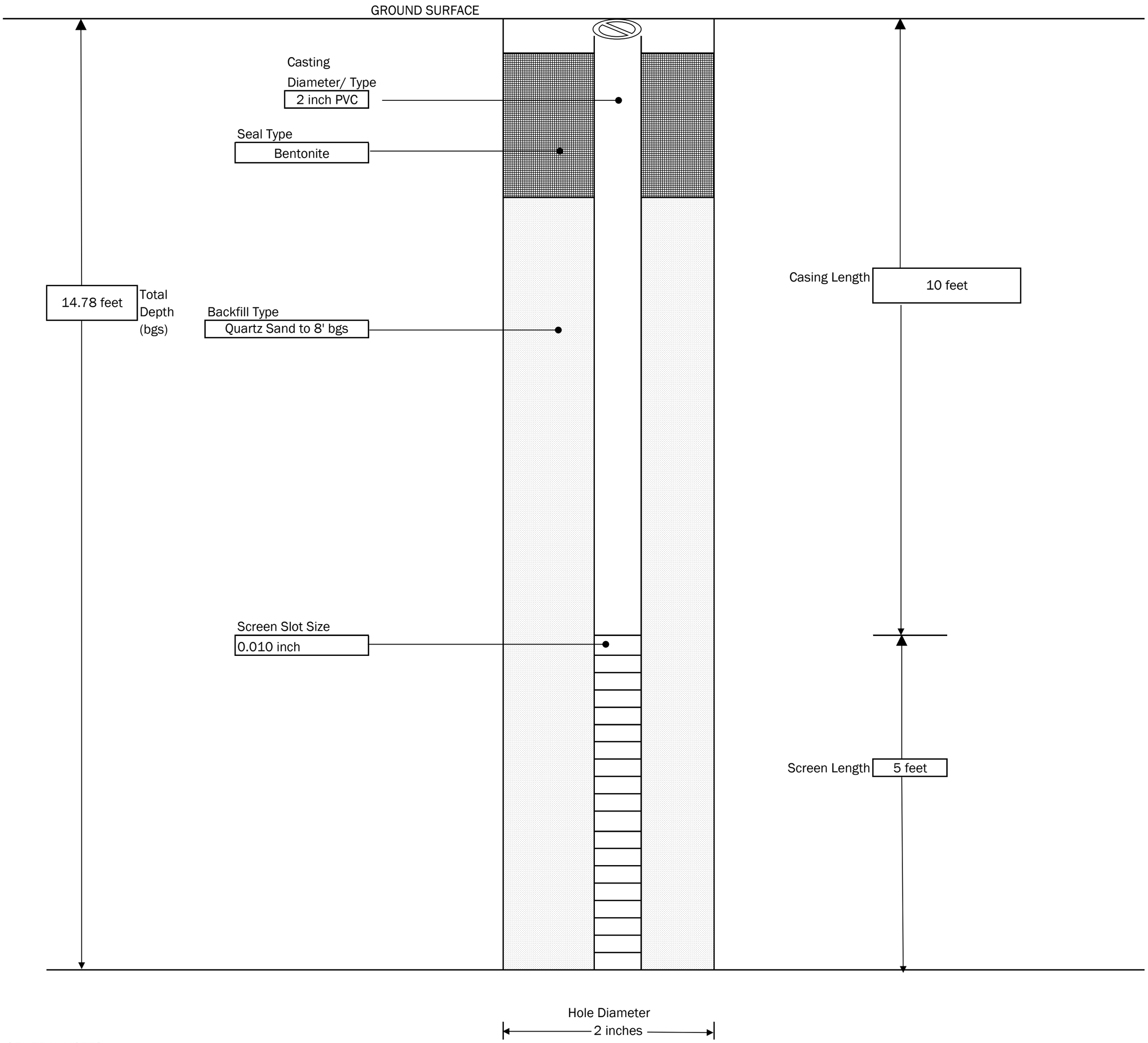
C = Coarse
M = Medium
F = Fine
VF = Very Fine

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

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Ellicott Station East 56-70 Ellicott Street, Batavia, NY 14020	**MONITORING WELL :** LBA-SB-23/MW-6 **SHEET** 1 OF 1 **JOB # 2180745**
CONTRACTOR: LaBella Environmental LLC DRILLER: LABELLA REPRESENTATIVE: Eric Detweiler	BORING LOCATION: SB-23 MW-6 GROUND SURFACE ELEVATION: NA DATUM: NA START DATE: 2/8/18 END DATE: 02/15/2018 (2nd attempt)	TYPE OF DRILL RIG: Geoprobe 54LT AUGER SIZE AND TYPE: NA Macrocore

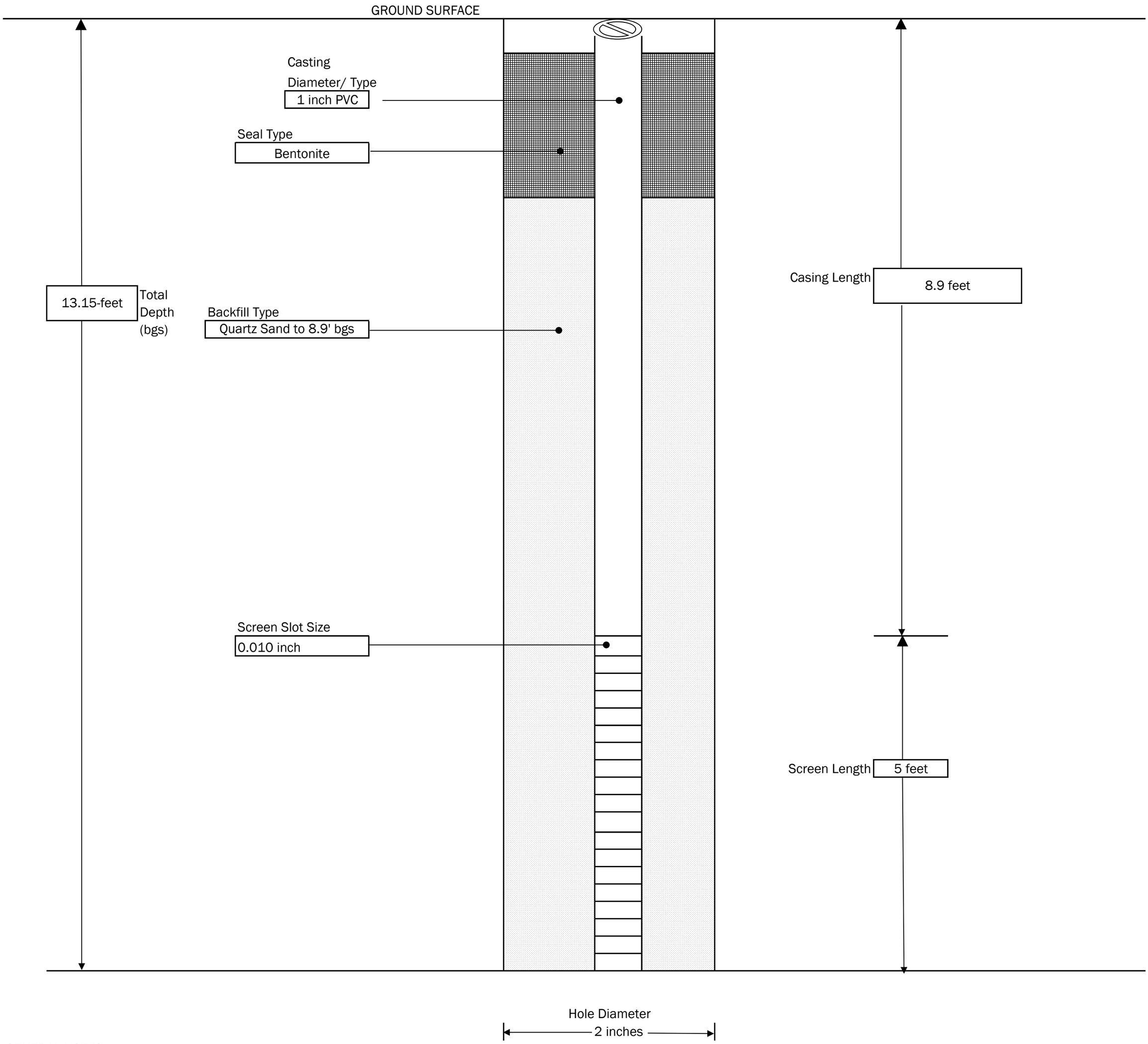


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Ellicott Station East 56-70 Ellicott Street, Batavia, NY 14020	**MONITORING WELL :** LBA-SB-24 MW-1 **SHEET** 1 OF 1 **JOB # 2180745**

CONTRACTOR: LaBella Environmental LLC	BORING LOCATION:	SB-24 MW-1			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE: Eric Detweiler	START DATE:	2/8/18		END DATE:		Macrocore

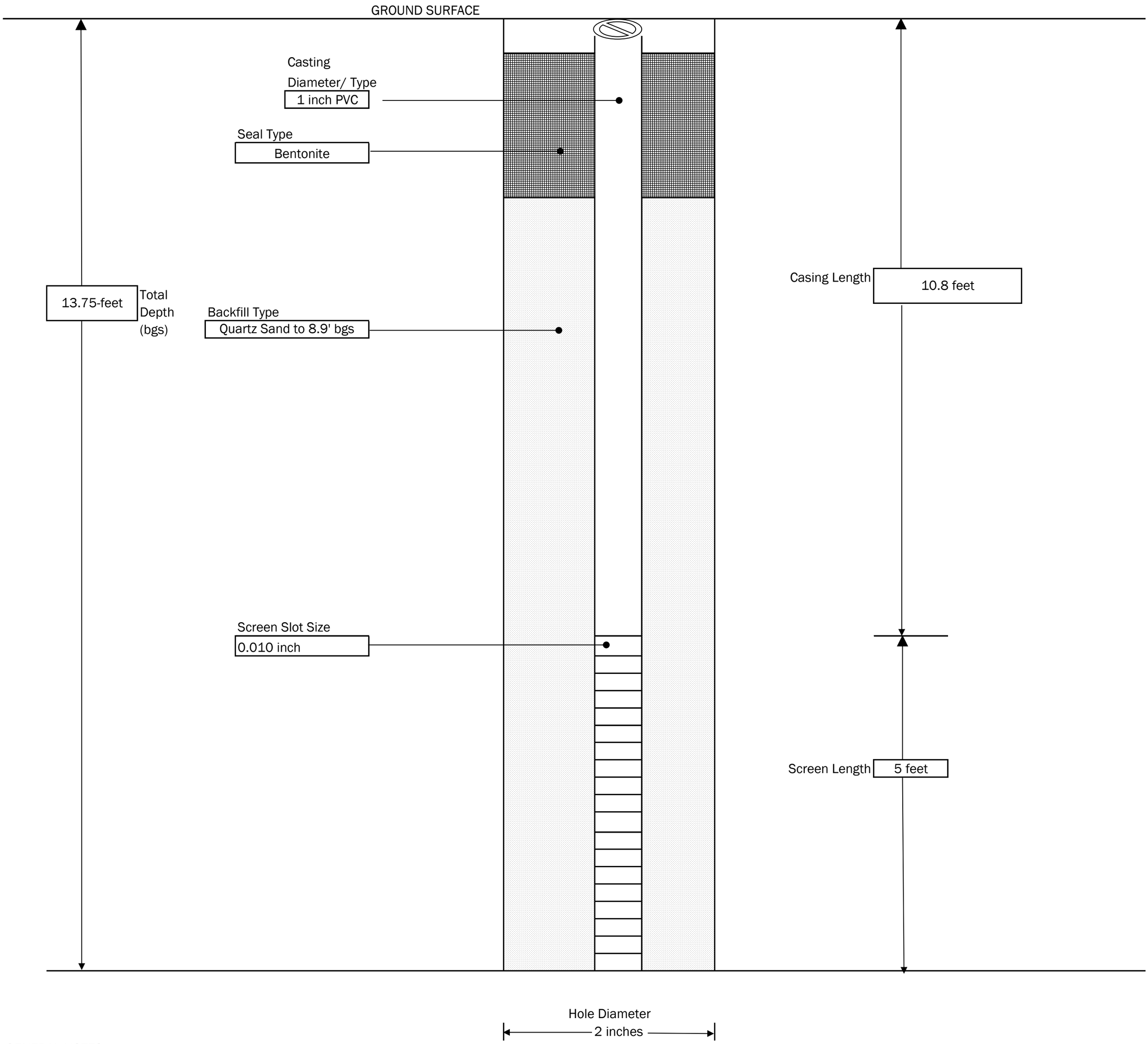


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Ellicott Station East 56-70 Ellicott Street, Batavia, NY 14020	**MONITORING WELL :** LBA-SB-25 MW-2 **SHEET** 1 OF 1 **JOB # 2180745**

CONTRACTOR: LaBella Environmental LLC	BORING LOCATION:	SB-25 MW-2			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE: Eric Detweiler	START DATE:	2/8/18		END DATE:		Macrocore

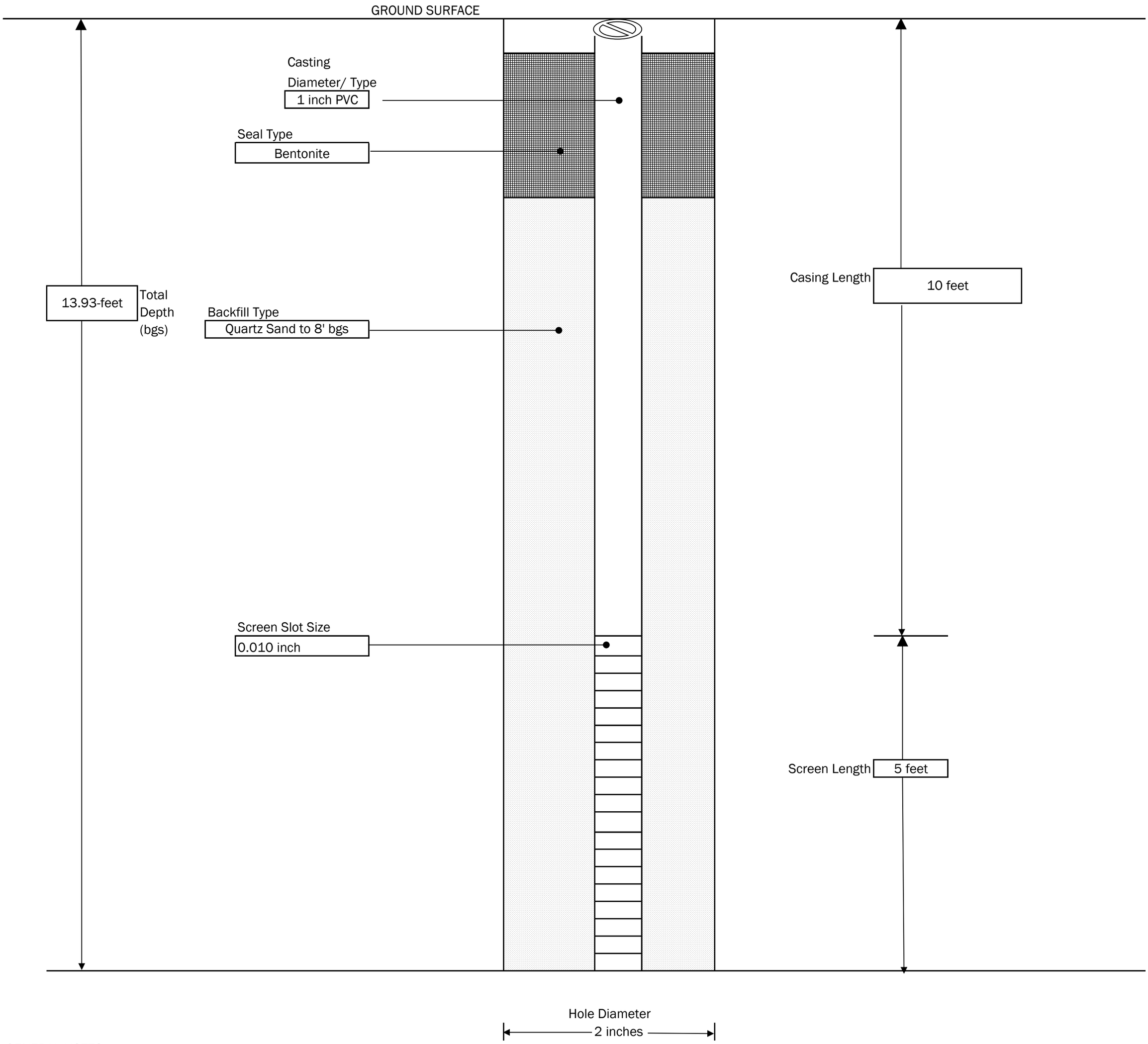


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Ellicott Station East 56-70 Ellicott Street, Batavia, NY 14020	**MONITORING WELL :** LBA-SB-29 MW-3 **SHEET** 1 OF 1 **JOB # 2180745**

CONTRACTOR: LaBella Environmental LLC	BORING LOCATION:	SB-29 MW-3			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE: Eric Detweiler	START DATE:	2/9/18		END DATE:		Macrocore

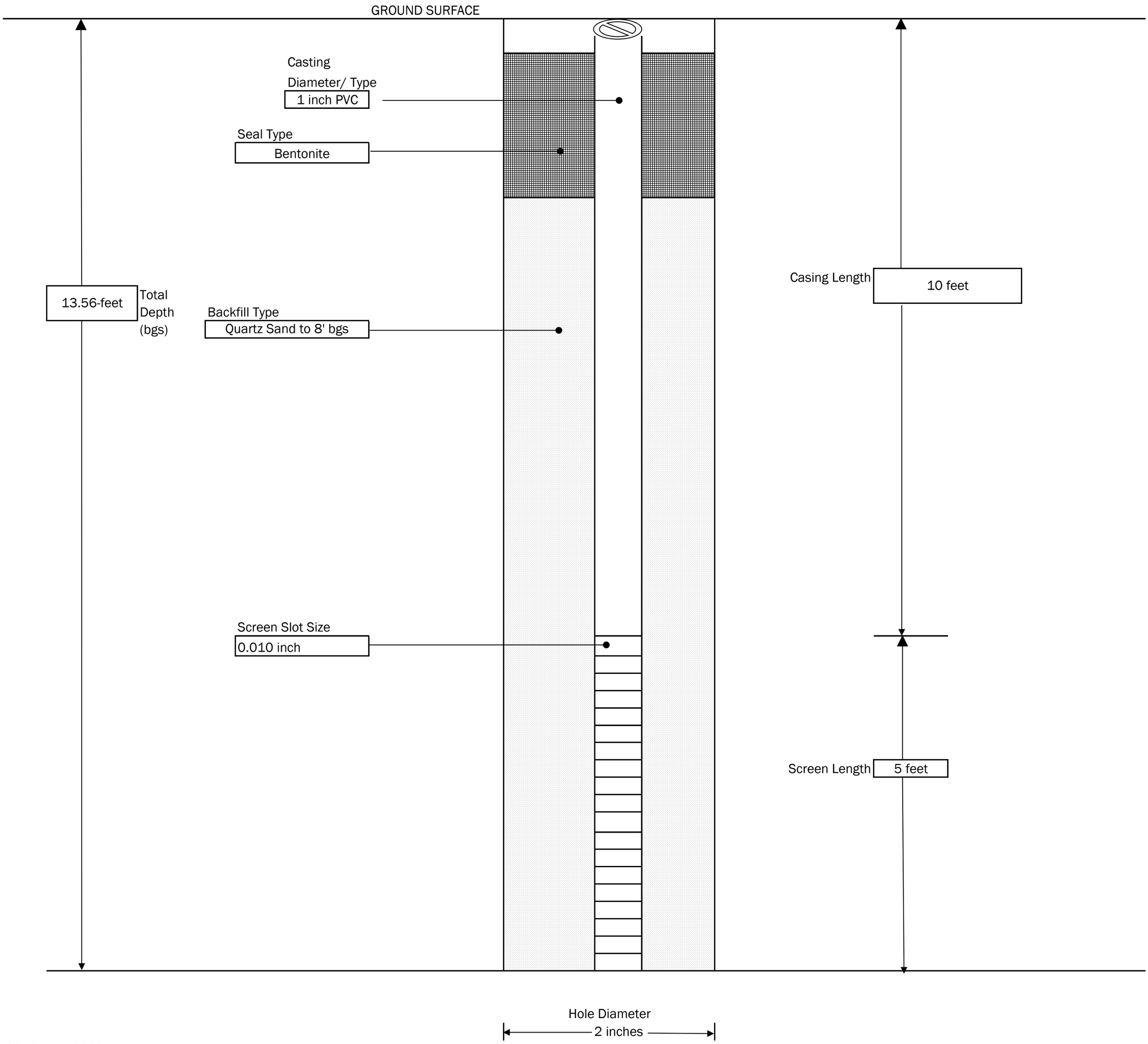


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Ellicott Station East 56-70 Ellicott Street, Batavia, NY 14020	**MONITORING WELL :** LBA-SB-30 MW-4 **SHEET** 1 OF 1 **JOB # 2180745**

