Interim Remedial Measures Work Plan
NYSDEC BCP Site #C819021

Location:

Ellicott Station
40-52 Ellicott Street
Batavia, New York

Prepared for:

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

LaBella Project No. 2172238

November 12, 2019

LaBella
Powered by partnership.

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CERTIFICATION

I DANIEL NOLL certify that I am currently a NYS registered professional engineer and that this Remedial Investigation Report 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.

081996	7/17/18	
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 40-52 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 July 2015 and is designated NYSDEC Site #C819021. A Site Location Map is included as Figure 1.

LaBella completed a Remedial Investigation (RI) for the Site in 2017-2018 and the findings were documented in a Draft RI Report dated March 2018 (note the RI has not yet been approved by 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 May 2016 and approved by the NYSDEC in a letter dated July 21, 2016 and RI Work Plan Amendment dated September 19, 2017.

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

1.1 Site Description

The Site is comprised of an approximately 1.132± acre tax parcel (SBL 84.015-1-2). The attached Figure 2 illustrates the location and surrounding area of the Site. Current Site features include a primary brick building approximately 19,142 square feet in size ("Main Building") and a garage outbuilding approximately 4,250 square feet in size ("Garage Building"). The buildings are currently unoccupied. A small portion of vegetation is located south of the Main Building; the remainder of the Site is covered by asphalt. A chain link fence surrounds the northern, southern, and eastern Site boundaries. A historical sewer reportedly installed in the 1800s and known as the "Grand Canal Sewer" is present on the southern portion of the Site. The sewer is reportedly approximately 3-ft wide and 4-ft in height with a flat bottom and arched, brick ceiling (refer to Figure 2).

The Site is bordered by Ellicott Street to the northeast, a commercial office building to the northwest, a parking lot and office to the southwest, a vacant commercial building to the east (pending Ellicott Station East BCP Site #C819023) and vacant real property and a parking lot to the southeast.

1.2 Site History

The Site appears to have been historically utilized for various residential, commercial and industrial purposes. Historical mapping indicates that between approximately 1884 and 1919 the property was developed with various dwellings, cooper shops, and was also used for lumber storage. Electricity generation organizations appear to have occupied the western portion of the parcel from approximately 1912 to approximately 1975. Based on historical mapping, electricity generation operations appear to have included use for transformer storage and as a transformer repair shop. The property appears to have been utilized by a commercial paving contractor (Della Penna Paving Company) and for commercial office space from approximately 1988 until as late as 2005. The Site has reportedly been vacant since approximately 2005.

Adjacent properties with known environmental impacts include the former Batavia Gas Light Co., a coal gasification plant located adjacent to the southwest of the Site from at least 1884 until approximately 1901. This property is a designated NYSDEC State Superfund facility (#819019). In addition, the property adjacent to the east was historically utilized as an auto repair facility and gasoline filling station and is currently designated NYSDEC BCP Site #C819023 (pending acceptance into program).

1.3 Planned Redevelopment

The Site is planned to be redeveloped for residential and commercial use. A conceptual redevelopment plan is included as Appendix 4. The Garage Building and the northern portion of the Main Building are planned to be demolished. The remaining portion of the Main Building is planned to be converted to a retail space (i.e., a brewery). A newly constructed, slab-on-grade residential building with open-air parking on the ground floor is planned on the eastern portion of the Site. As shown in Appendix 4, the remaining area of the Site will primarily be comprised of asphalt parking areas and a patio with limited surface soils.

2.0 PREVIOUS INVESTIGATIONS

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

- Phase I ESA for Site, by LaBella dated April 2013
- Phase II ESA for Site, by LaBella dated June 2013
- DRAFT Remedial Investigation/Focused Feasibility Study (RI/FFS) for Batavia Former MGP, 11 Evans Street, Batavia, New York by Turnkey Environmental Restoration LLC (Turnkey) dated March 2017*
- Grand Canal Sewer Evaluation by LaBella in May 2017
- DRAFT Remedial Investigation Report for the Site, by LaBella dated March 2018

**Obtained from the NYSDEC in February 2018. As of February 2018, this report has not been finalized or approved by the NYSDEC.*

The RI was conducted from 2017-2018 by LaBella and consisted of the following activities:

- Completion of three (3) test pits;
- Collection of one (1) surface soil sample;
- Advancement of eighteen (18) soil borings, five (5) of which were completed for geotechnical purposes;
- Installation of nine (9) overburden groundwater monitoring wells; and
- Completion of an SVI evaluation, including five (5) interior SVI sample locations.

RI investigation locations and a data summary are included on Figure 3.

2.1 Remedial Areas of Concern

Based on the RI and previous environmental investigations as noted above, four (4) Remedial Areas of Concern (RAOCs) exist for the Site:

RAOC #1A – Southern Impacts: Semi-volatile organic compound (SVOC) impacts in soil and groundwater are present in the southern portion of the Site, along the southwestern property line. Specifically, total SVOCs were detected up to 22 milligrams per kilogram (mg/kg) or parts per million (ppm) in soil at 8-9-feet (ft) below ground surface (bgs) and 209 micrograms per liter (ug/L) or parts per billion (ppb) in groundwater. Photoionization detector (PID) readings up to 755 ppm were noted in the soil boring advanced in this area at 9-ft bgs (RI-GP8). These impacts appear to be coming from the adjacent NYSDEC State Superfund Site (#819019), which was a former MGP. The greatest impacts are generally present at and around the level of the water table (between 8-ft and 12-ft bgs). A SVOC groundwater plume appears to be emanating across the Site from the southern adjacent property, with the greatest impacts located in RAOC #1.

RAOC #1B – Southern Impacts: A 5,000-gallon UST was encountered at the Site during RI test pitting activities (refer to Figure 5). The UST contained approximately 150 gallons of what appeared to be a fuel oil/water mixture. Piping uncovered associated with the UST extended northwest, to the Main Building, southeast to the Garage Building and southwest, towards the adjacent former MGP. As such, this tank may have historically been utilized to fuel heating systems in one (1) or both on-site buildings and potentially one (1) more buildings on the southwestern adjacent property. SVOCs were identified above applicable SCGs in test pit samples collected from 7-ft bgs proximate the UST. Elevated PID readings up to 62 ppm were also identified in soils proximate the UST.

RAOC #2 – Central Impacts: Shallow SVOC impacts are present in the central portion of the Site, in the top approximately 1.5-ft to 2-ft below asphalt pavement in an approximately 1,000-sq ft area. Specifically, total SVOCs were detected up to 299 ppm in soil at 0.25-2-ft bgs. PID readings up to 270 ppm were noted in the soil boring advanced in this area at 0.5-ft bgs (RI-GP4). The impacts identified in soil samples appear to be from a black, tar/slab-like material noted in a soil boring in this location. Although the exact source is unknown, the presence of this material may be associated with the prior use of the Site by a commercial paving contractor from the mid-1980s to the mid-2000s. SVOC impacts in groundwater in this area appear to be associated with the apparent plume emanating from the southern adjacent property and not with these shallow impacts.

RAOC #3 – Interior Components: This RAOC is associated with components within the buildings that appear to be affecting various media (e.g., soil and soil vapor) and will need to be removed prior to Site redevelopment. Hydraulic lifts, ASTs and numerous containers/drums which appear to contain petroleum products and/or hazardous substances are present in the Site buildings. PCBs and petroleum-related VOCs in soil as well as chlorinated VOCs in sub-slab and indoor air are attributed to current interior features and historical operations within the buildings.

RAOC #4 – Surface Soil Impacts and Urban Fill: An approximate 390-square foot area of vegetation is present at the Site south of the Main Building. Surface soil sampling to 2-ft bgs in this area identified SVOCs, VOCs, PCBs, one (1) pesticide and one (1) metal at concentrations above SCGs. These impacts may be attributed to the long-term use of the Site and/or adjacent property for industrial purposes and/or due to contaminated storm water run-off from on-site and adjacent parking lots entering this area.

In addition to the surface soil impacts, 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. One (1) sample of this material 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.

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 or crushed stone) or concrete and sub-base, throughout the Site. The only exception to this was a small grass covered area located immediately south of the Main 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 included lesser amounts of intermixed silt, gravel and clay. Silt with lesser amounts of sand, gravel and clay was observed between 13 and 25 ft bgs. Thirty (30) ft bgs was the greatest depth that soil was sampled but there was no significant recovery, likely due to running sands that were observed in the soil core between 25-ft and 30-ft bgs.

Bedrock

A bedrock evaluation was not completed as part of the RI. However, as part of the advancement of boring RI-GP1, 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 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 due to significant rain events, groundwater was generally present between 7 and 9-ft bgs. Static water levels were collected on October 27, 2017 from each of the RI monitoring wells prior to groundwater sampling and again on February 21, 2018. Groundwater elevations were calculated by subtracting the static water levels from the top of PVC casing elevations. The October 2017 and February 2018 groundwater measurements indicate groundwater flow direction across the Site is generally towards the northwest. The hydraulic gradient is less than 1-ft. across the Site. Hydraulic conductivities were measured ranging from 1.02×10^{-4} to 3.13×10^{-4} ft per second (ft/s).

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 (Restricted-Residential).

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/Restricted Residential 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.

Soil Vapor SCGs:
Decision Matrices and Air Guideline Values in the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York dated 2006 and subsequent updates.

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 soil grossly contaminated with SVOCs from the southern portion of the Site, thus removing the *on-site* source of the SVOC groundwater plume emanating across the Site, which actually appears to be a secondary source. Note that the primary source(s) of the SVOC groundwater plume and grossly contaminated soils in this RAOC appear to be from the adjacent former MGP property and potentially from the on-site 5,000-gallon UST. Remediation of the apparent source areas at the adjacent property is reportedly planned and is anticipated to eliminate the migration of SVOC impacts from this adjacent property to the Site.
- **IRM #2** – The objective of IRM #2 is to remove SVOC contaminated shallow soils from the central portion of the Site to meet Restricted Residential Use SCOs.
- **IRM #3** – The objective of IRM #3 is to remove interior components containing or potentially containing petroleum products including but not limited to ASTs, underground lifts, drums, containers, etc. to allow for redevelopment of Site Buildings.
- **IRM #4** – The objective of IRM #4 is to remove impacted surface soils in the southwestern portion of the Site and provide a cover system in this area (i.e., minimum 2-ft material that meets SCGs or impervious surface).

6.0 IRM #1- RAOC #1 SOUTHERN IMPACTS

This section details proposed IRMs for RAOC #1. The IRMs for RAOC #1 are anticipated to include excavations of SVOC-impacted soil in the areas shown on Figure 5. IRM #1A and #1B will consist of excavation and off-Site disposal of a total of approximately 320 cubic yards (CY) of impacted soils.

IRM #1A is approximately 1,000 sq. ft. in area and impacts are present in soil from approximately 7-12-ft. bgs. An estimated 185 CY of impacted soil are anticipated to be removed and disposed of off-Site from this IRM #1A. Soil and fill material encountered in the top 7-ft of the soil column will be placed back in the excavation.

IRM #1B is approximately 650 sq. ft. in area and impacts are present in soil from approximately 6-12-ft. bgs. IRM #1B also includes the removal of the orphan 5,000-gallon fuel oil UST. In addition to the UST, an estimated 135 CY of impacted soil will be removed and disposed of off-Site from IRM #1B. Soil and fill material encountered in the top 6-ft of the soil column will be placed back in the excavation.

Based on the presence of off-site impacts to the west of IRM #1A and #1B, the western sidewalls of these remedial excavations will be lined with 20-mil polyethylene sheeting (or similar) to reduce the potential for migration of contamination on the adjacent property to the clean backfill.

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).

6.1 Waste Characterization

It is anticipated that one (1) waste characterization sample will be collected in-place from each IRM #1A and #1B 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.

6.2 UST Removal

The 5,000 gallon fuel oil UST shown on Figure 4 will be removed as part of IRM #1B. 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 UST will be registered with the NYSDEC PBS Program following removal.

The top of the tank 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 tank 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 tank 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 tank is 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 disposed of these impacted soils are detailed in Section 6.3.