CONTRACTOR: LaBella Environmental LLC	BORING LOCATION:	SB-30 MW-4			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE: Eric Detweiler	START DATE:	2/9/18		END DATE:		Macrocore

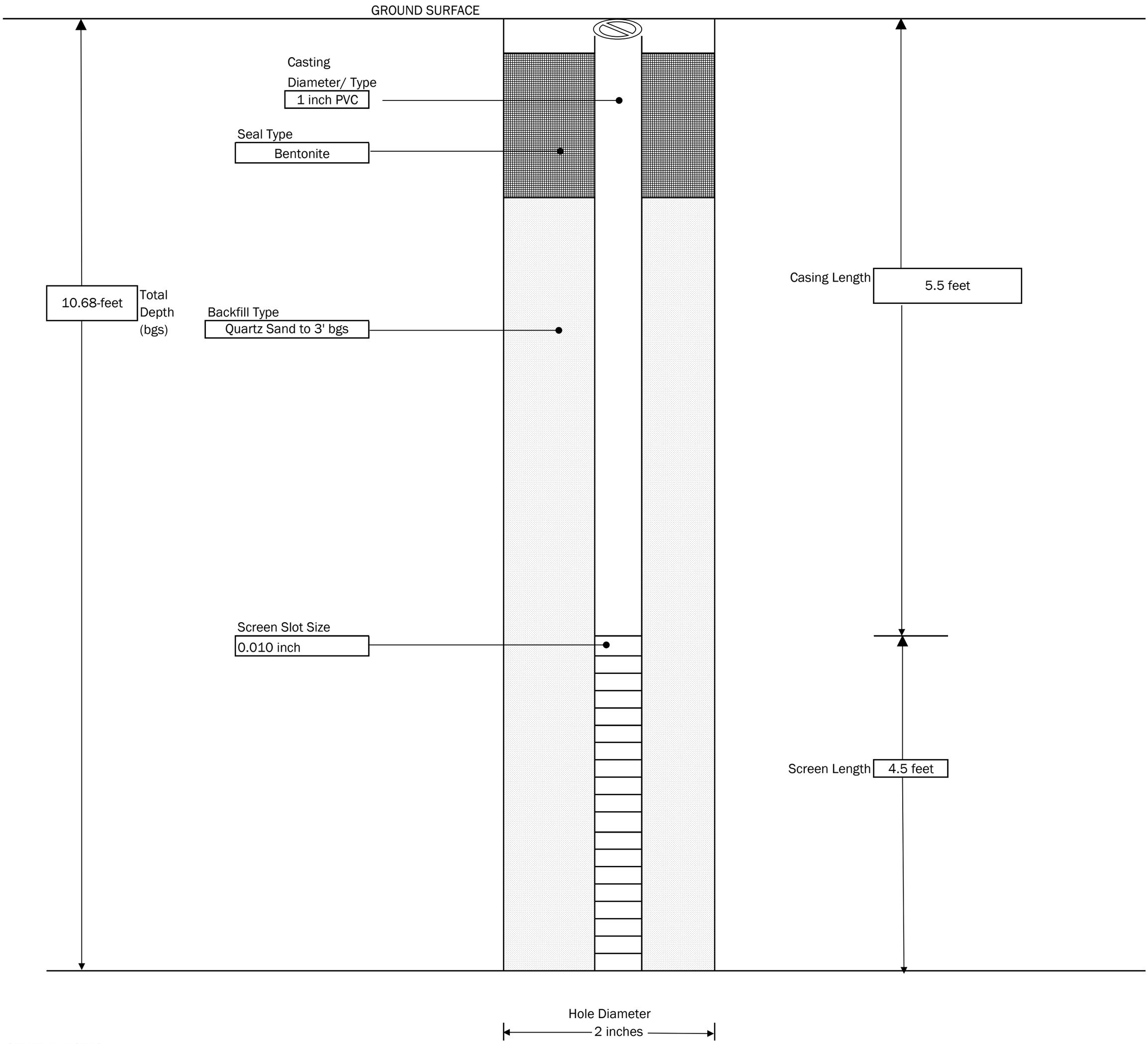


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Ellicott Station East 56-70 Ellicott Street, Batavia, NY 14020	**MONITORING WELL :** LBA-SB-31 MW-5 **SHEET** 1 OF 1 **JOB # 2180745**

CONTRACTOR: LaBella Environmental LLC	BORING LOCATION:	SB-31 MW-5			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE: Eric Detweiler	START DATE:	2/9/18		END DATE:		Macrocore

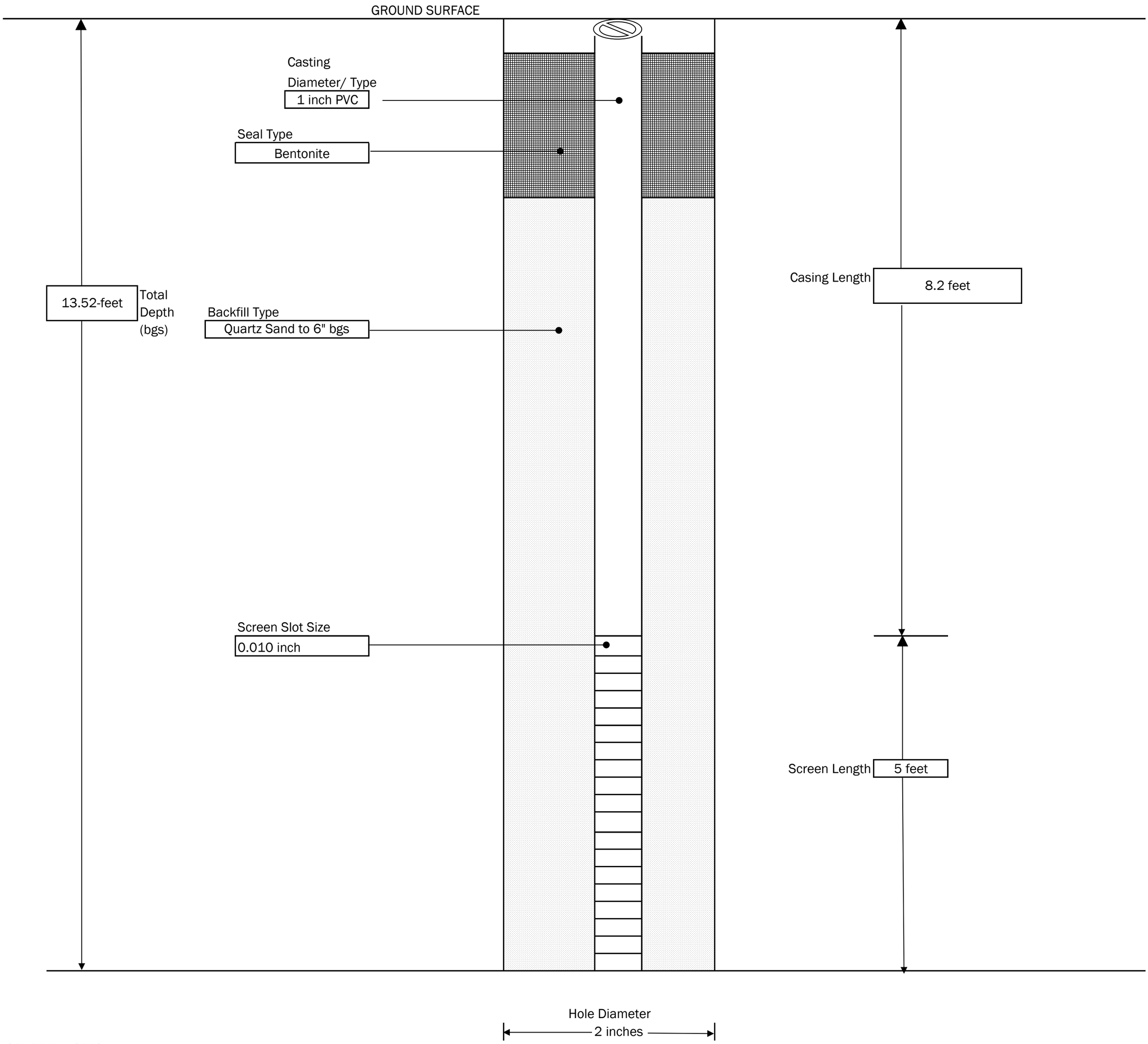


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Ellicott Station East 56-70 Ellicott Street, Batavia, NY 14020	**MONITORING WELL :** LBA-SB-33 MW-7 **SHEET** 1 OF 1 **JOB # 2180745**

CONTRACTOR: LaBella Environmental LLC	BORING LOCATION:	SB-33 MW-7			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE: Eric Detweiler	START DATE:	2/9/18		END DATE:		Macrocore

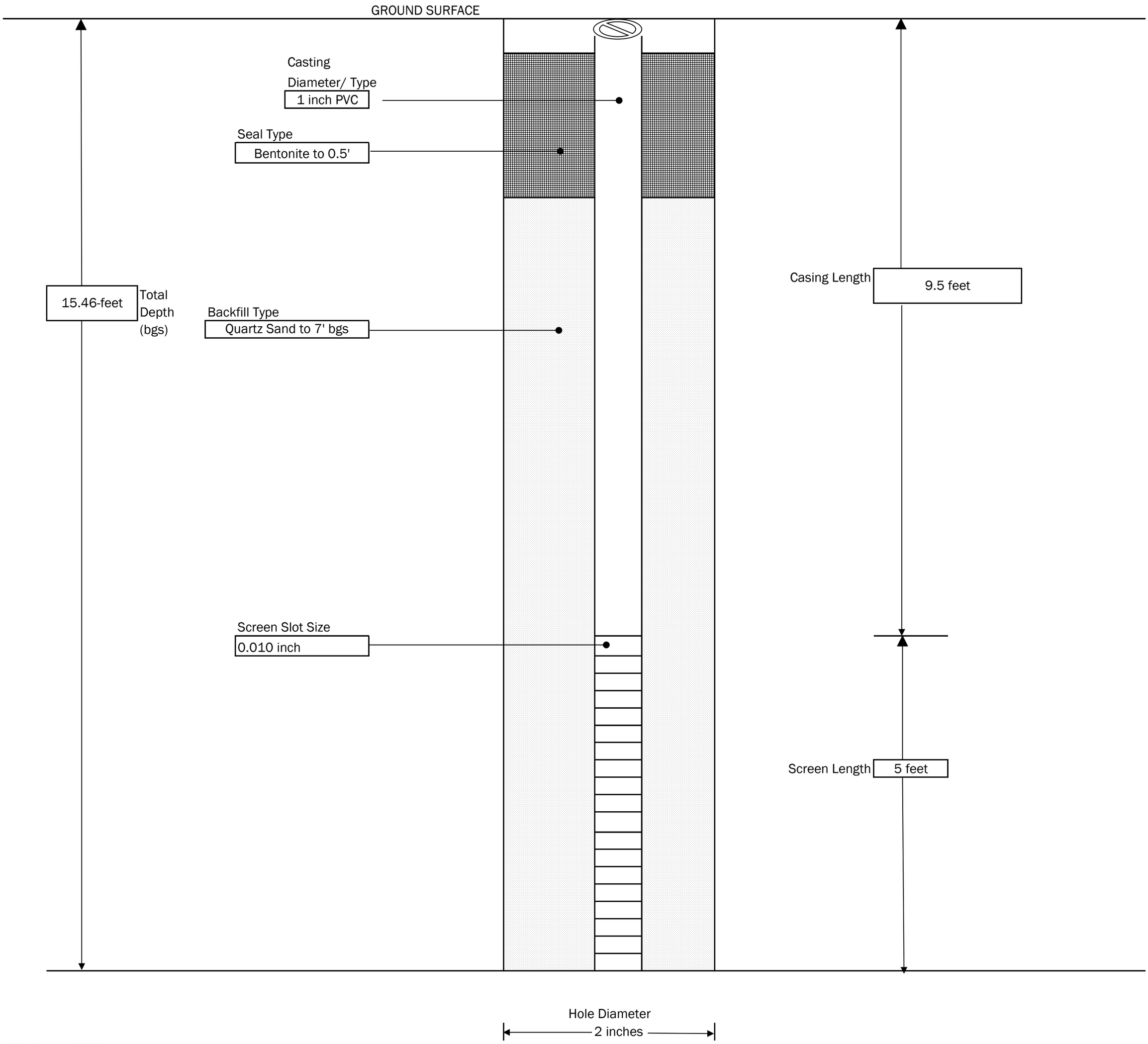


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Ellicott Station East 56-70 Ellicott Street, Batavia, NY 14020	**MONITORING WELL :** LBA-SB-34 MW-8 **SHEET** 1 OF 1 **JOB # 2180745**

CONTRACTOR: LaBella Environmental LLC	BORING LOCATION:	SB-34 MW-8			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE: Eric Detweiler	START DATE:	2/9/18		END DATE:		Macrocore

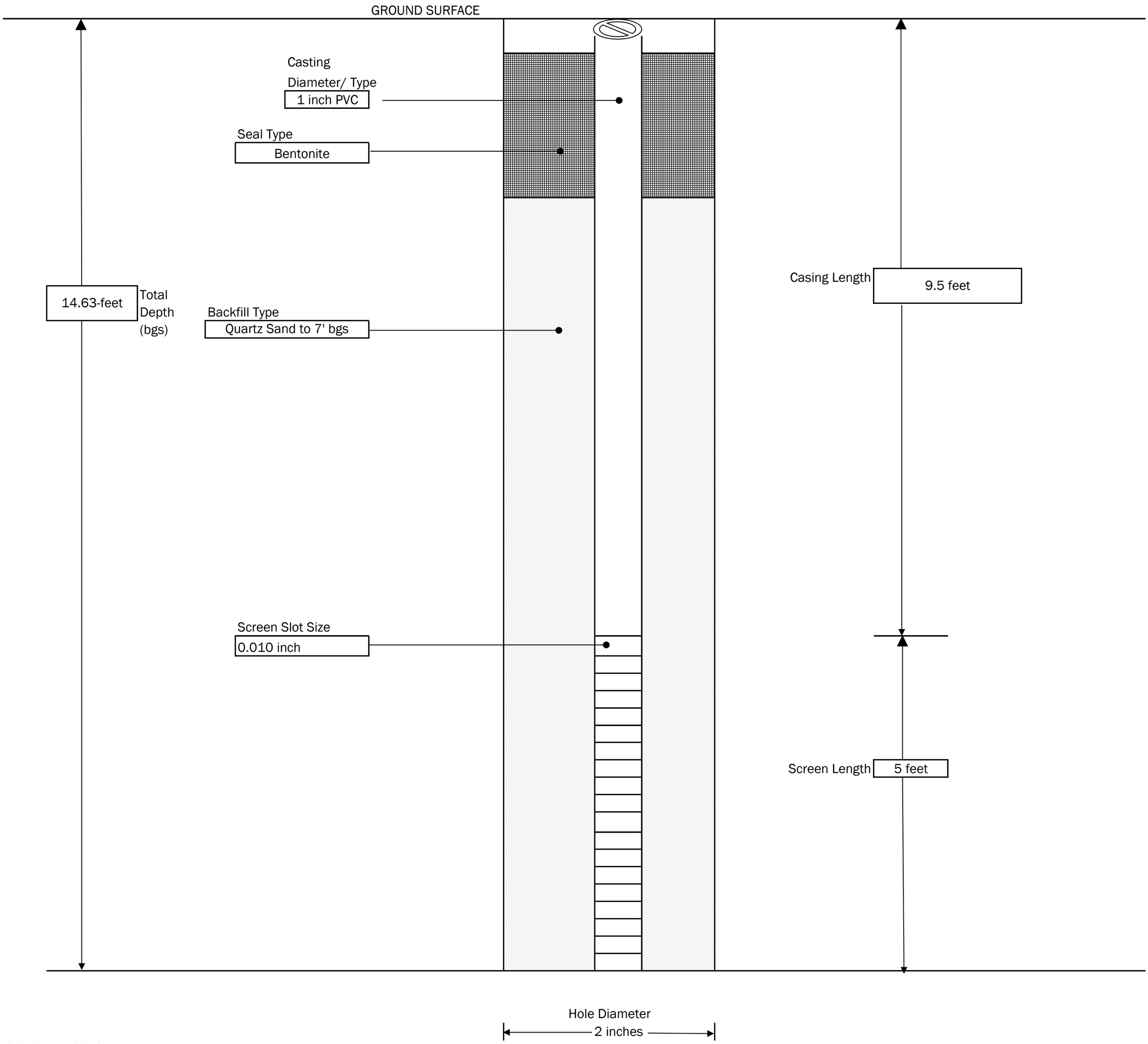


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Ellicott Station East 56-70 Ellicott Street, Batavia, NY 14020	**MONITORING WELL :** LBA-SB-35 MW-9 **SHEET** 1 OF 1 **JOB # 2180745**

CONTRACTOR: LaBella Environmental LLC	BORING LOCATION:	SB-35 MW-9			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE: Eric Detweiler	START DATE:	2/9/18		END DATE:		Macrocore

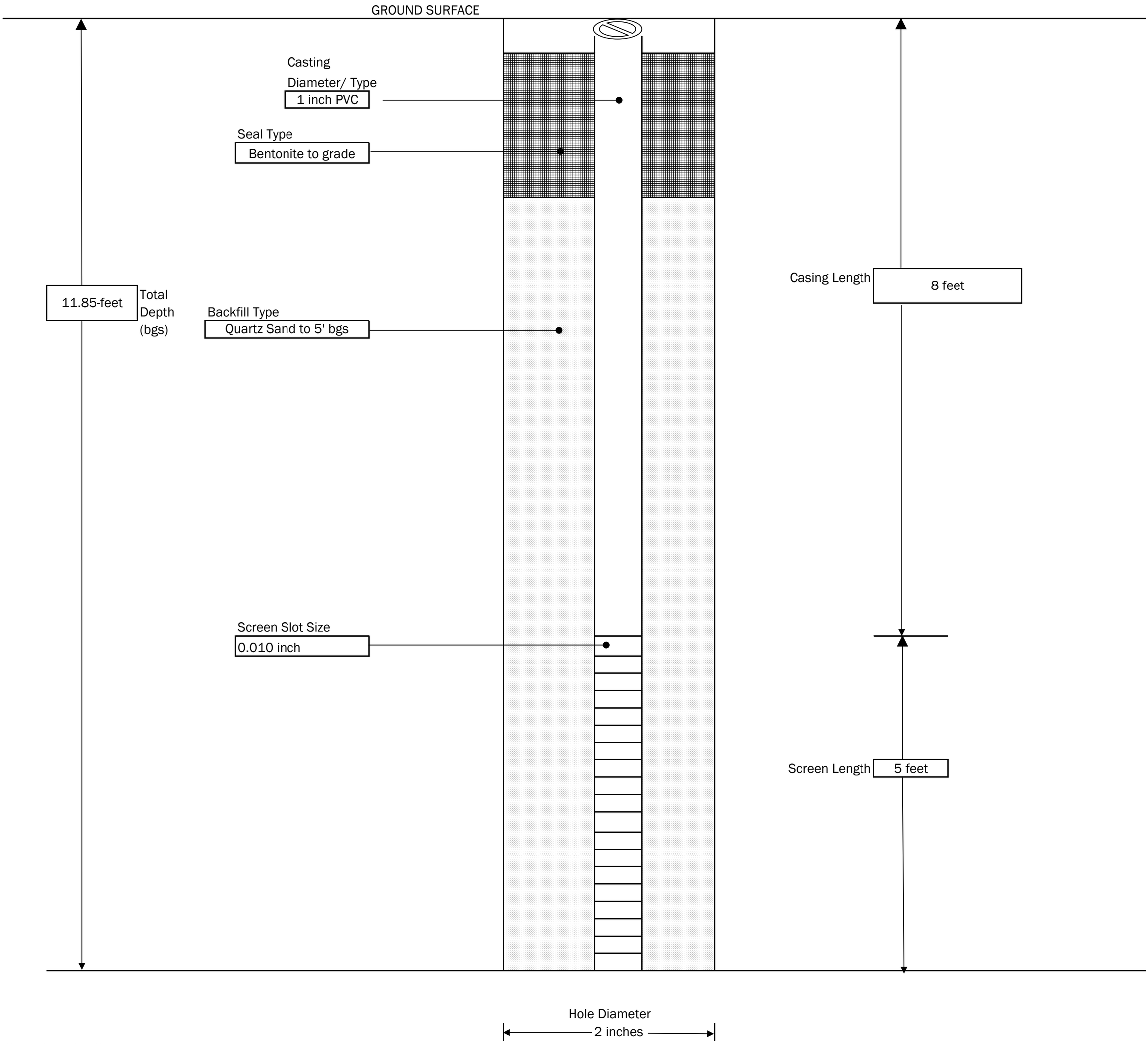


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Ellicott Station East 56-70 Ellicott Street, Batavia, NY 14020	**MONITORING WELL :** LBA-SB-36 MW-10 **SHEET** 1 OF 1 **JOB # 2180745**