6.3 Excavation

Based on previous investigations, the anticipated areas of excavation for IRM #1A and IRM #1B are shown on Figure 5; however, final excavation limits will be based on field screening and documentation soil sampling results.

The excavation activities may require shoring due to the depth of the excavations and the proximity to an adjacent building, property line, etc. The contractor will utilize a slide rail shoring system or a trench box to complete these excavations, if necessary. The slide rail shoring system is comprised of four corners and four panels that are advanced into the ground as the excavation depth increases. The system is installed once the soils are removed to a depth of two to four feet below grade. The shoring system is then constructed, the corner posts are driven into the ground utilizing the excavator bucket. Once the excavation proceeds, the sides of the slide rail are pushed into the ground to the depth of the active excavation. The system is removed from the ground as the backfill is placed and the depth of the excavation decreases. A trench box is installed and removed in a similar fashion.

It is currently anticipated soils from 0-7-ft bgs in IRM #1A and 0-6-ft bgs in IRM #1B will be excavated and temporary staged on poly sheeting to be used as backfill in accordance with Section 13.0. Soils from 7-12-ft bgs in IRM #1A and 6-12-ft bgs in IRM #1B will be excavated and temporarily staged on poly sheeting or live-loaded for disposal at a NYSDEC 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 #1A and #1B

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.
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 NYSDEC Part 360 landfill.

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

It should be noted that a remedial excavation is reportedly planned for the western adjacent property which appears to be the source area of ROAC #1A impacts. Due to the apparent off-site source of on-site groundwater impacts, on-site treatment of groundwater is not included in this IRM Work Plan. The removal of the apparent source from the adjacent property by the adjacent property owner is anticipated to substantially decrease the volume of contamination migrating to the Site.

As noted above, based on the presence of off-site impacts to the west of IRM #1A and #1B, the western sidewalls of these remedial excavations will be lined with 20-mil polyethylene sheeting (or similar) to reduce the potential for migration of contamination on the adjacent property to the clean backfill. Remediation is reportedly planned for this adjacent property, although the timeframe for that work is unknown.

6.4 Documentation Sampling

Following excavation of the areas shown on Figure 5, documentation soil 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 #1A

IRM	PERIMETER (FEET)	# SIDEWALL	AREA (SQUARE FEET)	# BOTTOM
1A	183	7	1,000	2
1B	121	5	650	1

Based on the contaminants of concern in this area of the Site, documentation samples will be analyzed for NYSDEC Commissioner Policy 51 (CP-51) list VOCs and NYSDEC CP-51 list SVOCs including tentatively identified compounds (TICs) via USEPA Methods 8260 and 8270, respectively 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 along the eastern sidewall of IRM #1A or the southern and eastern sidewalls of IRM #1B, further excavation and documentation soil sampling may be conducted until Restricted Residential criteria is met. It should be noted the western sidewall of IRM #1A and southwestern sidewall of IRM #1B will not be expanded due to proximity to the property line and additional portions of IRM #1B may not be able to be expanded due to the proximity of the Site building.

6.5 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 6-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 storm water 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.

6.6 Backfilling

A demarcation layer will be placed in the bottom of the excavation prior to backfilling. Following the receipt of documentation sample data below Restricted Residential 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 0-7-ft bgs 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 4 for a representation of the intended excavation areas of IRMs #1A and #1B.

7.0 IRM #2- RAOC #2 CENTRAL IMPACTS

This section details proposed IRMs for RAOC #2. The IRM for RAOC #2 will include excavation of tar-like material with elevated concentrations of SVOCs in the approximate area shown on Figure 6. It should be noted the excavation limits for this IRM will be based on visual observation of tar-like material; however, IRM 2 is anticipated to be up to approximately 1,000 sq. ft. and this material is present from approximately 0-2-ft. bgs. IRM #2 will consist of excavation and off-Site disposal of up to approximately 74 cubic yards (CY) of tar-like material.

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).

7.1 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.

7.2 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 0-2-ft bgs will be excavated and temporarily staged on poly sheeting or live-loaded for disposal at a NYSDEC 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 #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.

Class of Material	Description	Screening Parameter	Management/ Re-use of Material
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 NYSDEC Part 360 landfill.

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

7.3 Documentation Sampling

Following excavation of the area shown on Figure 6, 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 each excavation area:

Anticipated Documentation Soil Sampling for IRM #1A

IRM	PERIMETER (FEET)	# SIDEWALL	AREA (SQUARE FEET)	# BOTTOM
2	135	4	1,000	2

Documentation samples will be analyzed for NYSDEC CP-51 list VOCs and SVOCs including TICs via USEPA Methods 8260 and 8270, respectively by a NYSDOH ELAP certified laboratory. If documentation soil samples do not meet Restricted Residential 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. Dewatering is not anticipated to be required during excavation of IRM #2.

7.4 Backfilling

Following excavation of all tar-like material, the excavation will be backfilled with clean imported material (i.e., crushed stone) and any staged Class 1 material (if applicable) 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 6 for a representation of IRM #2.

8.0 IRM #3- RAOC #3 INTERIOR COMPONENTS

This IRM will consist of removing petroleum containing elements in the Site Buildings including but not limited to the following:

- Three (3) ASTs
- One (1) in-ground lift
- Various 55-gallon and 5-gallon containers with unknown contents

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 Removal of ASTs

Three (3) ASTs are present in the southern portion of Building 1. The ASTs are labeled "ATF", "Motor Oil", and "Hoist". Each AST appears to be approximately 250-gallons in capacity. These ASTs are located approximately 10-ft. above the floor surface on a ledge.

The tanks will be 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 tanks may be cut open and/or transported off-site disposal as scrap metal.

8.2 Removal of In-Ground Lift(s)

At least one (1) in-ground lift is present in the northern portion of Building 1. The lift(s) 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. 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 herein.

8.2.1 In-Ground Lift Excavation

The lift components will be removed and soils in the excavation will be screened for evidence of impairment. If evidence of impairment (i.e., Class 2 Material, see below) is identified, soils will be excavated until excavation sidewalls and bottom do not exhibit significant evidence of impairment. If evidence of impairment is not identified (i.e., Class 1 Material) following removal of underground components, material will be left in-place.