CONTRACTOR: LaBella Environmental LLC	BORING LOCATION:	SB-36 MW-10			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE: Eric Detweiler	START DATE:	2/9/18		END DATE:		Macrocore

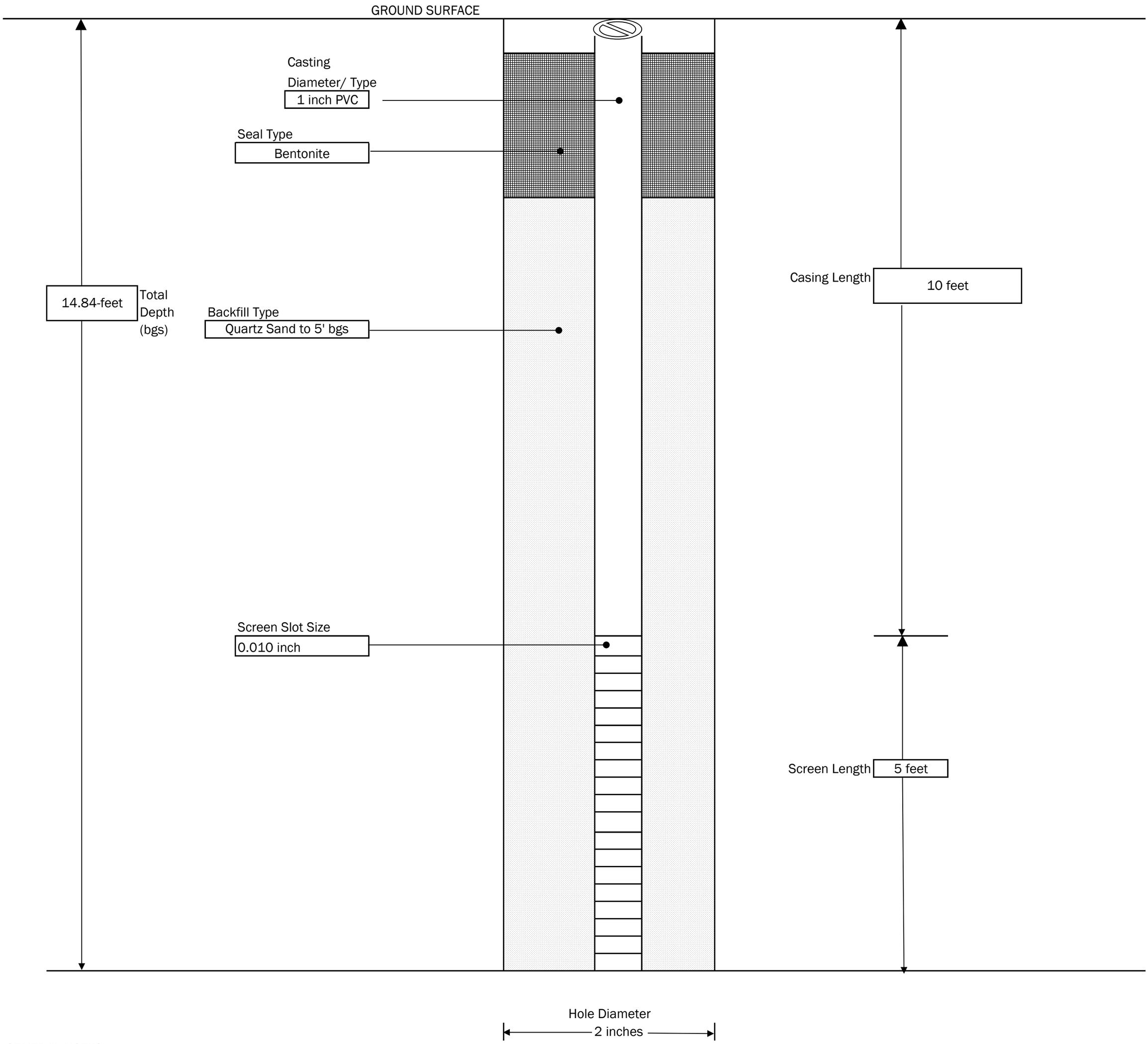


GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** Ellicott Station East 56-70 Ellicott Street, Batavia, NY 14020	**MONITORING WELL :** LBA-SB-37 MW-11 **SHEET** 1 OF 1 **JOB # 2180745**

CONTRACTOR: LaBella Environmental LLC	BORING LOCATION:	SB-37 MW-11			TYPE OF DRILL RIG:	Geoprobe 54LT
DRILLER:	GROUND SURFACE ELEVATION:		NA	DATUM: NA	AUGER SIZE AND TYPE:	NA
LABELLA REPRESENTATIVE: Eric Detweiler	START DATE:	2/9/18		END DATE:		Macrocore



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE

APPENDIX 3

EXCAVATION WORK PLAN

APPENDIX 3 – EXCAVATION WORK PLAN (EWP)

3-1 NOTIFICATION

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

Table 1: Notifications*

NYSDEC Project Manager; Mr. Todd Caffoe	585-226-5350, todd.caffoe@dec.ny.gov
NYSDEC Regional HW Engineer; Ms. Bernette Schilling	585-226-5315, bernette.schilling@dec.ny.gov
NYSDEC Site Control; Ms. Kelly Lewandowski	518-402-9547, kelly.lewandowski@dec.ny.gov

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

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control;
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work;

- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix 2 of this ISMP;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

3-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed by a qualified environmental professional during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil. Further discussion of off-site disposal of materials and on-site reuse is provided in Section 3-6 of this Appendix.

3-3 SOIL STAGING METHODS

Potentially contaminated soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

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

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

3-4 MATERIALS EXCAVATION AND LOAD-OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

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

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this ISMP is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

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

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

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

3-5 MATERIALS TRANSPORT OFF-SITE

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

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Truck transport routes are to be determined and will be included in the Change of Use or 15 day activity notice. The route will take into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

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

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

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

3-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of material from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report or Monthly Monitoring Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

3-7 MATERIALS REUSE ON-SITE

The qualified environmental professional will ensure that procedures defined for materials reuse in this ISMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

If encountered, building demolition related material proposed for reuse on-site will be sampled for asbestos (if suspect to contain asbestos) and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

3-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, and will be managed off-site, unless prior approval is obtained from NYSDEC.

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

3-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the ISMP or specific grading plan approved by the NYSDEC will be comprised of a minimum of 24 inches of clean soil, asphalt pavement, concrete covered sidewalks and concrete building, etc. The demarcation layer, consisting of orange snow fencing material, white geotextile or equivalent material, etc. will be replaced to provide a visual reference to the top of the remaining contamination zone, the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in the final SMP. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and/or Monthly Monitoring Report, and in the final SMP.

3-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this ISMP prior to receipt at the site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

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

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

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

3-11 STORMWATER POLLUTION PREVENTION

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

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

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

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

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

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

3-12 EXCAVATION CONTINGENCY PLAN

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

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC’s Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report, Monthly Monitoring Report, and/or Remedial Investigation Report.

3-13 COMMUNITY AIR MONITORING PLAN

Air sampling locations are to be determined. A figure showing the location of air sampling stations based on generally prevailing wind conditions will be provided in the final SMP and on the fifteen (15) day notification. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and downwind monitoring stations.

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

3-14 ODOR CONTROL PLAN

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

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

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

3-15 DUST CONTROL PLAN

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

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

3-16 OTHER NUISANCES

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work.

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

APPENDIX 4

HEALTH AND SAFETY AND COMMUNITY AIR MONITORING PLAN

APPENDIX 1A

New York State Department of Health
Generic Community Air Monitoring Plan

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

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

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

Community Air Monitoring Plan

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

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

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

VOC Monitoring, Response Levels, and Actions

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

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

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

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

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

Particulate Monitoring, Response Levels, and Actions

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

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

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

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

Site Health and Safety Plan

Location:

Ellicott Station East
56-70 Ellicott Street
Batavia, New York 14020

Prepared For:

Ellicott Station, LLC
500 Seneca Street
Suite 508
Buffalo, New York 14204

LaBella Project No. 2171218

June 2019

Table of Contents

SITE HEALTH AND SAFETY PLAN

Project Title:	Ellicott Station - Brownfield Cleanup Program
Project Number:	2171218
Project Location (Site):	56-70 Ellicott Street, Batavia, New York 14020
Environmental Director:	To Be Determined
Project Manager:	To Be Determined
Plan Review Date:	June 20, 2019
Plan Approval Date:	June 20, 2019
Plan Approved By:	Mr. Richard Rote, CIH
Site Safety Supervisor:	To Be Determined
Site Contact:	To Be Determined
Safety Director:	To Be Determined
Proposed Date(s) of Field Activities:	To Be Determined
Site Conditions:	0.81 acres; Current Site consists of the following: an 11,611 square foot vacant commercial building and asphalt paved parking area
Site Environmental Information Provided By:	❑ Phase II Environmental Site Assessment, 56-70 Ellicott Street and Two Unaddressed Parcels at Ellicott Street completed by LaBella Associates, D.P.C. (October 2014 ❑ Supplemental Subsurface Investigation, Ellicott Station East, 56-70 Ellicott Street, Batavia, New York completed by LaBella, March 2018
Air Monitoring Provided By:	To Be Determined
Site Control Provided By:	Contractor(s)

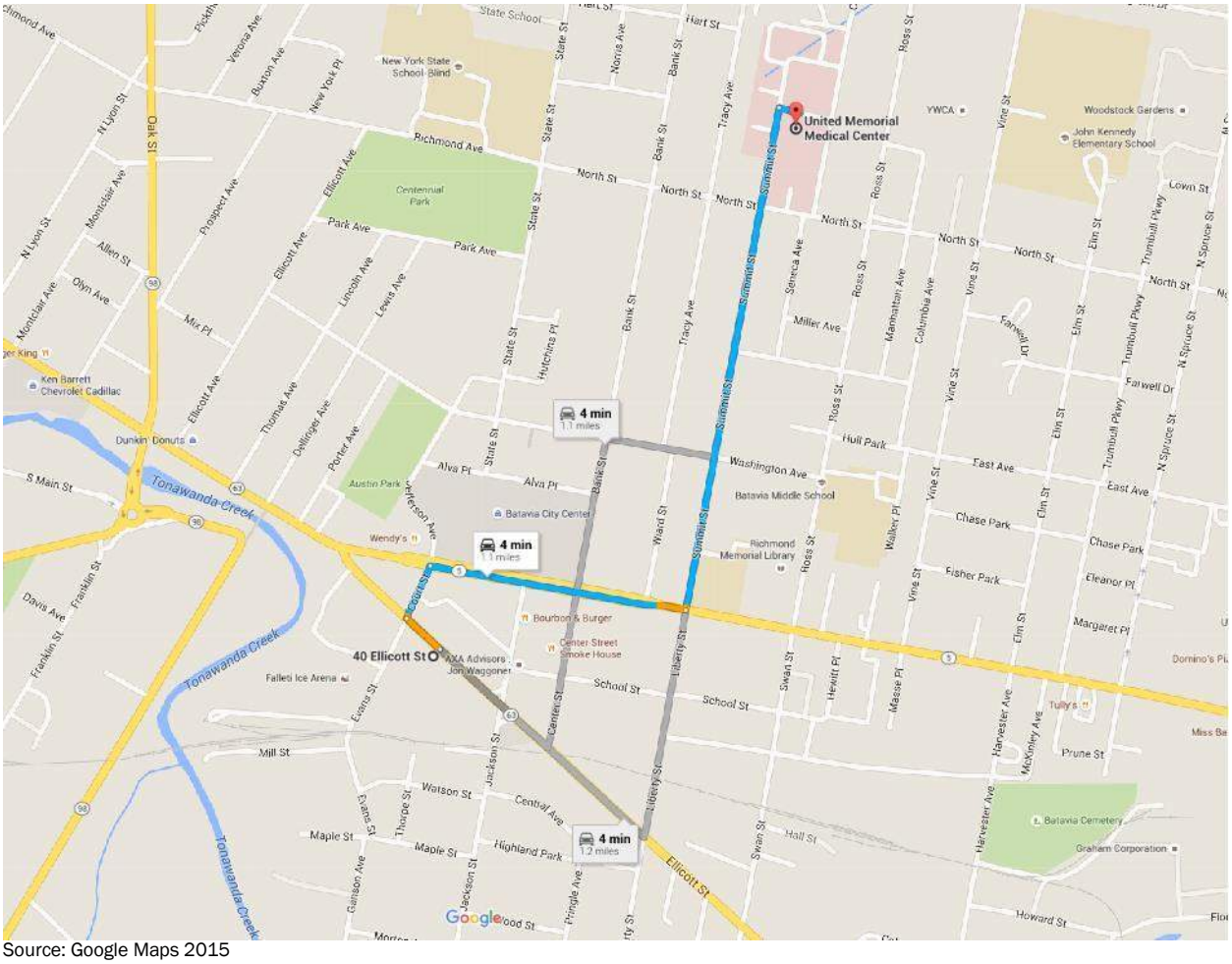
EMERGENCY CONTACTS

	Name	Phone Number
Ambulance:	As Per Emergency Service	911
Hospital Emergency:	United Memorial Medical Center	585-343-6030
Poison Control Center:	Finger Lakes Poison Control	716-275-5151
Police (local, state):	Genesee County Sheriff	911
Fire Department:	Batavia Fire Department	911
Site Contact:	To Be Determined	
Agency Contact:	NYSDEC – Matthew Gillette NYSDOH – To Be Determined	585-226-5308 To Be Determined
Environmental Director:	To Be Determined	To Be Determined
Project Manager:	To Be Determined	To Be Determined
Site Safety Supervisor:	To Be Determined	To Be Determined
Safety Director	To Be Determined	To Be Determined

MAP AND DIRECTIONS TO THE MEDICAL FACILITY
- UNITED MEMORIAL MEDICAL CENTER

Total Est. Time: 4 minutes **Total Est. Distance:** 1.1 miles

1:	Start out going NORTHWEST on ELLICOTT ST toward EVANS ST	285 feet
2:	Turn RIGHT onto COURT ST	364 feet
3:	Turn RIGHT onto MAIN ST	0.3 miles
4:	Turn LEFT onto SUMMIT ST	0.6 miles
5:	End at **127 North Street** Batavia, NY 14020	



Source: Google Maps 2015

1.0 Introduction

The purpose of this Health and Safety Plan (HASP) is to provide guidelines for responding to potential health and safety issues that may be encountered during the Remedial Investigation (RI) at 56-70 Ellicott Street in the City of Batavia, Genesee County, New York (Site). This HASP only reflects the policies of LaBella Associates D.P.C. The requirements of this HASP are applicable to all approved LaBella personnel at the work site. This document's project specifications, and the Community Air Monitoring Plan (CAMP), are to be consulted for guidance in preventing and quickly abating any threat to human safety or the environment. The provisions of the HASP do not replace or supersede any regulatory requirements of the USEPA, NYSDEC, OSHA or other regulatory bodies.

2.0 Responsibilities

This HASP presents guidelines to minimize the risk of injury to project personnel, and to provide rapid response in the event of injury. The HASP is applicable only to activities of approved LaBella personnel and their authorized visitors. The Project Manager shall implement the provisions of this HASP for the duration of the project. It is the responsibility of LaBella employees to follow the requirements of this HASP, and all applicable company safety procedures.

3.0 Activities Covered

The activities covered under this HASP are limited to the following:

- Management of environmental investigation and remediation activities
- Environmental Monitoring
- Collection of samples
- Management of excavated soil and fill

4.0 Work Area Access and Site Control

The contractor(s) will have primary responsibility for work area access and site control.

5.0 Potential Health and Safety Hazards

This section lists some potential health and safety hazards that project personnel may encounter at the project site and some actions to be implemented by approved personnel to control and reduce the associated risk to health and safety. This is not intended to be a complete listing of any and all potential health and safety hazards. New or different hazards may be encountered as site environmental and site work conditions change. The suggested actions to be taken under this plan are not to be substituted for good judgment on the part of project personnel. At all times, the Site Safety Officer has responsibility for site safety and his instructions must be followed.

5.1 Hazards Due to Heavy Machinery

Potential Hazard:
Heavy machinery including trucks, drilling rigs, trailers, etc. will be in operation at the site. The presence of such equipment presents the danger of being struck or crushed. Use caution when working near heavy machinery.

Protective Action:
Make sure that operators are aware of your activities, and heed operator's instructions and warnings. Wear bright colored clothing and walk safe distances from heavy equipment. A hard hat, safety glasses and steel toe shoes are required.

5.2 Excavation Hazards

Potential Hazard:
Excavations and trenches can collapse, causing injury or death. Edges of excavations can be unstable and collapse. Toxic and asphyxiant gases can accumulate in confined spaces and trenches. Excavations that require working within the excavation will require air monitoring in the breathing zone (refer to Section 9.0).

Excavations left open create a fall hazard which can cause injury or death.

Protective Action:
Personnel must receive approval from the Project Manager to enter an excavation for any reason. Subsequently, approved personnel are to receive authorization for entry from the Site Safety Officer. Approved personnel are not to enter excavations over 4 feet in depth unless excavations are adequately sloped. Additional personal protective equipment may be required based on the air monitoring.

Personnel should exercise caution near all excavations at the site as it is expected that excavation sidewalls will be unstable. Do not proceed closer than 3 feet to an unsupported or non-sloped excavation side wall.

Fencing and/or barriers accompanied by "no trespassing" signs should be placed around all excavations when left open for any period of time when work is not being conducted.

5.3 Cuts, Punctures and Other Injuries

Potential Hazard:
In any excavation and construction work site there is the potential for the presence of sharp or jagged edges on rock, metal materials, and other sharp objects. Serious cuts and punctures can result in loss of blood and infection.

Protective Action:
The Project Manager is responsible for making First Aid supplies available at the work site to treat minor injuries. The Site Safety Officer is responsible for arranging the transportation of authorized on-site personnel to medical facilities when First Aid treatment in not sufficient. Do not move seriously injured workers. All injuries requiring treatment are to be reported to the Project Manager. Serious injuries are to be reported immediately to the Site Safety Officer

5.4 Injury Due to Exposure of Chemical Hazards

Potential Hazards:
Contaminants identified in testing locations at the Site include various petroleum-related volatile organic compounds (VOCs). Volatile organic vapors, chlorinated solvents or other chemicals may be encountered during subsurface activities at the project work site. Inhalation of high concentrations of volatile organic vapors can cause headache, stupor, drowsiness, confusion and other health effects. Skin contact can cause irritation, chemical burn, or dermatitis.