Material Classifications for IRM #3

Class of Material	Description	Screening Parameter	Management/ Re-use of Material
Class 1	Soil with little to no evidence of impairment	No nuisance characteristics (i.e., petroleum odors and/or staining); PID Readings < 50 ppm.	Leave in-place or excavate, stage on and cover with poly sheeting. Use on-site for backfill in the remedial excavation.
Class 2	Soils with evidence of impairment	PID readings greater than 50 ppm, and/or discernable nuisance characteristics (i.e., petroleum odors and/or staining).	Excavate, stage on and cover with poly sheeting pending off-Site disposal or direct load for off-site disposal at a NYSDEC Part 360 landfill.

8.3 *In-Ground Lift Waste Characterization*

It is anticipated one (1) waste characterization sample will be collected from staged soils, if applicable, prior to off-Site disposal 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.

8.3.1 *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 in accordance with NYSDEC DER-10.

Documentation samples will be analyzed for TCL VOCs and SVOCs including TICs via USEPA Methods 8260 and 8270, respectively, and PCBs via USEPA Method 8082 by a NYSDOH ELAP certified laboratory. If documentation soil samples do not meet Restricted Residential 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.

8.3.2 *In-Ground Lift Dewatering*

Groundwater may be encountered during removal of in-ground lifts. 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 from accumulating in the excavation. Water will be pumped to an on-Site frac tank or into 55-gallon drums pending characterization, and permit issuance for disposal to 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 permit requirements.

8.3.3 *In-Ground Lift Backfilling*

Following the receipt of documentation sample data below Restricted Residential Use SCOs the excavation will be backfilled with clean imported material (i.e., 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 tape measured from Site features.

8.4 *Removal of Containers*

Numerous containers including 55-gallon drums and 5-gallon pails were observed in both Site Buildings. 5-gallon 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. The following analytical will be collected from each drum/ tote of petroleum products following consolidation:

- PCBs via USEPA Method 8082.
- USEPA TAL metals via USEPA Method 6010/7470.
- USEPA TCL VOCs via USEPA Method 8260.

Empty containers will be cleaned if needed and containerized in a roll-off for off-Site disposal as non-hazardous. Any wash water will be containerized for disposal. Refer to Figure 7 for a representation of IRM #3.

9.0 IRM #4- RAOC #4 SURFACE SOIL IMPACTS AND URBAN FILL

An estimated 390 sq. ft. area of vegetated surface soil is present in the western portion of the Site. Surface soil samples from this area were collected during the RI and do not meet Restricted Residential Use criteria.

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 area of surface soil in the western portion of the Site as shown on Figure 8 will be removed from 0-2-ft. bgs and temporarily staged on poly sheeting or live-loaded for disposal at a NYSDEC Part 360 landfill. Approximately 15 cubic yards of surface soils will be excavated. A demarcation layer will be placed in the bottom of the excavation prior to backfill. Subsequently, 2-ft of clean imported material will be placed to bring the area back up to current grade. Documentation sampling will not be completed. It should be noted a portion of vegetated surface soil adjacent to the Site is present. Off-site sampling was not completed and off-site surface soils will not be removed or covered as part of this IRM. Excavation limits will be collected using a GPS.

It should be noted that RAOC #4 also includes urban fill across the Site; however, the urban fill material will not be handled under this IRM. Urban fill will be evaluated in the RAA.

Refer to Figure 8 for a representation of IRM #4.

9.1 *Documentation Sampling*

Following excavation of the areas shown on Figure 8, documentation soil 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 #4

IRM	PERIMETER (FEET)	# SIDEWALL	AREA (SQUARE FEET)	# BOTTOM
4	170	6	400	1

Based on the contaminants of concern in this area of the Site, documentation samples will be analyzed for NYSDEC Commissioner Policy 51 list SVOCs including tentatively identified compounds (TICs) via USEPA Method 8270 and the Resource Conservation and Recovery Act Metals (totals) using USEPA Methods 6010 or 7471, by a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory.

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

11.0 HEALTH AND SAFETY

The NYSDOH Generic Community Air Monitoring Plan (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.

A 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. If testing results exceed the site SCOs, and are not considered source material; then the material may be reused below the site cover. A NYSDEC Request to Reuse Fill or Soil form will be completed and provided to the NYSDEC for approval prior to placement.

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 polychlorinated 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 70 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) Restricted Residential Use.