Protective Action:
The presence of organic vapors may be detected by their odor and by monitoring instrumentation. Approved employees will not work in environments where hazardous concentrations of organic vapors are present. Air monitoring (refer to Section 9.0) of the work area will be performed at least every 60 minutes or more often using a Photoionization Detector (PID). Personnel are to leave the work area whenever PID measurements of ambient air exceed 25 ppm consistently for a 5 minute period. In the event that sustained total volatile organic compound (VOC) readings of 25 ppm are encountered personnel should upgrade personal protective equipment to Level C (refer to Section 8.0) and an Exclusion Zone should be established around the work area to limit and monitor access to this area (refer to Section 6.0).

5.5 Injuries due to extreme hot or cold weather conditions

Potential Hazards:
Extreme hot weather conditions can cause heat exhaustion, heat stress and heat stroke or extreme cold weather conditions can cause hypothermia.

Protective Action:
Precaution measures should be taken such as dress appropriately for the weather conditions and drink plenty of fluid. If personnel should suffer from any of the above conditions, proper techniques should be taken to cool down or heat up the body and taken to the nearest hospital if needed.

6.0 Work Zones

In the event that conditions warrant establishing various work zones (i.e., based on hazards - Section 5.0), the following work zones should be established:

Exclusion Zone (EZ):
The EZ will be established in the immediate vicinity and adjacent downwind direction of site activities that elevate breathing zone VOC concentrations to unacceptable levels based on field screening. These site activities include contaminated soil excavation and soil sampling activities. If access to the site is required to accommodate non-project related personnel then an EZ will be established by constructing a barrier around the work area (yellow caution tape and/or construction fencing). The EZ barrier shall encompass the work area and any equipment staging/soil staging areas necessary to perform the associated work. The contractor(s) will be responsible for establishing the EZ and limiting access to approved personnel. Depending on the condition for establishing the EZ, access to the EZ may require adequate PPE (e.g., Level C).

Contaminant Reduction Zone (CRZ):
The CRZ will be the area where personnel entering the EZ will don proper PPE prior to entering the EZ and the area where PPE may be removed. The CRZ will also be the area where decontamination of equipment and personnel will be conducted as necessary.

7.0 Decontamination Procedures

Upon leaving the work area, approved personnel shall decontaminate footwear as needed. Under normal work conditions, detailed personal decontamination procedures will not be necessary. Work clothing may become contaminated in the event of an unexpected splash or spill or contact with a contaminated substance. Minor splashes on clothing and footwear can be rinsed with clean water. Heavily contaminated clothing should be removed if it cannot be rinsed with water. Personnel assigned to this project should be prepared with a change of clothing whenever on site.

Personnel will use the contractor's disposal container for disposal of PPE.

8.0 Personal Protective Equipment

Generally, site conditions at this work site require level of protection of Level D or modified Level D; however, air monitoring will be conducted to determine if up-grading to Level C PPE is required (refer to Section 9.0). Descriptions of the typical safety equipment associated with Level D and Level C are provided below:

Level D:
Hard hat, safety glasses, rubber nitrile sampling gloves, steel toe construction grade boots, etc.

Level C:
Level D PPE and full or ½-face respirator and tyvek suit (if necessary). [*Note: Organic vapor cartridges are to be changed after each 8-hours of use or more frequently.*]

9.0 Air Monitoring

According to 29 CFR 1910.120(h), air monitoring shall be used to identify and quantify airborne levels of hazardous substances and health hazards in order to determine the appropriate level of employee protection required for personnel working onsite. Air monitoring will consist at a minimum of the procedure listed below. Air monitoring instruments will be calibrated and maintained in accordance with the manufacturer's specifications.

The Air Monitor will utilize a photoionization detector (PID) to screen the ambient air in the work areas (drilling, excavation, soil staging, and soil grading areas) for total Volatile Organic Compounds (VOCs) and a DustTrak tm Model 8520 aerosol monitor or equivalent for measuring particulates. Work area ambient air will generally be monitored in the work area and downwind of the work area. Air monitoring of the work areas and downwind of the work areas will be performed at least every 60 minutes using a PID and the DustTrak meter.

If sustained PID readings of greater than 25 ppm are recorded in the breathing zone, either personnel are to leave the work area until satisfactory readings are obtained or approved personnel may re-enter the work areas wearing at a minimum a ½ face respirator with organic vapor cartridges for an 8-hour duration (i.e., upgrade to Level C PPE). Organic vapor cartridges are to be changed after each 8-hour use or more frequently, if necessary. If PID readings are sustained, in the work area, at levels above 50 ppm for a 5 minute average, work will be stopped immediately until safe levels of VOCs are encountered or additional PPE will be required (i.e., Level B).

If downwind PID measurements reach or exceed 25 ppm consistently for a 5 minute period downwind of the work area, PID readings will be taken within the buildings (if occupied) on Site to ensure that the vapors are not penetrating any occupied building and effecting the personnel working within. If the PID measurements reach or exceed 25 ppm within the nearby buildings, the personnel should be evacuated via a route in which they would not encounter the work area. The building should then be ventilated until the PID measurements within the building are at or below background levels. It should be noted that the site buildings are currently vacant.

10.0 Emergency Action Plan

In the event of an emergency, employees are to turn off and shut down all powered equipment and leave the work areas immediately. Employees are to walk or drive out of the Site as quickly as possible, wait at the assigned 'safe area' and follow the instructions of the Site Safety Officer.

Employees are not authorized or trained to provide rescue and medical efforts. Rescue and medical efforts will be provided by local authorities.

11.0 Medical Surveillance

Medical surveillance will be provided to all employees who are injured due to overexposure from an emergency incident involving hazardous substances at this site.

12.0 Employee Training

Personnel who are not familiar with this site plan will receive training on its entire content and organization before working at the Site.

Individuals involved with the remedial investigation must be 40-hour OSHA HAZWOPER trained with current 8-hour refresher certification.

Table 1
Exposure Limits and Recognition Qualities

Compound	PEL-TWA (ppm)(b)(d)	TLV-TWA (ppm)(c)(d)	STEL (ppm)(b)	LEL (%)(e)	UEL (%)(f)	IDLH (ppm)(g)(d)	Odor	Odor Threshold (ppm)	Ionization Potential
Acetone	750	500	NA	2.15	13.2	20,000	Sweet	4.58	9.69
Anthracene	.2	.2	NA	NA	NA	NA	Faint aromatic	NA	NA
Benzene	1	0.5	5	1.3	7.9	3000	Pleasant	8.65	9.24
Benzo (a) pyrene (coal tar pitch volatiles)	0.2	0.1	NA	NA	NA	700	NA	NA	NA
Benzo (a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b) Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (k) Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	10.88
Carbon Disulfide	20	1	NA	1.3	50	500	Odorless or strong garlic type	.096	10.07
Chlorobenzene	75	10	NA	1.3	9.6	2,400	Faint almond	0.741	9.07
Chloroform	50	2	NA	NA	NA	1,000	ethereal odor	11.7	11.42
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethylene	200	200	NA	9.7	12.8	400	Acrid	NA	9.65
1,2-Dichlorobenzene	50	25	NA	2.2	9.2		Pleasant		9.07
Ethyl Alcohol	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	100	100	NA	1.0	6.7	2,000	Ether	2.3	8.76
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropyl Alcohol	400	200	500	2.0	12.7	2,000	Rubbing alcohol	3	10.10
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	500	50	NA	12	23	5,000	Chloroform-like	10.2	11.35
Naphthalene	10, Skin	10	NA	0.9	5.9	250	Moth Balls	0.3	8.12
n-propylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphoric Acid	1	1	3	NA	NA	10,000	NA	NA	NA
Polychlorinated Biphenyl	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium Hydroxide	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethane	NA	NA	NA	NA	NA	NA	Sweet	NA	NA
Toluene	100	100	NA	0.9	9.5	2,000	Sweet	2.1	8.82
Trichloroethylene	100	50	NA	8	12.5	1,000	Chloroform	1.36	9.45
1,2,4-Trimethylbenzene	NA	25	NA	0.9	6.4	NA	Distinct	2.4	NA
1,3,5-Trimethylbenzene	NA	25	NA	NA	NA	NA	Distinct	2.4	NA
Vinyl Chloride	1	1	NA	NA	NA	NA	NA	NA	NA
Xylenes (o,m,p)	100	100	NA	1	7	1,000	Sweet	1.1	8.56
Metals									
Arsenic	0.01	0.2	NA	NA	NA	100, Ca	NA	NA	NA
Cadmium	0.2	0.5	NA	NA	NA	NA	NA	NA	NA
Calcium	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	1	0.5	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.05	0.15	NA	NA	NA	700	NA	NA	NA
Mercury	0.05	0.05	NA	NA	NA	28	NA	NA	NA
Selenium	0.2	0.02	NA	NA	NA	Unknown	NA	NA	NA

(a) Skin = Skin Absorption
(b) OSHA-PEL Permissible Exposure Limit (flame weighted average, 8-hour): NIOSH Guide, June 1990
(c) ACGIH – 8 hour time weighted average from Threshold Limit Values and Biological Exposure Indices for 2003.
(d) Metal compounds in mg/m3
(e) Lower Exposure Limit (%)
(f) Upper Exposure Limit (%)
(g) Immediately Dangerous to Life or Health Level: NIOSH Guide, June 1990.

Notes:
1. All values are given in parts per million (PPM) unless otherwise indicated.
2. Ca = Possible Human Carcinogen, no IDLH information.

APPENDIX 5

QUALITY CONTROL PLAN

QUALITY CONTROL PLAN

Location:

Ellicott Station East
56-70 Ellicott Street
Batavia, New York 14020

Prepared for:

Ellicott Station, LLC
500 Seneca Street
Suite 508
Buffalo, New York 14204

LaBella Project No. 2171218

June 2019

LaBella
Powered by partnership.

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

1.0 Introduction

LaBella's Quality Control (QC) Program is an integral part of its approach to environmental investigations. By maintaining a rigorous QC program, our firm is able to provide accurate and reliable data. QC also provides safe working conditions for all on-Site workers.

The QC program contains procedures which allow for the proper collection and evaluation of data and documents that QC procedures have been followed during field investigations. The QC program presents the methodology and measurement procedures used in collecting quality field data. This methodology includes the proper use of equipment, documentation of sample collection, and sample handling procedures.

Procedures used in the firm's QC program are compatible with federal, state, and local regulations, as well as, appropriate professional and technical standards.

This QC program has been organized into the following areas:

- QC Objectives and Checks
- Field Equipment, Handling, and Calibration
- Sampling Techniques
- Sample Handling and Packaging

It should be noted that project-specific work plans (e.g., Remedial Investigation Work Plans) may have project specific details that will differ from the procedures in this QC program. In such cases, the project-specific work plan should be followed (subsequent to regulatory approval).

2.0 Quality Control Objectives

The United States Environmental Protection Agency (EPA) has identified five general levels of analytical data quality as being potentially applicable to site investigations conducted under CERCLA. These levels are summarized below:

- **Level I** - Field screening. This level is characterized by the use of portable instruments, which can provide real-time data to assist in the optimization of sampling point locations and for health and safety support. Data can be generated regarding the presence or absence of certain contaminants (especially volatiles) at sampling locations.

- **Level II** - Field analysis. This level is characterized by the use of portable analytical instruments, which can be used on site or in mobile laboratories stationed near a site (close-support labs). Depending upon the types of contaminants, sample matrix, and personnel skills, qualitative and quantitative data can be obtained.

- **Level III** - Laboratory analysis using methods other than the Contract Laboratory Program (CLP) Routine Analytical Services (RAS). This level is used primarily in support of engineering studies using standard EPA-approved procedures. Some procedures may be equivalent to CLP RAS, without the CLP requirements for documentation.

- **Level IV** - CLP Routine Analytical Services. This level is characterized by rigorous QC protocols and documentation and provides qualitative and quantitative analytical data. Some regions have obtained similar support via their own regional laboratories, university laboratories, or other commercial laboratories.

- **Level V** - Non-standard methods. Analyses, which may require method modification and/or development. CLP Special Analytical Services (SAS) are considered Level V.

Unless stated otherwise, all data will be generated in accordance with Level IV. When CLP methodology is not available, federal and state approved methods will be utilized. Level III will be utilized, as necessary, for non-CLP RAS work which may include ignitability, corrosivity, reactivity, EP toxicity, and other state approved parameters for characterization. Level I will be used throughout the RI for health and safety monitoring activities.

All measurements will be made to provide that analytical results are representative of the media and conditions measured. Unless otherwise specified, all data will be calculated and reported in units consistent with other organizations reporting similar data to allow comparability of data bases among organizations. Data will be reported in micrograms per liter (µg/L) and milligrams (mg)/L for aqueous samples, and µg/ kilogram (kg) and mg/kg (dry weight) for soils, or otherwise as applicable.

The characteristics of major importance for the assessment of generated data are accuracy, precision, completeness, representativeness, and comparability. Application of these characteristics to specific projects is addressed later in this document. The characteristics are defined below.

2.1 Accuracy

Accuracy is the degree of agreement of a measurement or average of measurements with an accepted reference or "true" value and is a measure of bias in the system.

2.2 Precision

Precision is the degree of mutual agreement among individual measurements of a given parameter.

2.3 Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected to be obtained under correct normal conditions.

2.4 Representativeness

Representativeness expresses the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition.

Careful choice and use of appropriate methods in the field will ensure that samples are representative. This is relatively easy with water or air samples since these components are homogeneously dispersed. In soil and sediment, contaminants are unlikely to be evenly distributed, and thus it is important for the sampler and analyst to exercise good judgment when removing a sample.

2.5 Comparability

Comparability expresses the confidence with which one data set can be compared to another. The data sets may be inter- or intra- laboratory.

3.0 Measurement of Data Quality

3.1 Accuracy

Accuracy of a particular analysis is measured by assessing its performance with "known" samples. These "knowns" take the form of EPA standard reference materials, or laboratory prepared solutions of target analytes spiked into a pure water or sample matrix. In the case of gas chromatography (GC) or GC/MS (mass spectrometry) analyses, solutions of surrogate compounds are used. These solutions can be spiked into every sample and are designed to mimic the behavior of target analytes without interfering with their determination.

In each case the recovery of the analyte is measured as a percentage, correcting for analytes known to be present in the original sample if necessary, as in the case of a matrix spike analysis. For EPA supplied known solutions, this recovery is compared to the published data that accompany the solution.

For the firm's prepared solutions, the recovery is compared to EPA-developed data or the firm's historical data as available. For surrogate compounds, recoveries are compared to EPA CLP acceptable recovery tables.

If recoveries do not meet required criteria, then the analytical data for the batch (or, in the case of surrogate compounds, for the individual sample) are considered potentially inaccurate. The analyst or his supervisor must initiate an investigation of the cause of the problem and take corrective action. This can include recalibration of the instrument, reanalysis of the QC sample, reanalysis of the samples in the batch, or flagging the data as suspect if the problems cannot be resolved. For highly contaminated samples, recovery of the matrix spike may depend on sample homogeneity. As a rule, analyses are not corrected for recovery of matrix spike or surrogate compounds.

3.2 Precision

Precision of a particular analysis is measured by assessing its performance with duplicate or replicate samples. Duplicate samples are pairs of samples taken in the field and transported to the laboratory as distinct samples. Their identity as duplicates is typically not known to the laboratory. For most purposes, precision is determined by the analysis of replicate pairs (i.e., two samples prepared at the laboratory from one original sample). Often in replicate analysis the sample chosen for replication does not contain target analytes so that quantitation of precision is impossible. For EPA CLP analyses, replicate pairs of spiked samples, known as matrix spike/matrix spike duplicate samples, are used for precision studies. This has the advantage that two real positive values for a target analyte can be compared.

Precision is calculated in terms of Relative Percent Difference (RPD).

- Where X_1 and X_2 represent the individual values found for the target analyte in the two replicate analyses or in the matrix spike/matrix spike duplicate analyses.

- RPDs must be compared to the method RPD for the analysis. The analyst or his supervisor must investigate the cause of RPDs outside stated acceptance limits. This may include a visual inspection of the sample for non-homogeneity, analysis of check samples, etc. Follow-up action may include sample reanalysis or flagging of the data as suspect if problems cannot be resolved.

- During the data review and validation process, field duplicate RPDs are assessed as a measure of the total variability of both field sampling and laboratory analysis.

3.3 Completeness

Completeness for each parameter is calculated as follows:

- The firm's target value for completeness for all parameters is 100%. A completeness value of 95% will be considered acceptable. Incomplete results will be reported to the site managers. In planning the field sample collection, the site manager will plan to collect field duplicates from identified critical areas. This procedure should assure 100% completeness for these areas.

3.4 Representativeness

The characteristic of representativeness is not quantifiable. Subjective factors to be taken into account are as follows:

- The degree of homogeneity of a site;
- The degree of homogeneity of a sample taken from one point in a site; and
- The available information on which a sampling plan is based.

To maximize representativeness of results, sampling techniques and sample locations will be carefully chosen so that they provide laboratory samples representative of the site and the specific area. Within the laboratory, precautions are taken to extract from the sample bottle an aliquot representative of the whole sample. This includes premixing the sample and discarding pebbles from soil samples.

4.0 Quality Control Targets

Target values for detection limit, percent spike recovery and percent "true" value of known check standards, and RPD of duplicates/replicates are included in the QCP, Analytical Procedures. Note that tabulated values are not always attainable. Instances may arise where high sample concentrations, non-homogeneity of samples, or matrix interferences preclude achievement of target detection limits or other quality control criteria. In such instances, the firm will report reasons for deviations from these detection limits or noncompliance with quality control criteria.

5.0 Sampling Procedures

This section describes the sampling procedures to be utilized for each environmental medium that will be collected and analyzed in accordance with appropriate state and federal requirements. All procedures described are consistent with EPA sampling procedures as described in SW-846, third edition, September 1986, and subsequent updates. All samples will be delivered to the laboratory and analyzed within the holding times specified by the analytical method.

6.0 Soil & Groundwater Investigation

The groundwater sampling plan outlined in this subsection has been prepared in general accordance with RCRA Groundwater Monitoring Technical Enforcement Guidance Document 9950.1 (September 1986), Office of Solid Waste and Emergency Response.

Prior to drilling, all drill sites will be cleared with appropriate utility companies to avoid potential accidents relating to underground utilities.

6.1 Test Borings and Well Installation

6.1.1 Drilling Equipment

Direct Push Geoprobe Soil Borings:

Soil borings and monitoring wells may be advanced with a Geoprobe direct push sampling system. The use of direct push technology allows for rapid sampling, observation, and characterization of relatively shallow overburden soils. The Geoprobe utilizes a four-foot or five-foot Macrocore sampler, with disposable polyethylene sleeves. Soil cores will be retrieved in four-foot or five-foot sections, and can be easily cut from the polyethylene sleeves for observation and sampling. The Macrocore sampler will be decontaminated between samples and borings using an alconox and water solution.

Any investigative derived waste generated during the advancement of soil borings and monitoring well installations will be containerized and characterized for proper disposal.

Hollow-Stem Auger Advanced Soil Borings:

The drilling and installation of soil borings and monitoring wells may be performed using a rotary drill rig which will have sufficient capacity to perform 4 1/2-inch inside diameter (ID) hollow-stem auger drilling in the overburden, retrieve Macrocore or split-spoon samples, and perform necessary rock coring to provide a minimum 3-inch diameter core, known in the industry as "NX." The borehole may be reamed to 5 1/2-inch diameter prior to monitoring well installation as cased hole in the bedrock, or may be left as open hole, with regulatory concurrence. Equipment sizes and diameters may vary based on project-specific criteria. Any investigative derived waste generated during the advancement of soil borings and monitoring well installations will be containerized and characterized for proper disposal.

6.1.2 Drilling Techniques

Direct Push Geoprobe Advanced Borings:

Prior to initiating drilling activities, the Geoprobe, Macrocores, drive rods and/or other pertinent equipment will be steam cleaned or washed with an alconox and water solution. This cleaning procedure will also be used between each boring. Throughout and after the cleaning processes, direct contact between the equipment and the ground surface will be avoided. Plastic sheeting and/or clean support structures (e.g., pallets, sawhorses) will be used. All sampling equipment will be steam cleaned or washed with an alconox and water solution upon completion of the investigation and prior to leaving the Site.

Test borings will be advanced with 2-inch (or larger) inside diameter (ID) direct push Macrocore through overburden soils. Drilling fluids, other than water from a NYSDEC-approved source, will not be allowed without special consideration and agreement from NYSDEC. The use of lubricants is also not allowed unless approved by the NYSDEC representative.