14.0 INTERIM SITE MANAGEMENT PLAN

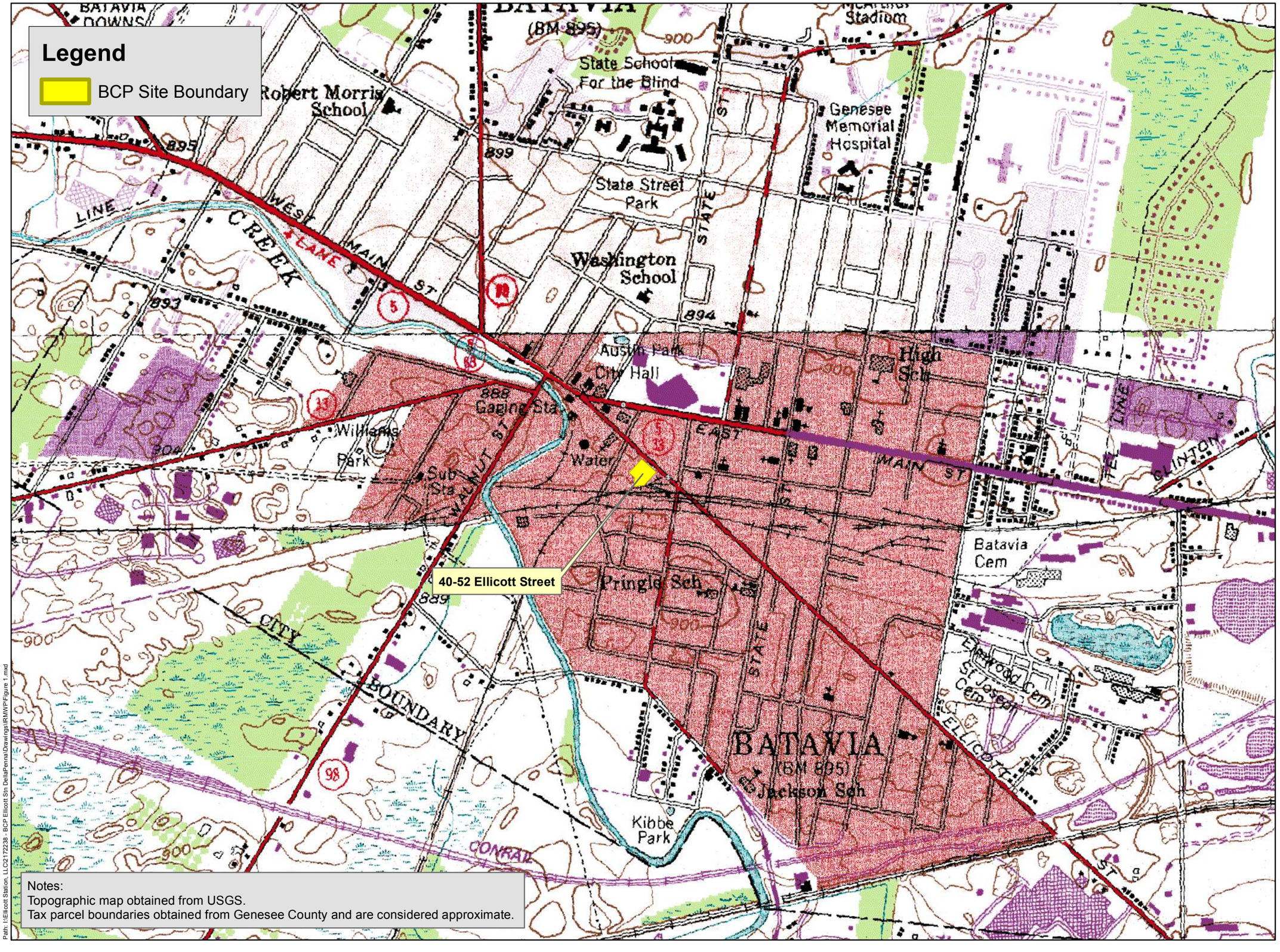
An Interim Site Management Plan (ISMP) has been prepared for the site to manage excavations outside of the remedial areas outlined in this IRMWP.

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.

On-site material reuse and importation backfill material will be completed in accordance of Section 13.0.

Soil removal conducted outside the extent of areas identified in the IRM work plan will be documented in the IRM CCR or under separate cover.

FIGURES



Notes:
Topographic map obtained from USGS.
Tax parcel boundaries obtained from Genesee County and are considered approximate.

Path: I:\Ellicott Station, LLC\2172238 - BCP Elliott Stn DellaPenna\Drawings\IRM\PF\Figure 1.mxd

LaBella
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Feet
1 inch = 1,000 feet

INTENDED TO PRINT AS: 11" X 17"

PROJECT:

Interim Remedial Measures Work Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

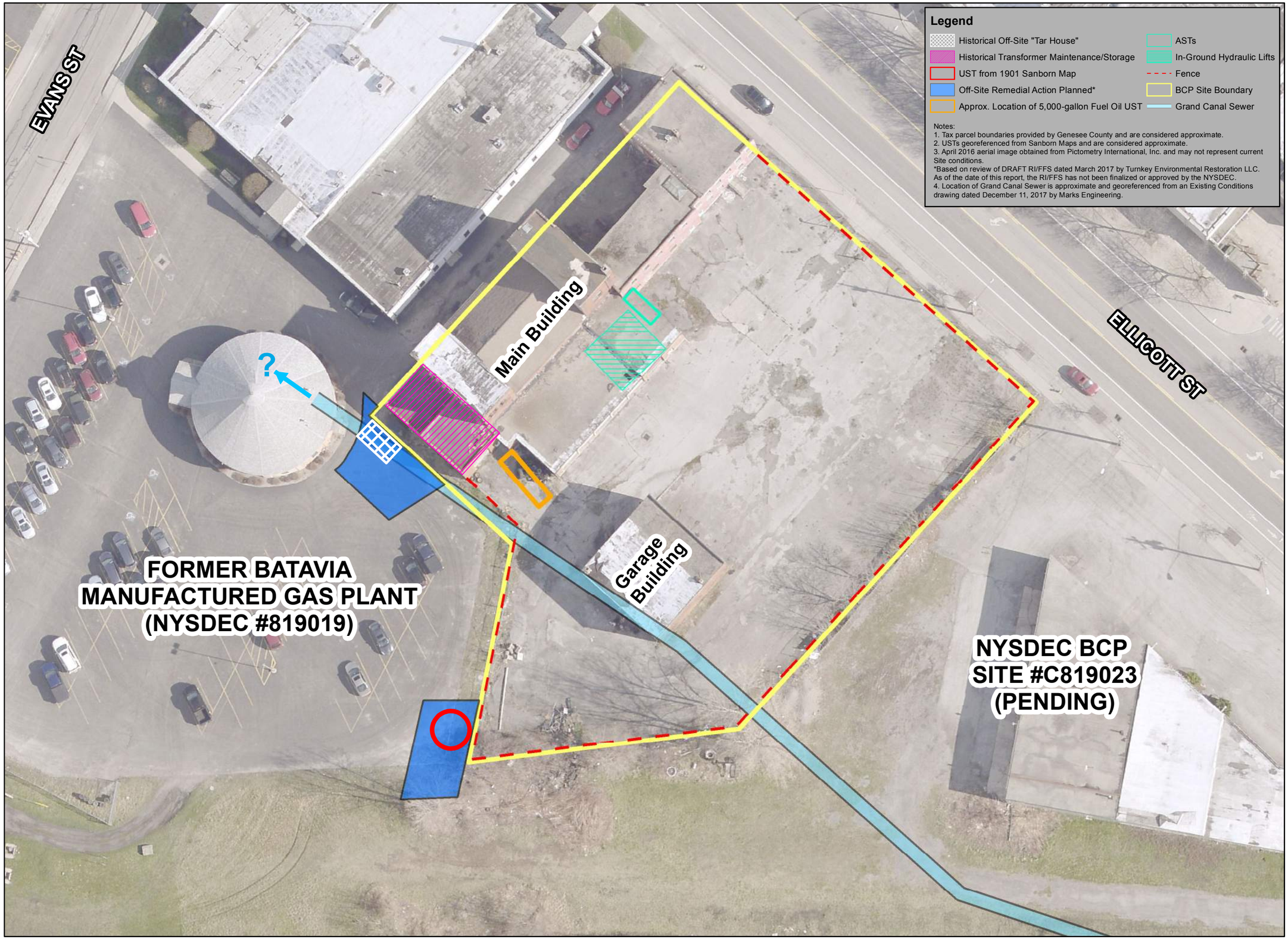
Site Location Map

PROJECT/DRAWING NUMBER:

2172238

FIGURE 1

3/9/2018



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Feet
1 inch = 40 feet

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PROJECT:

Interim Remedial Measures Work Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

Site Layout and Features

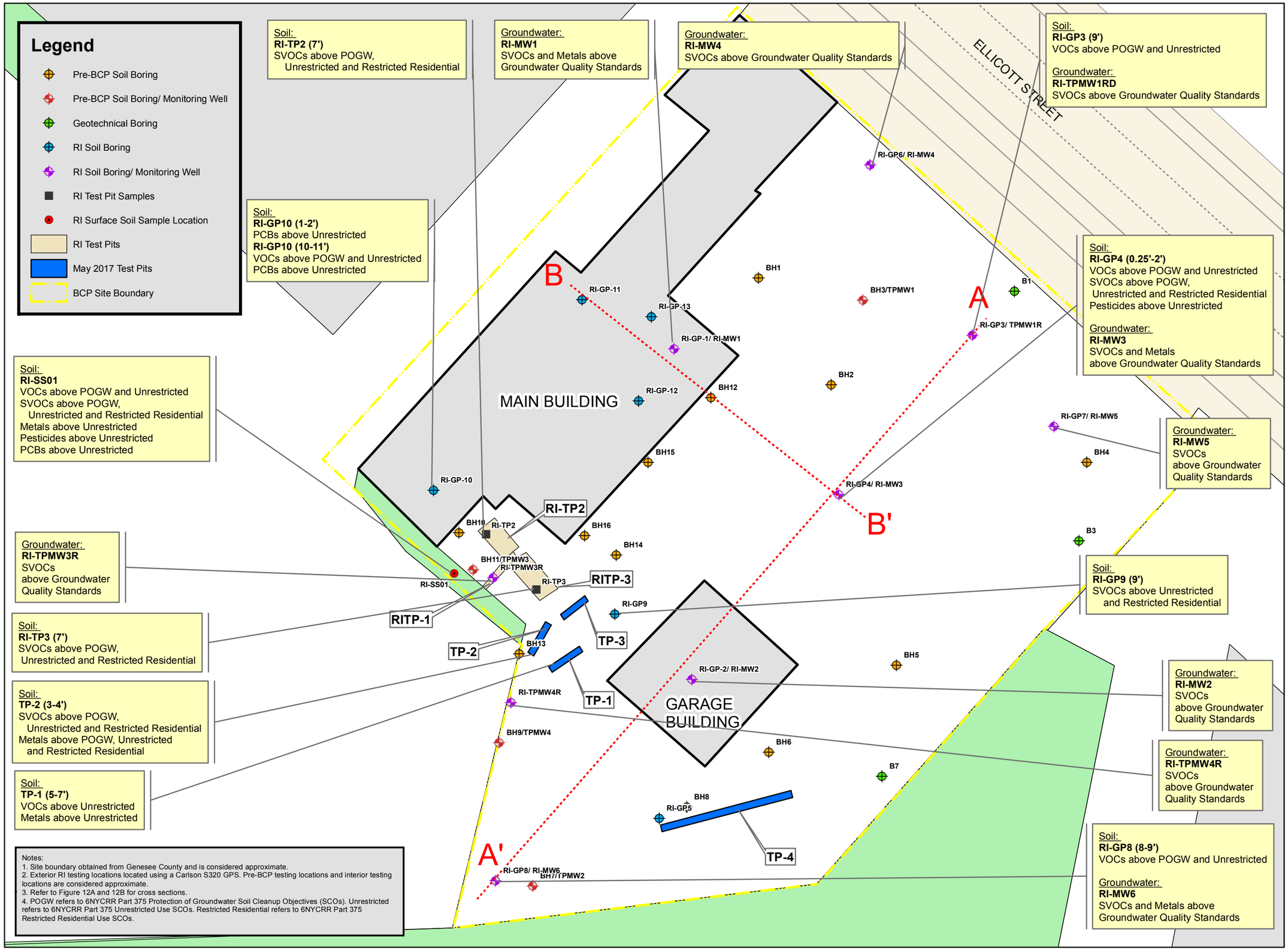
PROJECT/DRAWING NUMBER:

2172238

FIGURE 2

3/9/2018

Path: I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\IRMWP\Figure 2 - Historical Site Features.mxd



Notes:
1. Site boundary obtained from Genesee County and is considered approximate.
2. Exterior RI testing locations located using a Carlson S320 GPS. Pre-BCP testing locations and interior testing locations are considered approximate.
3. Refer to Figure 12A and 12B for cross sections.
4. POGW refers to 6NYCRR Part 375 Protection of Groundwater Soil Cleanup Objectives (SCOs). Unrestricted refers to 6NYCRR Part 375 Unrestricted Use SCOs. Restricted Residential refers to 6NYCRR Part 375 Restricted Residential Use SCOs.