It will be the responsibility of the consultant to arrange for the appropriate drilling equipment to be present at the Site. Standby time to arrange for additional equipment or a water supply will not be allowed unless caused by unexpected Site conditions.

During the drilling, a properly calibrated photoionization detector (PID) will be used to screen soil cores retrieved from the Macrocores.

Direct Push Geoprobe advanced groundwater-monitoring wells typically utilize 1.25-inch threaded flush joint PVC pipe with 0.010-in. slotted screen. However, well construction will vary by project and will be specified in the project-specific work plan. PVC piping used for risers and screens will conform to the requirements of ASTM-D 1785 Schedule 40 pipe, and shall bear markings that will identify the material as that which is specified. All materials used to construct the wells will be NSF/ASTM approved. Solvent PVC glue shall not be used at any time in the construction of the wells. The bottom of the screen shall be sealed with a treated cap or plug. No lead shot or lead wool is to be employed in sealing the bottom of the well or for sealant at any point in the well. All risers and screens shall be set round, plumb, and true to line.

Hollow-Stem Auger Advanced Borings:

Prior to initiating drilling activities, the drill rig, augers, rods, Macrocore, split spoons and/or other pertinent equipment will be steam cleaned or washed with an alconox and water solution. This cleaning procedure will also be used between each boring. These activities will be performed in a designated on-site decontamination area. Throughout and after the cleaning processes, direct contact between the equipment and the ground surface will be avoided. Plastic sheeting and/or clean support structures (e.g., pallets, sawhorses) will be used. The drilling rig and all equipment will be steam cleaned or washed with an alconox and water solution upon completion of the investigation and prior to leaving the site.

Test borings completed with the hollow-stem auger will be advanced with 4 1/2-inch (ID) hollow stem augers through overburden, and NX-sized diamond core barrels in competent rock, driven by truck-, track-, or trailer-mounted drilling equipment. Alternative methods of drilling or equipment may be allowed or requested for project-specific criteria, but must be approved by the NYSDEC. Drilling fluids, other than water from a NYSDEC-approved source, will not be allowed without special consideration and agreement from NYSDEC. The use of lubricants is also not allowed unless approved by the NYSDEC representative.

It will be the responsibility of the consultant to arrange for the appropriate drilling equipment to be present at the site. Standby time to arrange for additional equipment or a water supply will not be allowed unless caused by unexpected site conditions.

During the drilling, a (PID) will be used to screen soils retrieved from the split spoons or Macrocores.

If bedrock wells are required, test borings shall be advanced into rock with NX (or similar) coring tools. Only water from an approved source shall be used in rock coring. The consultant shall monitor and record the petrology, core recovery, fractures, rate of advance, water levels, and water lost or produced in each test boring. The Rock Quality Determination (RQD) value shall be calculated for each 5-foot core. Each core shall be screened with a PID upon extraction to determine proper handling procedure. All core samples shall be retained and stored by the consultant in an approved wooden core box for a period of not less than one year. It should be noted that the installation of bedrock wells is not currently planned for this Site.

The method selected may be percussion or rotary drilling at the option of the subcontractor. The method and equipment selected must be capable of penetrating the bedrock at each well location to a depth required by the work plan and will be selected based on the results of the rock coring performed.

Bedrock well installation will involve construction of a rock socket in the weathered bedrock. The socket will be drilled into the top of rock (typically 1-ft. to 5-ft. into the top of rock) at each bedrock well location to allow a permanent steel casing to be grouted securely in place prior to completion of the well. The purpose for this is to provide a seal at the overburden/bedrock interface and into the upper bedrock surface, to prevent the entrance of overburden water into the bedrock. After the grout and casing have set up for a minimum of 12 hours, the remaining bedrock can be NX (or similar) cored through the steel casing to a depth determined by the project-specific work plan.

Bedrock wells will either be open coreholes in the rock or consist of threaded, flush-joint PVC piping. Construction will vary depending on the project and as such, specific construction of the wells will be detailed in the project-specific work plan. Bedrock wells which do utilized PVC piping for risers and screens will conform to the requirements of ASTM-D 1785 Schedule 40 pipe, and shall bear markings that will identify the material as that which is specified. All materials used to construct the wells will be NSF/ASTM approved.

The well screen slot size will be selected based on the filter pack grain size and the ability to hold back 85 percent or more of the filter pack materials. Screen and riser sections shall be joined by flush-threaded coupling to form watertight unions that retain 100% of the strength of the casing. Solvent PVC glue shall not be used at any time in the construction of the wells. The bottom of the screen shall be sealed with a treated cap or plug. No lead shot or lead wool is to be employed in sealing the bottom of the well or for sealant at any point in the well. All risers and screens shall be set round, plumb, and true to line.

6.1.3 Artificial Sand Pack

When utilized, granular backfill will be chemically and texturally clean, inert, siliceous, and of appropriate grain size for the screen slot size and the host environment. The sand pack will be installed using a tremie pipe, when possible (i.e., a tremie pipe may not fit into smaller, 2-in. diameter boreholes). When utilized, the well screen and casing will be installed, and the sand pack placed around the screen and casing to a depth extending 2-ft. or at least 25 percent of the screen length above the top of the screen.

An artificial sand pack will not be utilized in bedrock wells without screens (i.e., open borehole wells).

6.1.4 Bentonite Seal

A minimum 2-ft. thick seal of tamped bentonite pellets will be placed directly on top of the sand pack, and care will be taken to avoid bridging. In the event that Site geology does not allow for a 2-ft. seal (e.g., only 1-ft. of space remains between the top of the sand pack and ground surface), the remaining space in the annulus will be filled with bentonite. The seal will be measured immediately after placement, without allowance for swelling.

6.1.5 Grout Mixture

Upon completion of the bentonite seal, the well may be grouted with a non-shrinking cement grout (e.g., Volclay^{R}) mix to be placed from the top of the bentonite seal to the ground surface. The cement grout shall consist of a mixture of Portland cement (ASTM C 150) and water, in the proportion of not more than 7 gallons of clean water per bag of cement (1 cubic foot or 94 pounds). Additionally, 3% by weight of bentonite powder shall be added, if permitted.

6.1.6 Surface Protection

At all times during the progress of the work, precautions shall be used to prevent tampering with or the entrance of foreign material into the well. Upon completion of the well, a suitable lockable cap shall be installed to prevent material from entering the well. Where permanent wells are to be installed, the well riser shall be protected by a flush mounted road box set into a concrete pad. A concrete pad, sloped away from the well, shall be constructed around the flush mount road box at ground level.

Any well that is to be temporarily removed from service or left incomplete due to delay in construction shall be capped with a watertight cap and equipped with a "vandal-proof" cover, satisfying applicable NYSDEC regulations or recommendations.

6.1.7 Surveying

Coordinates and elevations will be established for each monitoring well and sampling location. Elevations to the closest 0.01 foot shall be used for the survey. These elevations shall be referenced to a regional, local, or project-specific datum. USGS benchmarks will be used whenever available. The location, identification, coordinates, and elevations of the wells will be plotted on maps with a scale large enough to show their location with reference to other structures at each site.

6.1.8 Well Development

After completion of the well, but not sooner than 24 hours after grouting is completed, development will be accomplished using pumping, bailing, or surge blocking. No dispersing agents, acids, disinfectants, or other additives will be used during development or introduced into the well at any other time. During development, water will be removed throughout the entire water column by periodically lowering and raising the pump intake (or bailer stopping point).

Development water will be either properly contained and treated as waste until the results of chemical analysis of samples are obtained or discharged on Site as determined by the Site-specific work plans and/or consultation with the NYSDEC representatives on Site.

The development process will continue until a stabilization of pH, specific conductance, temperature, and turbidity (goal of <50 NTUs) of the discharge is achieved for three consecutive intervals following the removal of a minimum of 110% of the water lost during drilling, or three well volumes; whichever is greater. In the event that limited recharge does not allow for the recovery of all drilling water lost in the well or three (3) well volumes, the well will be allowed to stabilize to conditions deemed representative of groundwater conditions. Stabilization periods will vary by project but will be confirmed with the NYSDEC prior to sampling.

7.0 Geologic Logging and Sampling

At each investigative location, borings will be advanced through overburden using either a drill rig and hollow-stem auger or direct push technology. Soils will be evaluated for visual and olfactory evidence of impairment (i.e., staining, odors, and elevated PID readings) by a geologist, engineer or qualified Environmental Professional. Sampling devices will be decontaminated according to procedures outlined in the Decontamination section of this document. When utilized, split-spoon samplers will be driven into the soil using a minimum 140-pound safety hammer and allowed to free-fall 30-inches, in accordance with ASTM-D 1586-84 specifications. The number of blows required to drive the sampler each 6-inches of penetration will be recorded. When required, samples will be stored in glass jars until they are needed for testing or the project is complete.

If hard boulders or bedrock result in auger refusal, rock coring will be used to advance the hole to design depth. If hydrogeologic conditions are favorable for well installation at a depth less than design, the well may be installed at the boring or coring termination depth. In the event that maximum design depth is reached and hydrogeologic conditions are not suitable for well installation, the maximum drilling depth may be revised. Hydrogeologic suitability for well placement will be determined by the supervising geologist, engineer or qualified Environmental Professional in consultation with NYSDEC, based on thickness and estimated hydraulic conductivity of the saturated zone encountered. If necessary, the borehole will be advanced to water or abandoned.

Boulders and bedrock encountered during well installation may be cored by standard diamond-core drilling methods using an "NX" size core barrel. All rock cores recovered will be logged by a geologist, labeled and stored in wooden core boxes. The cores will be stored by the firm until the project is completed or for at least one year. Drilling logs will be prepared by an experienced geologist or engineer, who will be present during all drilling operations. One copy of each field boring and well construction log and groundwater data, will typically be submitted as part of the investigation summary report (e.g., Remedial Investigation Report). The RQD value shall be calculated for each 5-foot section. Information provided in the logs shall include, but not be limited to, the following:

- Date, test hole identification, and project identification;
- Name of individual developing the log;
- Name of driller and assistant(s);
- Drill, make and model, auger size;
- Identification of alternative drilling methods used and justification thereof (e.g., rotary drilling with a specific bit type to remove material from within the hollow stem augers);

- Standard penetration test (ASTM D-1586) blow counts;
- Field diagram of each monitoring well installed with the depth to bottom of screen, top of screen, and pack, bentonite seal, etc.;
- Reference elevation for all depth measurements;
- Depth of each change of stratum;
- Thickness of each stratum;
- Identification of the material of which each stratum is composed, according to the USCS system or standard rock nomenclature, as appropriate;
- Depth interval from which each sample was taken;
- Depth at which hole diameters (bit sizes) change;
- Depth at which groundwater is encountered;
- Depth to static water level and changes in static water level with well depth;
- Total depth of completed well;
- Depth or location of any loss of tools or equipment;
- Location of any fractures, joints, faults, cavities, or weathered zones;
- Depth of any grouting or sealing;
- Nominal hole diameters;
- Amount of cement used for grouting or sealing;
- Depth and type of well casing;
- Description of well screen (to include depth, length, location, diameter, slot sizes, material, and manufacturer);
- Any sealing-off of water-bearing strata;
- Static water level upon completion of the well and after development;
- Drilling date or dates;
- Construction details of well; and
- An explanation of any variations from the work plan.

8.0 Groundwater Sampling Procedures

The groundwater in all new monitoring wells will be allowed to stabilize for at least 24-hours following development. Water levels will be measured to within 0.01 feet prior to purging and sampling. Sampling of each well will typically be accomplished in one of two ways; active or passive.

Active Sampling:

Purging will be completed prior to active sampling. During purging, the following will be recorded in field books or groundwater sampling logs:

- date
- purge start time
- weather conditions
- PID reading immediately after the well cap is removed
- presence of NAPL, if any, and approximate thickness
- pH
- dissolved oxygen

- temperature
- specific conductance
- depth of well
- depth to water
- estimated water volume
- purge end time
- volume of water purged

In general, wells will be purged until the pH, conductivity, temperature, and turbidity of the water being pumped from the well have stabilized with a turbidity goal of 50 NTU. All wells will be purged of at least three well volumes or to dryness.

Passive Sampling:

Groundwater samples will be collected via passive methods (i.e., no-purge) according to the following procedures and in the volumes specified in Table 11-1:

- Samples will be collected via passive diffusion bag (PDB) samplers. PDB samplers are made of low-density polyethylene plastic tubing (typically 4 mil), filled with laboratory grade (ASTM Type II) deionized water and sealed at both ends.
- PDB samplers will only be used to collect groundwater samples which will be analyzed for VOCs.
- PDB samplers will be deployed by hanging in the well at the middle of the well screen unless a low water table, need to deploy multiple samplers or the targeting of a specific depth interval is identified. The PDB samplers will be deployed at least 14 days prior to sampling.
- The PDB samplers will be deployed using a Teflon® coated string or synthetic rope.
- When transferring water from the PDB to sample containers, care will be taken to avoid agitating the sample, since agitation promotes the loss of volatile constituents;
- Any observable physical characteristics of the groundwater (e.g., color, sheen, odor, turbidity) at the time of sampling will be recorded; and
- Weather conditions (i.e., air temperature, sky condition, recent heavy rainfall, drought conditions) at the time of sampling will be recorded.

All groundwater samples and their accompanying QC samples will be run for volatile organic compounds (VOCs) using NYSDEC Analytical Services Protocol (ASP; revised July 2005 and subsequent amendments or revisions).

9.0 Management of Investigative-Derived Waste

Purpose:

The purposes of these guidelines are to ensure the proper holding, storage, transportation, and disposal of materials that may contain hazardous wastes. Investigation-derived waste (IDW) included the following:

- Drill cuttings, discarded soil samples, drilling mud solids, and used sample containers;
- Well development and purge waters and discarded groundwater samples;
- Decontamination waters and associated solids;
- Soiled disposable personal protective equipment (PPE);
- Used disposable sampling equipment;
- Used plastic sheeting and aluminum foil;
- Other equipment or materials that either contain or have been in contact with potentially-impacted environmental media.
- Because these materials may contain regulated chemical constituents, they must be managed as a solid waste. This management may be terminated if characterization analytical results indicate the absence of these constituents.

Procedure:

1. Contain all investigation-derived wastes in Department of Transportation (DOT)-approved 55-gallon drums, roll-off boxes, or other containers suitable for the wastes.
2. Containerize wastes from separate borings or wells in separate containers (i.e. do not combine wastes from several borings/wells in a single container, unless it is a container used specifically for transfer purposes, or unless specific permission to do so has been provided by the LaBella Project Manager. Unused samples from surface sample locations within a given area may be combined.
3. To the extent practicable, separate solids from drilling muds, decontamination waters, and similar liquids. Place solids within separate containers.
4. Transfer all waste containers to a staging area. Access to this area will be controlled. Waste containers must be transferred to the staging area as soon as practicable after the generating activity is complete.
5. Pending transfer, all containers will be covered and secured when not immediately attended,
6. Label all containers with regard to contents, origin, and date of generation. Use indelible ink for all labeling.
7. Collect samples for waste characterization purposes, use boring/well sample analytical data for characterization.
8. For wastes determined to be hazardous in character, be aware on accumulation time limitations. Coordinate the disposal of these wastes with the Owner and NYSDEC.

9. Dispose of investigation-derived wastes as follows;

   - Soil, water, and other environmental media for which analysis does not detect organic constituents, and for which inorganic constituents are at levels consistent with background, may be spread on-site (pending NYSDEC approval) or otherwise treated as a non-waste material.
   - Soils, water, and other environmental media in which organic compounds are detected or metals are present above background will be disposed as industrial waste or hazardous waste, as appropriate. Alternate disposition must be consistent with applicable State and Federal laws.
   - Personal protective equipment, disposable bailers, and similar equipment may be disposed as municipal waste, unless waste characterization results mandate disposal as industrial wastes

10. If waste is determined to be listed hazardous waste, it must be handled as hazardous waste as described above, unless a contained-in determination is accepted by the NYSDEC.

10.0 Decontamination

Sampling methods and equipment have been chosen to minimize decontamination requirements and to prevent the possibility of cross-contamination. Decontamination of equipment will be performed between discrete sampling locations. Equipment used to collect samples between composite sample locations will not require decontamination between collection of samples. All drilling equipment will be decontaminated after the completion of each drilling location. Special attention will be given to the drilling assembly and augers.

Split spoons and other non-disposable equipment will be decontaminated between each sampling event. The sampler will be cleaned prior to each use, by one of the following procedures:

- Initially cleaned of all foreign matter;
- Sanitized with a steam cleaner;

OR

- Initially cleaned of all foreign matter;
- Scrubbed with brushes in alconox solution;
- Rinsed; and
- Allowed to air dry.

11.0 Sample Containers

The containers required for sampling activities are pre-washed and ordered directly from a laboratory, which has the containers prepared in accordance with USEPA bottle washing procedures. The following tables detail sample volumes, containers, preservation and holding time for typical analytes.

Table 11-1
Water Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Maximum Holding Time
VOCs	40-ml glass vial with Teflon-backed septum	Two (2); fill completely, no air space	Cool to 4° C (ice in cooler), Hydrochloric acid to pH <2	7 days
Semivolatile Organic Compounds (SVOCs)	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Pesticides	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Polychlorinated biphenyls (PCBs)	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Metals	500-ml polyethylene	One (1); fill completely	Cool to 4° C (Nitric acid to pH <2	6 months
Cyanide	500-ml polyethylene	One (1); fill completely	Cool to 4° C (Sodium hydroxide to pH >12, plus 0.6 grams ascorbic acid)	14 days

*Holding time is based on verified time of sample collection.

Note: All sample bottles will be prepared in accordance with USEPA bottle washing procedures.

TABLE 11-2
Soil Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Maximum Holding Time
VOCs, SVOCs, PCBs, and Pesticides	8-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	7 days
VOCs by USEPA Method 5035 (if specified in work plan) Closed-system Purge and Trap Method	40-ml glass vial with Teflon-backed septum	Three (3), fill with 5 grams of soil using soil syringe	Cool to 4° C (ice in cooler). Two (2) with 10 mL DI water or 5 mL sodium bisulfate, one (1) with 5 mL methanol.	14 days
RCRA/TAL Metals, and cyanide	8-oz. glass jar with Teflon-lined cap	One (1); fill completely	Cool to 4° C (ice in cooler)	Must be extracted within 10 days; analyzed with 30 days

*Holding time is based on the times from verified time of sample collection.

Note: All sample bottles will be prepared in accordance with USEPA bottle washing procedures.

TABLE 11-3
List of Major Instruments for Sampling and Analysis

- MSA 360 0_2 /Explosimeter
- Hollige Series 963 Nephlometer (turbidity meter)
- EM-31 Geomics Electromagnetic Induction Device
- pH/Temperature/Conductivity Meter - Portable
- Hewlett Packard (HP) 1000 computer with RTE-6 operating system; and HP 9144 computer with RTE-4 operating system equipped with Aquarius software for control and data acquisition from gas chromatograph/mass spectrometer (GC/MS) systems; combined wiley and National Bureau of Standards (NBS) mass spectral library; and data archiving on magnetic tape
- Viriam 6000 and 37000 gas chromatrographs equipped with flame ionization, electron capture, photoionization and wall detectors as appropriate for various analyses,, and interfaced to Variam DS604 or D5634 data systems for processing data.
- Spectra-Physics Model SP 4100 and SP 4270 and Variam 4270 cam puting integrators
- Perkin Eimer (PE) 3000% and 3030% fully Automated Atomic Absorption Spectrophotometers (AAS) with Furnace Atomizer and background correction system
- PE Plasma II Inductively Coupled Argon Plasma (ICAP) Spectre meter with PE7500 laboratory computer
- Dionex 20001 ion chromatograph with conductivity detector for anion analysis, with integrating recorder

12.0 Sample Custody

This section describes standard operating procedures for sample identification and chain-of-custody to be utilized for all field activities. The purpose of these procedures is to ensure that the quality of the samples is maintained during their collection, transportation, and storage through analysis. All chain-of-custody requirements comply with standard operating procedures indicated in USEPA sample handling protocol.

Sample identification documents must be carefully prepared so that sample identification and chain-of-custody can be maintained and sample disposition controlled. Sample identification documents include:

- Field notebooks,
- Sample label,
- Custody seals, and
- Chain-of-custody records.

12.1 Chain-of-Custody

The primary objective of the chain-of-custody procedures is to provide an accurate written or computerized record that can be used to trace the possession and handling of a sample from collection to completion of all required analyses. A sample is in custody if it is:

- In someone's physical possession;
- In someone's view;
- Locked up; or
- Kept in a secured area that is restricted to authorized personnel.

12.2 Field Custody Procedures

- As few persons as possible should handle samples.
- Sample bottles will be obtained pre-cleaned from a source such as I-Chem. Coolers or boxes containing cleaned bottles should be sealed with a custody tape seal during transport to the field or while in storage prior to use.
- The sample collector is personally responsible for the care and custody of samples collected until they are transferred to another person or dispatched properly under chain-of-custody rules.
- The sample collector will record sample data in the notebook.
- The site manager will determine whether proper custody procedures were followed during the fieldwork and decide if additional samples are required.

12.3 Sample Tags

Sample tags attached to or affixed around the sample container must be used to properly identify all samples collected in the field. The sample tags are to be placed on the bottles so as not to obscure any QC lot numbers on the bottles; sample information must be printed in a legible manner using waterproof ink. Field identification must be sufficient to enable cross-reference with the logbook. For chain-of-custody purposes, all QC samples are subject to exactly the same custodial procedures and documentation as "real" samples.

12.4 Transfer of Custody and Shipment

- The coolers in which the samples are packed must be accompanied by a chain-of-custody record. When transferring samples, the individuals relinquishing and receiving them must sign, date, and note the time on the chain-of-custody record. This record documents sample custody transfer
- Shipping containers must be sealed with custody seals for shipment to the laboratory. The method of shipment, name of courier, and other pertinent information are entered in the "Remarks" section of the chain-of-custody record and traffic reports.
- All shipments must be accompanied by the chain-of-custody record identifying their contents. The original record accompanies the shipment. The other copies are distributed appropriately to the site manager.
- If sent by mail, the package is registered with return receipt requested. If sent by common carrier, a bill of lading is used. Freight bills, Postal Service receipts, and bill of lading are retained as part of the permanent documentation.

12.5 Chain-of-Custody Record

The chain-of-custody record must be fully completed in duplicate, using black carbon paper where possible, by the field technician who has been designated by the project manager as responsible for sample shipment to the appropriate laboratory for analysis. In addition, if samples are known to require rapid turnaround in the laboratory because of project time constraints or analytical concerns (e.g., extraction time or sample retention period limitations, etc.), the person completing the chain-of-custody record should note these constraints in the "Remarks" section of the record.

12.6 Laboratory Custody Procedures

A designated sample custodian accepts custody of the shipped samples and verifies that the sample identification number matches that on the chain-of-custody record and traffic reports, if required. Pertinent information as to shipment, pickup, and courier is entered in the "Remarks" section.

12.7 Custody Seals

Custody seals are preprinted adhesive-backed seals with security slots designed to break if the seals are disturbed. Sample shipping containers (coolers, cardboard boxes, etc., as appropriate) are sealed in as many places as necessary to ensure security. Seals must be signed and dated before use. On receipt at the laboratory, the custodian must check (and certify, by completing the package receipt log and LABMIS entries) that seals on boxes and bottles are intact. Strapping tape should be placed over the seals to ensure that seals are not accidentally broken during shipment.

13.0 Laboratory Requirements and Deliverables

This section will describe laboratory requirement and procedures to be followed for laboratory analysis. Samples collected in New York State will be analyzed by a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP)-certified laboratory. When required, analyses will be conducted in accordance with the most current NYSDEC Analytical Services Protocol (ASP). For example, ASP Category B reports will be completed by the laboratory for samples representing the final delineation of the Remedial Investigation, confirmation samples, samples to determine closure of a system, and correlation samples taken using field testing technologies analyzed by an ELAP-certified laboratory to determine correlation to field results. Data Usability Summary Reports will be completed by a third party for samples requiring ASP Category B format reports. Electronic data deliverables (EDDs) will also be generated by the laboratory in EQUIS format for samples requiring ASP Category B format reports.

14.0 Documentation

14.1 Sample Identification

All containers of samples collected from the project will be identified using the following format on a label or tag fixed to the sample container:

XX-ZZ-O/D-DDMMYYYY

XX:	This set of initials indicates the Site from which the sample was collected.
ZZ:	These initials identify the sample location. Actual sample locations will be recorded in the task log.
O/D:	An "O" designates an original sample; "D" identifies it as a duplicate.
DDMMYYYY:	This set of initials indicates the date the sample was collected

Each sample will be labeled, chemically preserved (if required) and sealed immediately after collection. To minimize handling of sample containers, labels will be filled out prior to sample collection when possible. The sample label will be filled out using waterproof ink and will be firmly affixed to the sample containers. The sample label will give the following information:

- Date and time of collection
- Sample identification
- Analysis required
- Project name/number

- Preservation

14.2 Daily Logs

Daily logs and data forms are necessary to provide sufficient data and observations to enable participants to reconstruct events that occurred during the project and to refresh the memory of the field personnel if called upon to give testimony during legal proceedings.

The site log is the responsibility of the site manager and will include a complete summary of the day's activity at the site.

The **Task Log** will include:

- Name of person making entry (signature).
- Names of team members on-site.
- Levels of personnel protection:
  - Level of protection originally used;
  - Changes in protection, if required; and
  - Reasons for changes.
- Documentation on samples taken, including:
  - Sampling location and depth station numbers;
  - Sampling date and time, sampling personnel;
  - Type of sample (grab, composite, etc.); and
  - Sample matrix.

- On-site measurement data.
- Field observations and remarks.
- Weather conditions, wind direction, etc.
- Unusual circumstances or difficulties.
- Initials of person recording the information.

15.0 Corrections to Documentation

15.1 Notebook

As with any data logbooks, no pages will be removed for any reason. If corrections are necessary, these must be made by drawing a single line through the original entry (so that the original entry can still be read) and writing the corrected entry alongside. The correction must be initialed and dated. Most corrected errors will require a footnote explaining the correction.

15.2 Sampling Forms

As previously stated, all sample identification tags, chain-of-custody records, and other forms must be written in waterproof ink. None of these documents are to be destroyed or thrown away, even if they are illegible or contain inaccuracies that require a replacement document.

If an error is made on a document assigned to one individual, that individual may make corrections simply by crossing a line through the error and entering the corrected information. The incorrect information should not be obliterated. Any subsequent error discovered on a document should be corrected by the person who made the entry. All corrections must be initialed and dated.

15.3 Photographs

Photographs will be taken as directed by the site manager. Documentation of a photograph is crucial to its validity as a representation of an existing situation. The following information will be noted in the task log concerning photographs:

- Date, time, location photograph was taken;
- Photographer
- Description of photograph taken;

16.0 Sample Handling, Packaging, and Shipping

The transportation and handling of samples must be accomplished in a manner that not only protects the integrity of the sample, but also prevents any detrimental effects due to the possible hazardous nature of samples. Regulations for packaging, marking, labeling, and shipping hazardous materials are promulgated by the United States DOT in the Code of Federal Regulation, 49 CFR 171 through 177. All samples will be delivered to the laboratory and analyzed within the holding times specified by the analytical method for that particular analyte.

All chain-of-custody requirements must comply with standard operating procedures in the USEPA sample handling protocol.

16.1 Sample Packaging

Samples must be packaged carefully to avoid breakage or contamination and must be shipped to the laboratory at proper temperatures. The following sample packaging requirements will be followed:

- Sample bottle lids must never be mixed. All sample lids must stay with the original containers.
- The sample volume level can be marked by placing the top of the label at the appropriate sample height, or with a grease pencil. This procedure will help the laboratory to determine if any leakage occurred during shipment. The label should not cover any bottle preparation QC lot numbers.

- All sample bottles are placed in a plastic bag to minimize the potential for cross-contamination.
- Shipping coolers must be partially filled with packing materials and ice when required, to prevent the bottles from moving during shipment.
- The sample bottles must be placed in the cooler in such a way as to ensure that they do not touch one another. Ice will be added to the cooler to ensure that the samples reach the laboratory at temperatures no greater than 4°C.
- The environmental samples are to be placed in plastic bags. Ice is not to be used as a substitute for packing materials.
- Any remaining space in the cooler should be filled with inert packing material. Under no circumstances should material such as sawdust, sand, etc., be used.
- A duplicate custody record and traffic reports, if required must be placed in a plastic bag and taped to the bottom of the cooler lid. Custody seals are affixed to the sample cooler.

16.2 Shipping Containers

Shipping containers are to be custody-sealed for shipment as appropriate. The container custody seal will consist of filament tape wrapped around the package and custody seals affixed in such a way that access to the container can be gained only by cutting the filament tape and breaking a seal.

Field personnel will make arrangements for transportation of samples to the lab. The lab must be notified as early in the week as possible regarding samples intended for Saturday delivery.

16.3 Marking and Labeling

- Chain of custody seals shall be placed on the container, signed, and dated prior to taping the container to ensure the chain of custody seals will not be destroyed during shipment.
- If samples are designated as medium or high hazard, they must be sealed in metal paint cans, placed in the cooler with vermiculite and labeled and placarded in accordance with DOT regulations.
- In addition, the coolers must also be labeled and placarded in accordance with DOT regulations if shipping medium and high hazard samples.

17.0 Calibration Procedures and Frequency

All instruments and equipment used during sampling and analysis will be operated, calibrated, and maintained according to the manufacturer's guidelines and recommendations as well as criteria set forth in the applicable analytical methodology references. Operation, calibration, and maintenance will be performed by personnel properly trained in these procedures. Section 11 lists the major instruments to be used for sampling and analysis. In addition, brief descriptions of calibration procedures for major field and laboratory instruments follow.

18.0 Field Instrumentation

18.1 Photovac/MiniRae Photoionization Detector (PID)

Standard operating procedures for the PID require that routine maintenance and calibration be performed every six months. The packages used for calibration are non-toxic analyzed gas mixtures available in pressurized containers.

18.2 Organic Vapor Analyzer

Organic vapor analyzers (OVAs) are calibrated and routine maintenance performed every six months when the units are not in use. Calibration is performed and the major system checks are performed prior to the instrument being released for field use.

Calibration of the OVA 128 GC must be performed by a factory-authorized service representative. The instrument is removed from its protective case and the probe is connected to the base unit. After checking for an airtight seal in the sample line (plugging the sample inlet to stop the pump), the hydrogen supply is turned on and the pressure is set to 10 psi. The electronics are turned on and the instrument is allowed to warm up for at least 5 minutes. After warm up, the instrument is zeroed on the "X10" scale using the adjust knob. The flame is then lit and a gas-tight sample bag is filled with a mixture of 100 ppm methane in air. The sample bag is then attached to the probe inlet and the internal pump is allowed to draw in as much sample as is needed. R32 on the control board is adjusted to read 100 ppm on the "X10" scale and then the hydrogen supply is shut down. The pump can now be turned off and the sample bag removed. Using the adjust knob, the meter is set to read 4 ppm on the "X1" scale. Switching back to the "X10" scale the adjust knob is again used to set the meter to 40 ppm. The scale is then set to "X100" and R33 is adjusted until the meter reads 40 ppm on the "X100" scale.

The OVA has a detection limit of 0.1 ppm in methane equivalents and a working range of 0 to 1,000 ppm. During daily field use, system checks are performed which involve calibration and maintenance of the pump systems, gases, and filters. Care is taken to check for and prevent clogging or leaks. Quad rings and the burner chamber are examined on a weekly basis. Routine biannual maintenance includes a thorough cleaning as well as a re-examination of the pump system for leaks and wear. Parts are replaced as necessary. Instrument operation is verified by calibrating and running the OVA for 4 to 6 hours. An instrument specific logbook is maintained with the OVA to document its use and maintenance.

18.3 Conductance, Temperature, and pH Tester

Temperature and conductance instruments are factory calibrated. Temperature accuracy can be checked against an NBS certified thermometer prior to field use if necessary. Conductance accuracy may be checked with a solution of known conductance and recalibration can be instituted, if necessary.

18.4 Turbidity Meter

LaMotte 2020WE Turbidity Meter is calibrated before each use. The default units are set to NTU and the default calibration curve is formazin. A 0 NTU Standard (Code 1480) is included with the meter. To calibrate, rinse a clean tube three times with the blank. Fill the tube to the fill line with the blank. Insert the tube into the chamber, close the lid, and select “scan blank”.

19.0 Internal Quality Control Checks

QC data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of field equipment. Field-based QC will comprise at least 10% of each data set generated and will consist of standards, replicates, spikes, and blanks. Field duplicates and field blanks will be analyzed by the laboratory as samples and will not necessarily be identified to the laboratory as duplicates or blanks. For each matrix, field duplicates will be provided at a rate of one per 10 samples collected or one per shipment, whichever is greater. Field blanks which consist of trip, routine field, and rinsate blanks will be provided at a rate of one per 20 samples collected for each parameter group, or one per shipment, whichever is greater.

Calculations will be performed for recoveries and standard deviations along with review of retention times, response factors, chromatograms, calibration, tuning, and all other QC information generated. All QC data, including split samples, will be documented in the site logbook. QC records will be retained and results reported with sample data.

19.1 Blank Samples

Blank samples are analyzed in order to assess possible contamination from the field and/or laboratory so that corrective measures may be taken, if necessary. Field samples are discussed in the following subsection:

19.2 Field Blanks

Various types of blanks are used to check the cleanliness of field handling methods. The following types of blanks may be used: the trip blank, the routine field blank, and the field equipment blank. They are analyzed in the laboratory as samples, and their purpose is to assess the sampling and transport procedures as possible sources of sample contamination. Field staff may add blanks if field circumstances are such that they consider normal procedures are not sufficient to prevent or control sample contamination, or at the direction of the project manager. Rigorous documentation of all blanks in the site logbooks is mandatory.

- **Routine Field Blanks** or bottle blanks are blank samples prepared in the field to access ambient field conditions. They will be prepared by filling empty sample containers with deionized water and any necessary preservatives. They will be handled like a sample and shipped to the laboratory for analysis.
- **Trip Blanks** are similar to routine field blanks with the exception that they are **not** exposed to field conditions. Their analytical results give the overall level of contamination from everything except ambient field conditions. For the RI/FS, one trip blank will be collected with every batch of water samples for VOC analysis. Each trip blank will be prepared by filling a 40-ml vial with deionized water prior to the sampling trip, transported to the site, handled like a sample, and returned to the laboratory for analysis without being opened in the field.
- **Field Equipment Blanks** are blank samples (sometimes called transfer blanks or rinsate blanks) designed to demonstrate that sampling equipment has been properly prepared and cleaned before field use, and that cleaning procedures between samples are sufficient to minimize cross contamination. If a sampling team is familiar with a particular site, they may be able to predict which areas or samples are likely to have the highest concentration of contaminants. Unless other constraints apply, these samples should be taken last to avoid excessive contamination of sampling equipment.

19.3 Field Duplicates

Field duplicate samples consist of a set of two samples collected independently at a sampling location during a single sampling event. In some instances the field duplicate can be a blind duplicate, i.e., indistinguishable from other analytical samples so that personnel performing the analyses are not able to determine which samples are field duplicates. Field duplicates are designed to assess the consistency of the overall sampling and analytical system.

19.4 Quality Control Check Samples

Inorganic and organic control check samples are available from EPA free of charge and are used as a means of evaluating analytical techniques of the analyst. Control check samples are subjected to the entire sample procedure, including extraction, digestion, etc., as appropriate for the analytical method utilized.

APPENDIX 5

RI Data Tables

Table 1A
Soil Sample Analytical Results
VOCs in Soil
56-70 Ellicott Street, Batavia, NY
LaBella Project #2171218

Sample ID	NYCRR Part 375 Unrestricted Use SCOs (mg/Kg)	NYCRR Part 375 Protection of Groundwater SCOs	NYCRR Part 375 Commercial Use SCOs (mg/Kg)	TP-1		S-46		S2020-2		S2020-4		S2020-6		QA/QC	
Sample Depth (feet)				**2'-5'**		**10'-15'**		**9'-19'**		**7'-8'**		**12'-13'**		**9'-19'**	
Sample Date				**4/29/2020**		**4/30/2020**		**4/30/2020**		**5/1/2020**		**5/1/2020**		**4/30/2020**	
Volatile Organic Compounds				Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
1,1,1-Trichloroethane	0.68	0.68	500	<0.00014		<0.00014		<0.037		<0.00014		<0.036		<0.034	
1,1,2,2-Tetrachloroethane	NL	NL	NL	<0.00017		<0.00016		<0.043		<0.00016		<0.041		<0.039	
1,1,2-Trichloroethane	NL	NL	NL	<0.00017		<0.00016		<0.043		<0.00016		<0.041		<0.039	
1,1-Dichloroethane	0.27	0.27	240	<0.00027		<0.00026		<0.069		<0.00026		<0.066		<0.063	
1,1-Dichloroethene	0.33	0.33	500	<0.00024		<0.00023		<0.061		<0.00023		<0.058		<0.056	
1,2,4-Trichlorobenzene	NL	NL	NL	<0.00027		<0.00026		<0.07		<0.00026		<0.067		<0.064	
1,2,4-Trimethylbenzene	3.6	3.6	190	0.007		0.0007	J	***42***		<0.00032		***67***		***58***	
1,2-Dibromo-3-chloropropane	NL	NL	NL	<0.001		<0.00097		<0.26		<0.00096		<0.24		<0.24	
1,2-Dibromoethane	NL	NL	NL	<0.00028		<0.00027		<0.072		<0.00027		<0.068		<0.066	
1,2-Dichlorobenzene	1	1.1	500	<0.00014		<0.00014		<0.037		<0.00014		<0.035		<0.034	
1,2-Dichloroethane	0.02	0.02	30	<0.00026		<0.00025		<0.066		<0.00025		<0.063		<0.061	
1,2-Dichloropropane	NL	NL	NL	<0.00012		<0.00012		<0.032		<0.00012		<0.031		<0.03	
1,3,5-Trimethylbenzene	8.4	8.4	190	0.0042		0.0004	J	***12***		<0.00018		0.32	J	***17***	
1,3-Dichlorobenzene	2.4	2.4	280	<0.00015		<0.00014		<0.038		<0.00014		<0.036		<0.035	
1,4-Dichlorobenzene	1.8	1.8	130	<0.00017		<0.00017		<0.044		<0.00016		<0.042		<0.04	
2-Butanone	0.12	0.12	500	<0.0022		<0.0022		<0.57		<0.0021		<0.54		<0.52	
2-Hexanone	NL	NL	NL	<0.0012		<0.0011		<0.3		<0.0011		<0.29		<0.28	
4-Methyl-2-pentanone	NL	NL	NL	<0.0013		<0.0012		<0.33		<0.0012		<0.31		<0.3	
Acetone	0.05	0.05	500	<0.0048		0.014		<1.2		<0.0046		<1.2		<1.1	
Benzene	0.06	0.06	44	<0.00017		<0.00016		***0.45***		<0.00016		<0.041		***0.68***	
Bromodichloromethane	NL	NL	NL	<0.00011		<0.0001		<0.028		<0.0001		<0.027		<0.026	
Bromoform	NL	NL	NL	<0.00025		<0.00024		<0.064		<0.00024		<0.06		<0.058	
Bromomethane	NL	NL	NL	<0.00058		<0.00056		<0.15		<0.00056		<0.14		<0.14	
Carbon disulfide	NL	NL	NL	<0.0046		<0.0044		<1.2		<0.0044		<1.1		<1.1	
Carbon tetrachloride	0.76	0.76	22	<0.00023		<0.00022		<0.059		<0.00022		<0.056		<0.054	
Chlorobenzene	1.1	1.1	500	<0.00013		<0.00012		<0.033		<0.00012		<0.031		<0.03	
Chloroethane	NL	NL	NL	<0.00045		<0.00044		<0.12		<0.00044		<0.11		<0.11	
Chloroform	0.37	0.37	350	0.00016	J	<0.00014		<0.036		0.00013	J	<0.034		<0.033	
Chloromethane	NL	NL	NL	<0.00093		<0.0009		<0.24		<0.0009		<0.23		<0.22	
cis-1,2-Dichloroethene	0.25	0.25	500	<0.00018		<0.00017		<0.045		<0.00017		<0.043		<0.041	
cis-1,3-Dichloropropene	NL	NL	NL	<0.00016		<0.00015		<0.041		<0.00015		<0.039		<0.037	
Cyclohexane	NL	NL	NL	<0.00054		0.017		1	J	<0.00052		2.2	J	1.4	J
Dibromochloromethane	NL	NL	NL	<0.00014		<0.00014		<0.036		<0.00013		<0.034		<0.033	
Dichlorodifluoromethane	NL	NL	NL	<0.00092		<0.00089		<0.24		<0.00088		<0.22		<0.22	
Ethylbenzene	1	1	390	<0.00014		<0.00014		***6.2***		<0.00014		***1.6***		***9***	
Freon-113	NL	NL	NL	<0.00069		<0.00067		<0.18		<0.00067		<0.17		<0.16	
Isopropylbenzene	NL	NL	NL	<0.00011		0.0019		1.4		<0.0001		1.1		1.9	
Methyl Acetate	NL	NL	NL	<0.00095		<0.00092		<0.24		<0.00092		<0.23		<0.22	
Methyl cyclohexane	NL	NL	NL	<0.0006		0.021		2.3		<0.00058		1.6		3.2	
Methyl tert butyl ether	0.93	0.93	500	<0.0002		<0.0002		<0.052		<0.00019		<0.049		<0.047	
Methylene chloride	0.05	0.05	500	<0.0023		<0.0022		<0.59		<0.0022		<0.56		<0.54	
n-Butylbenzene	12	12	500	0.025		<0.00063		***19***		<0.00063		2.6		***26***	
n-Propylbenzene	3.9	3.9	500	<0.00017		0.014		3.5		<0.00016		3.4		4.7	
Naphthalene	12	NL	500	<0.00017		0.01		5.1		<0.00016		8.4		7	
o-Xylene	0.26	1.6	500	0.00069	J	0.0004	J	***11***		<0.00028		0.21	J	***16***	
p/m-Xylene				0.00075	J	0.00067	J	***25***		<0.00054		**1.5**		***36***	
p-Isopropyltoluene	NL	NL	NL	<0.00011		0.00044	J	1.1		<0.0001		0.87		1.6	
sec-Butylbenzene	11	11	500	0.00015	J	0.0058		1.7		<0.00014		1.5		2.2	
Styrene	NL	NL	NL	<0.0002		<0.00019		0.088	J	<0.00019		<0.048		0.15	J
tert-Butylbenzene	5.9	5.9	500	<0.00012		0.00041	J	<0.03		<0.00011		<0.029		<0.028	
Tetrachloroethene	1.3	1.3	150	0.00079		<0.00019		0.074	J	<0.00019		<0.048		0.067	J
Toluene	0.7	0.7	500	0.0017		0.0016		***4.5***		<0.00052		<0.13		***5***	
trans-1,2-Dichloroethene	0.19	0.19	500	<0.00014		<0.00013		<0.035		<0.00013		<0.034		<0.032	
trans-1,3-Dichloropropene	NL	NL	NL	<0.00027		<0.00026		<0.07		<0.00026		<0.067		<0.064	
Trichloroethene	0.47	0.47	200	<0.00014		<0.00013		<0.035		<0.00013		<0.034		<0.032	
Trichlorofluoromethane	NL	NL	NL	<0.0007		<0.00067		<0.18		<0.00067		<0.17		<0.16	
Vinyl chloride	0.02	0.02	13	<0.00034		<0.00032		<0.086		<0.00032		<0.082		<0.079	
Total VOCs	NL	NL	NL	0.04044		0.08832		136.412		0.00013		92.3		189.897	

Notes:
All values displayed in micrograms per kilogram (mg/kg) or parts per million (ppm)
NL indicates not listed
< indicates not detected above the method detection limit shown
Bold font indicates the concentration exceeds the NYCRR Part 375-6.8(a) Unrestricted Use SCO
Italic font indicates the concentration exceeds the NYCRR Part 375-6.8(a) Protection of Groundwater SCO
Highlighted font indicates the concentration exceeds the NYCRR Part 375-6.8(a) Commercial Use SCO

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Table 1B
Soil Sample Analytical Results
SVOCs in Soil
56-70 Ellicott Street, Batavia, NY
LaBella Project #2171218

Sample ID	NYCRR Part 375 Unrestricted Use SCOs (mg/Kg)	NYCRR Part 375 Protection of Groundwater SCOs	NYCRR Part 375 Commercial Use SCOs (mg/Kg)	TP-1		S-46		S2020-2		S2020-4		S2020-6		QA/QC	
Sample Depth (feet)				**2'-5'**		**10'-15'**		**9'-19'**		**7'-8'**		**12'-13'**		**9'-19'**	
Sample Date				**4/29/2020**		**4/30/2020**		**4/30/2020**		**5/1/2020**		**5/1/2020**		**4/30/2020**	
Semivolatile Organic Compounds				Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Acenaphthene	20	98	500	4.7		0.042	J	<0.2		<0.021		0.11	J	<0.19	
Hexachlorobenzene	NL	NL	NL	<0.22		<0.021		<0.21		<0.023		<0.021		<0.21	
Bis(2-chloroethyl)ether	NL	NL	NL	<0.27		<0.026		<0.26		<0.028		<0.026		<0.25	
2-Chloronaphthalene	NL	NL	NL	<0.2		<0.019		<0.19		<0.02		<0.019		<0.18	
3,3'-Dichlorobenzidine	NL	NL	NL	<0.53		<0.05		<0.5		<0.054		<0.051		<0.5	
2,4-Dinitrotoluene	NL	NL	NL	<0.4		<0.038		<0.38		<0.041		<0.038		<0.37	
2,6-Dinitrotoluene	NL	NL	NL	<0.34		<0.032		<0.33		<0.035		<0.033		<0.32	
Fluoranthene	100	1000	500	48		0.41		0.81	J	<0.023		0.55		1.3	
4-Chlorophenyl phenyl ether	NL	NL	NL	<0.21		<0.02		<0.2		<0.022		<0.02		<0.2	
4-Bromophenyl phenyl ether	NL	NL	NL	<0.3		<0.029		<0.29		<0.031		<0.029		<0.28	
Bis(2-chloroisopropyl)ether	NL	NL	NL	<0.34		<0.032		<0.32		<0.035		<0.033		<0.32	
Bis(2-chloroethoxy)methane	NL	NL	NL	<0.2		<0.019		<0.19		<0.02		<0.019		<0.19	
Hexachlorobutadiene	NL	NL	NL	<0.29		<0.028		<0.28		<0.03		<0.028		<0.27	
Hexachlorocyclopentadiene	NL	NL	NL	<1.8		<0.17		<1.7		<0.18		<0.17		<1.7	
Hexachloroethane	NL	NL	NL	<0.32		<0.03		<0.31		<0.033		<0.031		<0.3	
Isophorone	NL	NL	NL	<0.26		<0.024		<0.25		<0.026		<0.025		<0.24	
Naphthalene	NL	12	NL	2.1		0.075	J	*16*		<0.025		0.46		*24*	
Nitrobenzene	NL	NL	NL	<0.29		<0.028		<0.28		<0.03		<0.028		<0.28	
NDPA/DPA	NL	NL	NL	<0.22		<0.021		<0.22		<0.023		<0.022		<0.21	
n-Nitrosodi-n-propylamine	NL	NL	NL	<0.31		<0.029		<0.29		<0.032		<0.03		<0.29	
Bis(2-ethylhexyl)phthalate	NL	NL	NL	<0.69		0.11	J	2.4		<0.071		<0.066		3.7	
Butyl benzyl phthalate	NL	NL	NL	<0.5		<0.048		<0.48		<0.052		<0.048		<0.47	
Di-n-butylphthalate	NL	NL	NL	<0.38		<0.036		<0.36		<0.039		<0.036		<0.35	
Di-n-octylphthalate	NL	NL	NL	<0.67		<0.064		<0.65		<0.07		<0.065		<0.64	
Diethyl phthalate	NL	NL	NL	<0.18		<0.017		<0.18		<0.019		<0.018		<0.17	
Dimethyl phthalate	NL	NL	NL	<0.42		<0.04		<0.4		<0.043		<0.04		<0.39	
Benzo(a)anthracene	1	1	6	***23***		0.18		0.62	J	<0.023		0.14		0.93	J
Benzo(a)pyrene	1	22	1	***20***		0.088	J	<0.46		<0.05		0.11	J	0.56	J
Benzo(b)fluoranthene	1	1.7	6	***25***		0.13		0.44	J	<0.034		0.15		0.72	J
Benzo(k)fluoranthene	1	1.7	56	***9.3***		0.048	J	<0.3		<0.033		0.033	J	<0.3	
Chrysene	1	1	56	***20***		0.18		0.62	J	<0.021		0.14		***1.2***	
Acenaphthylene	100	107	500	2.1		<0.029		<0.29		<0.032		<0.03		<0.29	
Anthracene	100	1000	500	10		0.057	J	0.75	J	<0.04		0.18		1.2	
Benzo(ghi)perylene	100	1000	500	11		0.068	J	0.69	J	<0.024		0.088	J	1.1	J
Fluorene	30	386	500	4.2		0.082	J	2.1		<0.02		0.089	J	3.3	
Phenanthrene	100	1000	500	27		0.23		4.8		<0.025		0.71		7.4	
Dibenzo(a,h)anthracene	0.33	1000	1	***3.1***		<0.022		<0.22		<0.024		<0.022		<0.22	
Indeno(1,2,3-cd)pyrene	1	8.2	6	***13***		0.049	J	<0.26		<0.028		0.077	J	0.3	J
Pyrene	100	1000	500	39		0.5		1.9		<0.02		0.42		3	
Biphenyl	NL	NL	NL	<0.46		<0.044		2.2	J	<0.047		<0.044		3.2	J
4-Chloroaniline	NL	NL	NL	<0.36		<0.034		<0.35		<0.037		<0.035		<0.34	
2-Nitroaniline	NL	NL	NL	<0.38		<0.036		<0.37		<0.039		<0.037		<0.36	
3-Nitroaniline	NL	NL	NL	<0.37		<0.036		<0.36		<0.039		<0.036		<0.35	
4-Nitroaniline	NL	NL	NL	<0.82		<0.078		<0.79		<0.085		<0.079		<0.77	
Dibenzofuran	NL	NL	NL	3.2		0.035	J	0.95	J	<0.019		0.05	J	1.4	J
2-Methylnaphthalene	NL	NL	NL	1.5	J	0.15	J	41		<0.025		0.49		60	
1,2,4,5-Tetrachlorobenzene	NL	NL	NL	<0.21		<0.02		<0.2		<0.021		<0.02		<0.2	
Acetophenone	NL	NL	NL	<0.24		<0.023		<0.24		<0.025		<0.024		<0.23	
2,4,6-Trichlorophenol	NL	NL	NL	<0.38		<0.036		<0.36		<0.039		<0.036		<0.35	
p-Chloro-m-cresol	NL	NL	NL	<0.3		<0.028		<0.28		<0.03		<0.028		<0.28	
2-Chlorophenol	NL	NL	NL	<0.23		<0.022		<0.22		<0.024		<0.023		<0.22	
2,4-Dichlorophenol	NL	NL	NL	<0.32		<0.03		<0.3		<0.033		<0.031		<0.3	
2,4-Dimethylphenol	NL	NL	NL	<0.65		<0.062		<0.63		<0.068		<0.063		<0.62	
2-Nitrophenol	NL	NL	NL	<0.75		<0.071		<0.72		<0.077		<0.072		<0.7	
4-Nitrophenol	NL	NL	NL	<0.81		<0.077		<0.78		<0.084		<0.078		<0.76	
2,4-Dinitrophenol	NL	NL	NL	<0.92		<0.088		<0.89		<0.095		<0.089		<0.87	
4,6-Dinitro-o-cresol	NL	NL	NL	<0.95		<0.091		<0.91		<0.098		<0.092		<0.9	
Pentachlorophenol	NL	0.8	NL	<0.44		<0.042		<0.42		<0.045		<0.042		<0.41	
Phenol	NL	0.33	NL	<0.3		<0.028		<0.29		<0.031		<0.029		<0.28	
2-Methylphenol	NL	0.33	NL	<0.31		<0.029		<0.29		<0.032		<0.03		<0.29	
3-Methylphenol/4-Methylphenol	NL	0.33	NL	<0.31		<0.03		<0.3		<0.032		<0.03		<0.29	
2,4,5-Trichlorophenol	NL	NL	NL	<0.38		<0.036		<0.36		<0.039		<0.037		<0.36	
Carbazole	NL	NL	NL	1.8	J	0.027	J	<0.18		<0.02		0.05	J	<0.18	
Atrazine	NL	NL	NL	<0.69		<0.066		<0.66		<0.072		<0.067		<0.65	
Benzaldehyde	NL	NL	NL	<0.54		<0.051		<0.51		<0.055		<0.052		<0.5	
Caprolactam	NL	NL	NL	<0.6		<0.057		<0.58		<0.062		<0.058		<0.57	
2,3,4,6-Tetrachlorophenol	NL	NL	NL	<0.4		<0.038		<0.38		<0.041		<0.039		<0.38	
Total SVOCs	NL		NL	268		2.461		75.28		-		-		-	

Notes:
All values displayed in micrograms per kilogram (mg/kg) or parts per million (ppm)
NL indicates not listed
< indicates not detected above the method detection limit shown
Bold font indicates the concentration exceeds the NYCRR Part 375-6.8(a) Unrestricted Use SCO
Italic font indicates the concentration exceeds the NYCRR Part 375-6.8(a) Protection of Groundwater SCO
Highlighted font indicates the concentration exceeds the NYCRR Part 375-6.8(a) Commercial Use SCO

Table 1C
Soil Sample Analytical Results
Metals in Soil
56-70 Ellicott Street, Batavia, NY
LaBella Project #2171218

Sample ID	NYCRR Part 375 Unrestricted Use SCOs (mg/Kg)	NYCRR Part 375 Protection of Groundwater SCOs	NYCRR Part 375 Commercial Use SCOs (mg/Kg)	TP-1		S-46		S2020-2		S2020-4		S2020-6		QA/QC	
Sample Depth (feet)				2'-5'		10'-15'		9'-19'		7'-8'		12'-13'		9'-19'	
Sample Date				4/29/2020		4/30/2020		4/30/2020		5/1/2020		5/1/2020		4/30/2020	
Total Metals				Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum, Total	NL	NL	NL	1420		4050		2810		2290		1910		2070	
Antimony, Total	NL	NL	NL	0.827	J	0.922	J	0.855	J	0.76	J	0.712	J	0.473	J
Arsenic, Total	13	16	16	8.72		2.98		1.63		2.27		0.982		1.59	
Barium, Total	350	820	400	28.5		25.1		15.4		24.6		7.55		11.5	
Beryllium, Total	7	47	590	0.169	J	0.233	J	0.144	J	0.117	J	0.09	J	0.114	J
Cadmium, Total	3	7.5	9.3	0.611	J	0.251	J	0.18	J	0.516	J	0.171	J	0.166	J
Calcium, Total	NL	NL	NL	104000		30300		110000		98300		126000		72800	
Chromium, Total	30	NS	1,500	4.17		9.87		7.21		4.36		4.38		3.93	
Cobalt, Total	NL	NL	NL	4		4.51		2.76		2.81		1.97		2.5	
Copper, Total	50	1,720	270	25.1		21.3		11.5		10.9		10		10.9	
Iron, Total	NL	NL	NL	12600		13300		8140		7290		6710		7060	
Lead, Total	63	450	1000	43.9		14.5		**78.8**		3.92	J	9.34		**67.6**	
Magnesium, Total	NL	NL	NL	5940		9220		40300		15000		43100		25600	
Manganese, Total	1,600	2,000	10,000	109		192		286		222		194		198	
Mercury, Total	0.18	0.73	2.8	<0.065		<0.06		<0.06		<0.063		<0.052		<0.057	
Nickel, Total	30	130	310	7.13		14		7.18		8		5.43		5.63	
Potassium, Total	NL	NL	NL	242		444		548		431		414		448	
Selenium, Total	3.9	4	1,500	1.35	J	<0.231		0.693	J	0.643	J	0.288	J	<0.226	
Silver, Total	2	8	1,500	<0.266		<0.253		<0.255		<0.276		<0.255		<0.248	
Sodium, Total	NL	NL	NL	98.5	J	95.4	J	161	J	123	J	176	J	114	J
Thallium, Total	NL	NL	NL	<0.296		<0.282		<0.283		<0.307		<0.284		<0.276	
Vanadium, Total	NL	NL	NL	6.56		14		8.95		8.92		7.24		7.97	
Zinc, Total	109	2,480	10,000	88.3		44.6		38.2		**114**		28		36.7	

Notes:
All values displayed in micrograms per kilogram (mg/kg) or parts per million (ppm)
NL indicates not listed
< indicates not detected above the method detection limit shown
Bold font indicates the concentration exceeds the NYCRR Part 375-6.8(a) Unrestricted Use SCO

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Table 1D
Soil Sample Analytical Results
Emerging Contaminants and PCBs in Soil
56-70 Ellicott Street, Batavia, NY
LaBella Project #2171218

Sample ID	NYCRR Part 375 Unrestricted Use SCOs (mg/Kg)	NYCRR Part 375 Commercial Use SCOs (mg/Kg)	TP-1		S2020-2		S2020-6		QA/QC	
Sample Depth (feet)			**2'-5'**		**9'-19'**		**12'-13'**		**9'-19'**	
Sample Date			**4/29/2020**		**4/30/2020**		**5/1/2020**		**4/30/2020**	
PERFLUORINATED ALKYL ACIDS	NL	NL	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Perfluorobutanoic Acid (PFBA)	NL	NL	<0.000024		<0.000023		<0.000025		<0.000025	
Perfluoropentanoic Acid (PFPeA)	NL	NL	0.000068	J	<0.000047		<0.000051		<0.00005	
Perfluorobutanesulfonic Acid (PFBS)	NL	NL	<0.000042		<0.00004		<0.000043		<0.000042	
Perfluorohexanoic Acid (PFHxA)	NL	NL	0.0001	J	<0.000054		0.000058	J	0.000062	J
Perfluoroheptanoic Acid (PFHpA)	NL	NL	0.00006	J	<0.000046		<0.00005		<0.000049	
Perfluorohexanesulfonic Acid (PFHxS)	NL	NL	0.000089	J	<0.000062		<0.000067		<0.000066	
Perfluorooctanoic Acid (PFOA)	NL	NL	0.000183	J	<0.000043		<0.000046		<0.000045	
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	NL	NL	<0.000191		<0.000183		<0.000197		<0.000195	
Perfluoroheptanesulfonic Acid (PFHpS)	NL	NL	<0.000146		<0.000139		<0.00015		<0.000148	
Perfluorononanoic Acid (PFNA)	NL	NL	<0.00008		<0.000077		<0.000083		<0.000081	
Perfluorooctanesulfonic Acid (PFOS)	NL	NL	0.00341		<0.000132		<0.000143		<0.000141	
Perfluorodecanoic Acid (PFDA)	NL	NL	<0.000071		<0.000068		<0.000074		<0.000073	
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	NL	NL	<0.000306		<0.000293		<0.000316		<0.000311	
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	NL	NL	<0.000215		<0.000206		<0.000222		<0.000218	
Perfluoroundecanoic Acid (PFUnA)	NL	NL	<0.00005		<0.000048		<0.000051		<0.000051	
Perfluorodecanesulfonic Acid (PFDS)	NL	NL	<0.000163		<0.000156		<0.000168		<0.000166	
Perfluorooctanesulfonamide (FOSA)	NL	NL	<0.000104		<0.0001		<0.000108		<0.000106	
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	NL	NL	<0.00009		<0.000086		<0.000093		<0.000092	
Perfluorododecanoic Acid (PFDoA)	NL	NL	<0.000075		<0.000071		<0.000077		<0.000076	
Perfluorotridecanoic Acid (PFTrDA)	NL	NL	<0.000218		<0.000208		<0.000225		<0.000222	
Perfluorotetradecanoic Acid (PFTA)	NL	NL	<0.000058		<0.000055		<0.000059		<0.000059	
PFOA/PFOS, Total	NL	NL	0.00359	J	-		-		-	

POLYCHLORINATED BIPHENYLS			**TP-1**		**S2020-2**	**S2020-6**	**QA/QC**
Aroclor 1016	0.1	1	<0.00347		<0.00334	<0.00335	<0.00327
Aroclor 1221	0.1	1	<0.00391		<0.00376	<0.00378	<0.00369
Aroclor 1232	0.1	1	<0.00828		<0.00796	<0.008	<0.0078
Aroclor 1242	0.1	1	<0.00526		<0.00506	<0.00509	<0.00496
Aroclor 1248	0.1	1	<0.00586		<0.00563	<0.00566	<0.00552
Aroclor 1254	0.1	1	**0.0227**	JP	<0.00411	<0.00413	<0.00403
Aroclor 1260	0.1	1	<0.00721		<0.00694	<0.00698	<0.0068
Aroclor 1262	0.1	1	<0.00496		<0.00477	<0.0048	<0.00468
Aroclor 1268	0.1	1	<0.00404		<0.00389	<0.00391	<0.00381
PCBs, Total	0.1	1	**0.0227**	J	-	-	-

1,4 DIOXANE			**TP-1**	**S2020-2**	**S2020-6**	**QA/QC**
1,4-Dioxane	0.1	130	<2.16	<2.05	<2.27	<2.15

Notes:
All values displayed in micrograms per kilogram (mg/kg) or parts per million (ppm)
NL indicates not listed
< indicates not detected above the method detection limit shown
Bold font indicates the concentration exceeds the NYCRR Part 375-6.8(a) Unrestricted Use SCO

Table 2A
Groundwater Sample Analytical Results
56-70 Ellicott Street, Batavia, NY
Volatile Organic Compounds in Groundwater
LaBella Project #2171218

Sample ID	NYCRR Part 703	MW-46		MW-1		MW2020-4		MW-5		MW-7		MW2020-8		MW-8		MW-6		MW-9		MW-10		QA/QC-1		QA/QC-2	
Sample Screened Interval (feet bgs.)	**Groundwater Quality**	**10'-15'**		**10'-15'**		**10'-15'**		**10'-15'**		**10'-15'**		**10'-15'**										**10'-15'**		**10'-15'**	
Sample Date	**Standards**	**5/5/2020**		**5/6/2020**		**5/6/2020**		**5/6/2020**		**5/6/2020**		**5/5/2020**		**5/7/2020**		**5/7/2020**		**5/7/2020**		**5/7/2020**		**5/5/2020**		**5/5/2020**	
Volatile Organic Compounds		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Methylene chloride	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
1,1-Dichloroethane	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Chloroform	7	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Carbon tetrachloride	5	<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13	
1,2-Dichloropropane	1	<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14	
Dibromochloromethane	50	<0.15		<0.15		<0.15		<0.15		<0.15		<0.15		<0.15		<0.15		<0.15		<0.15		<0.15		<0.15	
1,1,2-Trichloroethane	1	<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5	
Tetrachloroethene	5	<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18	
Chlorobenzene	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Trichlorofluoromethane	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
1,2-Dichloroethane	0.6	<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13		<0.13	
1,1,1-Trichloroethane	5	<0.7		0.85	J	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Bromodichloromethane	50	<0.19		<0.19		<0.19		<0.19		<0.19		<0.19		<0.19		<0.19		<0.19		<0.19		<0.19		<0.19	
trans-1,3-Dichloropropene	0.4	<0.16		<0.16		<0.16		<0.16		<0.16		<0.16		<0.16		<0.16		<0.16		<0.16		<0.16		<0.16	
cis-1,3-Dichloropropene	0.4	<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14		<0.14	
Bromoform	50	<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65	
1,1,2,2-Tetrachloroethane	5	<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17	
Benzene	1	<0.16		<0.16		<0.16		<0.16		<0.16		<0.16		<0.16		<0.16		0.42	J	0.49	J	0.81		<0.16	
Toluene	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Ethylbenzene	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Chloromethane	NL	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Bromomethane	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Vinyl chloride	2	<0.07		<0.07		<0.07		<0.07		<0.07		<0.07		<0.07		<0.07		<0.07		<0.07		<0.07		<0.07	
Chloroethane	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
1,1-Dichloroethene	5	<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17		<0.17	
trans-1,2-Dichloroethene	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Trichloroethene	5	<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18		<0.18	
1,2-Dichlorobenzene	3	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
1,3-Dichlorobenzene	3	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
1,4-Dichlorobenzene	3	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Methyl tert butyl ether	10	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
p/m-Xylene	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
o-Xylene	5	1	J	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		1	J	<0.7	
cis-1,2-Dichloroethene	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Styrene	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Dichlorodifluoromethane	5	<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
Acetone	50	<1.5		<1.5		<1.5		<1.5		<1.5		<1.5		<1.5		<1.5		<1.5		<1.5		<1.5		<1.5	
Carbon disulfide	60	<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
2-Butanone	50	<1.9		<1.9		<1.9		<1.9		<1.9		<1.9		<1.9		<1.9		<1.9		<1.9		<1.9		<1.9	
4-Methyl-2-pentanone	NL	<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
2-Hexanone	50	<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
Bromochloromethane	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
1,2-Dibromoethane	0.0006	<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65		<0.65	
1,2-Dibromo-3-chloropropane	0.04	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Isopropylbenzene	5	4.4		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		9.4		16		4.5		<0.7	
1,2,3-Trichlorobenzene	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
1,2,4-Trichlorobenzene	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Methyl Acetate	NL	<0.23		<0.23		<0.23		<0.23		<0.23		<0.23		<0.23		<0.23		<0.23		<0.23		<0.23		<0.23	
Cyclohexane	NL	3.9	J	<0.27		<0.27		<0.27		<0.27		<0.27		<0.27		0.82	J	9.4	J	0.66	J	4	J	<0.27	
1,4-Dioxane	NL	<61		<61		<61		<61		<61		<61		<61		<61		<61		<61		<61		<61	
Freon-113	5	<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7		<0.7	
Methyl cyclohexane	NL	4.5	J	<0.4		<0.4		<0.4		<0.4		1.7	J	<0.4		1.6	J	12		2.9	J	5	J	1.6	J
Total VOCs	NL	14.62		0.85		-		-		-		1.7		-		2.42		31.22				15.31		1.6	

NOTES:
J: Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
All values displayed in micrograms per liter (µg/L) or parts per billion (ppb)
NL indicates not listed
< indicates not detected above the method detection limit shown
Yellow highlight indicates that the compound was detected at a concentration above its respective 6 NYCRR Part 703 Groundwater Quality Standard or Technical and Operational Guidance Series (TOGS 1.1.1) Guidance Value

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Table 2B
Groundwater Sample Analytical Results
56-70 Ellicott Street, Batavia, NY
Semivolatile Organic Compounds in Groundwater
LaBella Project #2171218

Sample ID	NYCRR Part 703	MW-46		MW2020-4		MW-5		MW-7		MW2020-8		MW-8		MW-6		QA/QC-1		QA/QC-2	
Sample Screened Interval (feet bgs.)	Groundwater Quality	10'-15'		10'-15'		10'-15'		10'-15'		10'-15'						10'-15'		10'-15'	
Sample Date	Standards	5/5/2020		5/6/2020		5/6/2020		5/6/2020		5/5/2020		5/7/2020		5/7/2020		5/5/2020		5/5/2020	
Volatile Organic Compounds		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Bis(2-chloroethyl)ether	0.03	<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5	
3,3'-Dichlorobenzidine	5	<1.6		<1.6		<1.6		<1.6		<1.6		<1.6		<1.6		<1.6		<1.6	
2,4-Dinitrotoluene	5	<1.2		<1.2		<1.2		<1.2		<1.2		<1.2		<1.2		<1.2		<1.2	
2,6-Dinitrotoluene	0.07	<0.93		<0.93		<0.93		<0.93		<0.93		<0.93		<0.93		<0.93		<0.93	
4-Chlorophenyl phenyl ether	NL	<0.49		<0.49		<0.49		<0.49		<0.49		<0.49		<0.49		<0.49		<0.49	
4-Bromophenyl phenyl ether	NL	<0.38		<0.38		<0.38		<0.38		<0.38		<0.38		<0.38		<0.38		<0.38	
Bis(2-chloroisopropyl)ether	NL	<0.53		<0.53		<0.53		<0.53		<0.53		<0.53		<0.53		<0.53		<0.53	
Bis(2-chloroethoxy)methane	5	<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5	
Hexachlorocyclopentadiene	5	<0.69		<0.69		<0.69		<0.69		<0.69		<0.69		<0.69		<0.69		<0.69	
Isophorone	50	<1.2		<1.2		<1.2		<1.2		<1.2		<1.2		<1.2		<1.2		<1.2	
Nitrobenzene	0.4	<0.77		<0.77		<0.77		<0.77		<0.77		<0.77		<0.77		<0.77		<0.77	
NDPA/DPA	NL	<0.42		<0.42		<0.42		<0.42		<0.42		<0.42		<0.42		<0.42		<0.42	
n-Nitrosodi-n-propylamine	NL	<0.64		<0.64		<0.64		<0.64		<0.64		<0.64		<0.64		<0.64		<0.64	
Bis(2-ethylhexyl)phthalate	5	2.1	J	2.1	J	<1.5		<1.5		1.9	J	1.6	J	<1.5		2.1	J	<1.5	
Butyl benzyl phthalate	50	<1.2		<1.2		<1.2		<1.2		<1.2		<1.2		<1.2		<1.2		<1.2	
Di-n-butylphthalate	50	<0.39		<0.39		<0.39		<0.39		<0.39		<0.39		<0.39		<0.39		<0.39	
Di-n-octylphthalate	50	<1.3		<1.3		<1.3		<1.3		<1.3		<1.3		<1.3		<1.3		<1.3	
Diethyl phthalate	50	<0.38		<0.38		2.4	J	<0.38		<0.38		<0.38		<0.38		<0.38		<0.38	
Dimethyl phthalate	50	<1.8		<1.8		<1.8		<1.8		<1.8		<1.8		<1.8		<1.8		<1.8	
Biphenyl	NL	<0.46		<0.46		<0.46		<0.46		<0.46		<0.46		<0.46		<0.46		<0.46	
4-Chloroaniline	NL	<1.1		<1.1		<1.1		<1.1		<1.1		<1.1		<1.1		<1.1		<1.1	
2-Nitroaniline	5	<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5	
3-Nitroaniline	5	<0.81		<0.81		<0.81		<0.81		<0.81		<0.81		<0.81		<0.81		<0.81	
4-Nitroaniline	5	<0.8		<0.8		<0.8		<0.8		<0.8		<0.8		<0.8		<0.8		<0.8	
Dibenzofuran	NL	<0.5	J	<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5		<0.5	
1,2,4,5-Tetrachlorobenzene	5	<0.44		<0.44		<0.44		<0.44		<0.44		<0.44		<0.44		<0.44		<0.44	
Acetophenone	NL	<0.53		<0.53		<0.53		<0.53		<0.53		<0.53		<0.53		<0.53		<0.53	
2,4,6-Trichlorophenol	NL	<0.61		<0.61		<0.61		<0.61		<0.61		<0.61		<0.61		<0.61		<0.61	
p-Chloro-m-cresol	NL	<0.35		<0.35		<0.35		<0.35		<0.35		<0.35		<0.35		<0.35		<0.35	
2-Chlorophenol	NL	<0.48		<0.48		<0.48		<0.48		<0.48		<0.48		<0.48		<0.48		<0.48	
2,4-Dichlorophenol	5	<0.41		<0.41		<0.41		<0.41		<0.41		<0.41		<0.41		<0.41		<0.41	
2,4-Dimethylphenol	50	<1.8		<1.8		<1.8		<1.8		<1.8		<1.8		<1.8		<1.8		<1.8	
2-Nitrophenol	NL	<0.85		<0.85		<0.85		<0.85		<0.85		<0.85		<0.85		<0.85		<0.85	
4-Nitrophenol	NL	<0.67		<0.67		<0.67		<0.67		<0.67		<0.67		<0.67		<0.67		<0.67	
2,4-Dinitrophenol	10	<6.6		<6.6		<6.6		<6.6		<6.6		<6.6		<6.6		<6.6		<6.6	
4,6-Dinitro-o-cresol	NL	<1.8		<1.8		<1.8		<1.8		<1.8		<1.8		<1.8		<1.8		<1.8	
Phenol	1	<0.57		<0.57		<0.57		<0.57		<0.57		<0.57		<0.57		<0.57		<0.57	
2-Methylphenol	NL	<0.49		<0.49		<0.49		<0.49		<0.49		<0.49		<0.49		<0.49		<0.49	
3-Methylphenol/4-Methylphenol	NL	<0.48		<0.48		<0.48		<0.48		<0.48		<0.48		<0.48		<0.48		<0.48	
2,4,5-Trichlorophenol	NL	<0.77		<0.77		<0.77		<0.77		<0.77		<0.77		<0.77		<0.77		<0.77	
Carbazole	NL	<0.49		<0.49		<0.49		<0.49		<0.49		<0.49		<0.49		<0.49		<0.49	
Atrazine	7.5	<0.76		<0.76		<0.76		<0.76		<0.76		<0.76		<0.76		<0.76		<0.76	
Benzaldehyde	NL	<0.53		<0.53		<0.53		<0.53		<0.53		<0.53		<0.53		<0.53		<0.53	
Caprolactam	NL	<3.3		<3.3		<3.3		<3.3		<3.3		<3.3		<3.3		<3.3		<3.3	
2,3,4,6-Tetrachlorophenol	NL	<0.84		<0.84		<0.84		<0.84		<0.84		<0.84		<0.84		<0.84		<0.84	
Acenaphthene	5.3	0.92		<0.01		<0.01		<0.01		0.06	J	<0.01		0.03	J	0.92		0.06	J
2-Chloronaphthalene	10	<0.02		<0.02		<0.02		<0.02		<0.02		<0.02		<0.02		<0.02		<0.02	
Fluoranthene	50	0.1	J	0.07	J	0.03	J	0.15		0.04	J	<0.02		<0.02		0.1	J	0.03	J
Hexachlorobutadiene	0.5	<0.05		<0.05		<0.05		<0.05		<0.05		<0.05		<0.05		<0.05		<0.05	
Naphthalene	13	<0.05		<0.05		<0.05		0.05	J	<0.05		<0.05		<0.05		<0.05		<0.05	
Benzo(a)anthracene	NL	0.04	J	0.04	J	0.02	J	0.09	J	0.02	J	<0.02		<0.02		0.04	J	<0.02	
Benzo(a)pyrene	NL	0.02		0.04	J	0.03	J	0.01		<0.02		<0.02		<0.02		0.02	J	<0.02	
Benzo(b)fluoranthene	0.002	0.04	J	0.06	J	0.03	J	0.14		0.02	J	0.02	J	<0.01		0.04	J	0.01	J
Benzo(k)fluoranthene	0.002	0.01		0.02	J	0.01	J	0.05	J	<0.01		0.01	J	<0.01		0.01	J	<0.01	
Chrysene	0.002	0.03	J	0.04	J	0.02	J	0.1		0.01	J	<0.01		<0.01		0.03	J	<0.01	
Acenaphthylene	NL	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01	
Anthracene	50	<0.01		<0.01		<0.01		0.03	J	0.04	J	0.01	J	<0.01		<0.01		0.04	J
Benzo(ghi)perylene	NL	0.05	J	0.04	J	<0.01		0.08	J	<0.01		<0.01		<0.01		0.05	J	<0.01	
Fluorene	50	1.4		<0.01		0.02	J	0.02	J	0.07	J	<0.01		0.04	J	1.4		0.07	J
Phenanthrene	50	1.6		0.04	J	0.02	J	0.12		0.08	J	<0.02		0.03	J	1.6		0.07	J
Dibenzo(a,h)anthracene	NL	<0.01		<0.01		<0.01		0.09	J	<0.01		<0.01		<0.01		<0.01		<0.01	
Indeno(1,2,3-cd)pyrene	0.002	0.03		0.05	J	<0.01		0.1	J	<0.01		<0.01		<0.01		0.03	J	<0.01	
Pyrene	NL	<0.02		0.06	J	0.03	J	0.13		0.04	J	<0.02		<0.02		<0.02		<0.02	
2-Methylnaphthalene	NL	4.2		<0.02		<0.02		0.03	J	2.1		<0.02		2		4.2		2.2	
Pentachlorophenol	NL	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01	
Hexachlorobenzene	0.04	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01	
Hexachloroethane	5	<0.06		<0.06		<0.06		<0.06		<0.06		<0.06		<0.06		<0.06		<0.06	
Total SVOCs		10.54	-	2.56		2.61		1.19		4.38	-	1.64		2.1		10.54	-	2.48	-

NOTES:
J: Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
All values displayed in micrograms per liter (µg/L) or parts per billion (ppb)
NL indicates not listed
< indicates not detected above the method detection limit shown
Yellow highlight indicates that the compound was detected at a concentration above its respective 6 NYCRR Part 703 Groundwater Quality Standard or Technical and Operational Guidance Series (TOGS 1.1.1) Guidance Value

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Table 2C
Groundwater Sample Analytical Results
56-70 Ellicott Street, Batavia, NY
Metals and PCBs in Groundwater
LaBella Project #2171218

Sample ID	NYCRR Part 703	MW-46		MW2020-4		MW-5		MW2020-8		QA/QC-1		QA/QC-2	
Sample Screened Interval (feet bgs.)	Groundwater Quality	10'-15'		10'-15'		10'-15'		10'-15'		10'-15'		10'-15'	
Sample Date	Standards	5/5/2020		5/6/2020		5/6/2020		5/5/2020		5/5/2020		5/5/2020	
TOTAL METALS		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
Aluminum, Total	2000	355		5260		300		1420		790		1260	
Antimony, Total	3	3.57	J	0.53	J	<0.42		0.65	J	0.44	J	<0.42	
Arsenic, Total	25	1.89		6.76		10.47		1.96		2.48		1.84	
Barium, Total	1000	277.5		263.3		294		161.3		274.6		155.3	
Beryllium, Total	3	<0.1		0.37	J	<0.1		<0.1		<0.1		<0.1	
Cadmium, Total	5	<0.05		0.22		<0.05		<0.05		<0.05		<0.05	
Calcium, Total	NL	186000		225000		155000		149000		187000		144000	
Chromium, Total	50	1		17.17		0.52	J	4.27		2.19		3.54	
Cobalt, Total	NL	0.5		6.23		0.72		1.49		0.99		1.28	
Copper, Total	200	2.59		22.73		3.03		6.49		4.95		5.62	
Iron, Total	300	12900		17400		23100		6400		14100		6000	
Lead, Total	25	1.85		21.11		2.66		6.4		3.46		5.24	
Magnesium, Total	35000	30300		58600		16800		35200		33300		32400	
Manganese, Total	300	313.9		794.5		590.6		342.6		379.3		319.4	
Mercury, Total	0.7	<0.09		<0.09		<0.09		<0.09		<0.09		<0.09	
Nickel, Total	100	1.73	J	18.56		1.72	J	4.6		3.06		3.9	
Potassium, Total	NL	16500		6940		5480		6880		16200		6820	
Selenium, Total	10	<1.73		2.6	J	<1.73		<1.73		<1.73		<1.73	
Silver, Total	50	<0.16		<0.16		<0.16		<1.63		<1.63		<1.63	
Sodium, Total	20000	99500		90100		51600		102000		96300		102000	
Thallium, Total	0.5	0.27	J	0.34	J	<0.14		0.15	J	<0.14		<0.14	
Vanadium, Total	NL	<1.57		12.5		1.95	J	3.62	J	2.21	J	3.11	J
Zinc, Total	5000	6.32	J	70.28		8.82	J	20.1		11.47		16.68	

POLYCHLORINATED BIPHENYLS		MW-46	MW2020-4	MW-5	MW2020-8	QA/QC-1	QA/QC-2
Aroclor 1016	0.09	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034
Aroclor 1221	0.09	<0.067	<0.067	<0.067	<0.067	<0.067	<0.067
Aroclor 1232	0.09	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046
Aroclor 1242	0.09	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039
Aroclor 1248	0.09	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049
Aroclor 1254	0.09	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039
Aroclor 1260	0.09	<0.032	<0.032	<0.032	<0.032	<0.032	<0.032
Aroclor 1262	0.09	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035
Aroclor 1268	0.09	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034
PCBs, Total	0.09	-	-	-	-	-	-

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