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PROJECT:

Interim Remedial Measures Work Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

Areas of Impacts Above Applicable Standards, Criteria and Guidance

PROJECT/DRAWING NUMBER:

2172238

FIGURE 3

3/9/2018

I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\IRMWP\Figure 3- Areas of Impacts above SCGs.mxd

Legend

- Geotechnical Boring
- RI Soil Boring
- RI Soil Boring/ Monitoring Well
- RI Test Pit Samples
- RI Soil Vapor Intrusion Sample Locations
- RI Surface Soil Sample Location
- RAOC #1 "Worst-Case" Areas
- On-Site Soil and Groundwater Impacts
- Fuel Oil UST
- BCP Site Boundary

RI-SSV05/ IA05
RI-GP6/ RI-MW4
RI-GP-11
RI-SSV04/ IA04
RI-GP-13
B1
RI-GP3/ TPMW1R
RI-GP-1/ RI-MW1
RI-GP-12
RI-GP7/ RI-MW5
RI-SSV03/ IA03
RI-SSV02/ IA02
RI-GP-10
RI-GP4/ RI-MW3
B3
RI-TP2
RI-TPMW3R
RI-SS01
RI-TP3
RI-GP9
RI-OUTDOOR AMBIENT-1
RI-SSV01/ IA01
RI-GP-2/ RI-MW2
RI-TPMW4R
B7
RI-GP5
RI-GP8/ RI-MW6

RAOC #3: INTERIOR COMPONENTS
HYDRAULIC LIFTS, ASTS AND/OR CONTAINERS

RAOC #2: CENTRAL IMPACTS
ELEVATED PAHS IN SHALLOW SOIL

RAOC #4: SURFACE SOIL IMPACTS/URBAN FILL
- ELEVATED SVOCS IN SURFACE SOIL
- URBAN FILL MATERIAL THROUGHOUT SITE

RAOC #1B
Area of "Worst-Case" Impacts:
6-ft to 12-ft bgs

RAOC #1: SOUTHERN IMPACTS
ELEVATED PAHS IN SOIL AND GROUNDWATER

RAOC #1A
Area of "Worst-Case" Impacts:
7-ft to 12-ft bgs

Notes:
1. Site boundary obtained from Genesee County and is considered approximate.
2. Exterior RI testing locations located using a Carlson S320 GPS. Pre-BCP testing locations and interior testing locations are considered approximate.
3. Soil and groundwater impacts determined based on cumulative data, and PID readings.

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Feet
1 inch = 30 feet

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PROJECT:

Remedial Investigation Report

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

Remedial Areas of Concern

PROJECT/DRAWING NUMBER:

2172238

FIGURE 4

3/9/2018

I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\IRMWP\Figure 4- Conceptual Site Model.mxd

Legend

- Pre-BCP Soil Boring
- Pre-BCP Soil Boring/ Monitoring Well
- Geotechnical Boring
- RI Soil Boring
- RI Soil Boring/ Monitoring Well
- RI Test Pit Samples
- IRM #1A and IRM #1B Excavations
- Fuel Oil UST
- BCP Site Boundary

RI-GP-1/ RI-MW1
BH2
RI-GP-12
BH12
BH15
RI-GP-10
RI-GP4/ RI-MW3
BH10
RI-TP2
BH16
BH14
BH11/TPMW3
RI-TPMW3R
RI-TP3
RI-GP9
BH13
BH5
RI-GP-2/ RI-MW2
RI-TPMW4R
BH9/TPMW4
BH6
B7
BH8
RI-GP5
RI-GP8/ RI-MW6
BH7/TPMW2

RAOC #1B
SVOC impacted soil and groundwater
IRM #1B: Remove 5,000 gallon fuel oil UST
Excavate and dispose of soil from 650 sq. ft. area from 6-12-ft bgs (135 CY)

RAOC #1A- SOUTHERN IMPACTS
SVOC impacted soil and groundwater
IRM #1A: Excavate and dispose of soil from 1,000 sq. ft. area from 7-12-ft bgs (185 CY)

Notes:
1. Site boundary obtained from Genesee County and is considered approximate.
2. Exterior RI testing locations located using a Carlson S320 GPS. Pre-BCP testing locations and interior testing locations are considered approximate.
3. Soil and groundwater impacts determined based on cumulative data, and PID readings.
4. IRM excavations are approximate and will be based on field screening and confirmatory sample results.

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Feet
1 inch = 20 feet

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PROJECT:

Interim Remedial Measures Work Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

IRM #1A & IRM #1B Excavations

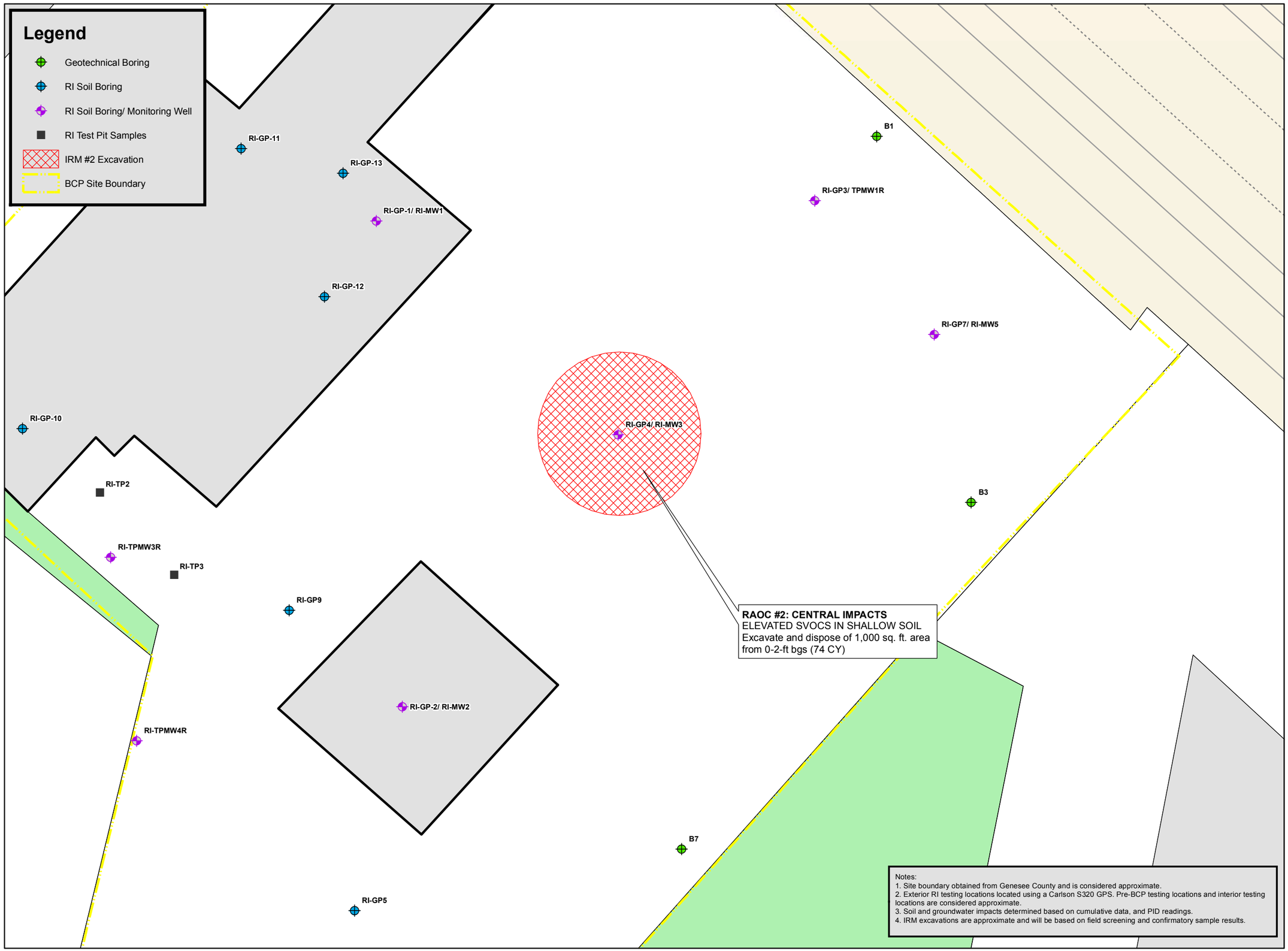
PROJECT/DRAWING NUMBER:

2172238

FIGURE 5

4/5/2018

I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\IRMWP\Figure 5- IRM 1.mxd



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Feet
1 inch = 20 feet

INTENDED TO PRINT AS: 11" X 17"

PROJECT:

Interim Remedial Measures Work Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

IRM #2 Excavation

PROJECT/DRAWING NUMBER:

2172238

FIGURE 6

4/5/2018

I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\IRMWP\Figure 6- IRM 2.mxd

Legend

- Geotechnical Boring
- RI Soil Boring
- RI Soil Boring/ Monitoring Well
- RI Test Pit Samples
- RI Soil Vapor Intrusion Sample Locations
- RI Surface Soil Sample Location
- Portions of Buildings to be Demolished
- Fuel Oil UST
- Interior Components
- BCP Site Boundary

RAOC #3: INTERIOR COMPONENTS
HYDRAULIC LIFTS, ASTS AND/OR CONTAINERS
IRM #3: Remove ASTs, Lift(s), and containers

ELLICOTT STREET

RI-SSV05/ IA05
RI-GP6/ RI-MW4
RI-GP-11
RI-SSV04/ IA04
RI-GP-13
RI-GP-1/ RI-MW1
B1
RI-GP3/ TPMW1R
RI-GP-12
RI-GP7/ RI-MW5
RI-SSV03/ IA03
RI-SSV02/ IA02
RI-GP-10
RI-GP4/ RI-MW3
B3
RI-TP2
RI-TPMW3R
RI-TP3
RI-SS01
RI-GP9
RI-OUTDOOR AMBIENT-1
RI-SSV01/ IA01
RI-GP-2/ RI-MW2
RI-TPMW4R
B7
RI-GP5
RI-GP8/ RI-MW6

Notes:
1. Site boundary obtained from Genesee County and is considered approximate.
2. Exterior RI testing locations located using a Carlson S320 GPS. Pre-BCP testing locations and interior testing locations are considered approximate.

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Feet
1 inch = 30 feet

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PROJECT:

Interim Remedial Measures Work Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

IRM #3
Removal of Interior Components

PROJECT/DRAWING NUMBER:

2172238

FIGURE 7

3/19/2018

I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\IRMWP\Figure 7- IRM 3.mxd

Legend

- RI Surface Soil Sample Location
- BCP Site Boundary
- Surface Soil Impacts

RI-SS01

RAOC #4: SURFACE SOIL IMPACTS/URBAN FILL
- ELEVATED SVOCS IN SURFACE SOIL
- URBAN FILL MATERIAL THROUGHOUT SITE

IRM #4: Remove surface soil impacts- excavate to 2-ft bgs and cover with 2-ft clean imported material.

Notes:
1. Site boundary obtained from Genesee County and is considered approximate.
2. Exterior RI testing locations located using a Carlson S320 GPS. Pre-BCP testing locations and interior testing locations are considered approximate.

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Feet
1 inch = 10 feet

INTENDED TO PRINT AS: 11" X 17"

PROJECT:

Interim Remedial Measures Work Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

IRM #4
Removal of Surface Soil Impacts

PROJECT/DRAWING NUMBER:

2172238

FIGURE 8

3/19/2018

I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\IRMWP\Figure 8- IRM 4.mxd

APPENDIX 1

NYSDEC Generic CAMP

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.

APPENDIX 2

Health and Safety Plan

Site Health and Safety Plan

Location:

Ellicott Station
40-52 Ellicott Street
Batavia, New York 14020

Prepared For:

Ellicott Station, LLC
c/o Batavia Development Corporation
One City Centre
Batavia, New York 14020

LaBella Project No. 2151319

October 2015

Site Health and Safety Plan

Location:

Ellicott Station
40-52 Ellicott Street
Batavia, New York 14020

Prepared For:

Ellicott Station, LLC
c/o Batavia Development Corporation
One City Centre
Batavia, New York 14020

LaBella Project No. 2151319

October 2015

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SITE HEALTH AND SAFETY PLAN

Project Title:	Ellicott Station - Brownfield Cleanup Program
Project Number:	2151319
Project Location (Site):	40-52 Ellicott Street, Batavia, New York 14020
Environmental Director:	To Be Determined
Project Manager:	To Be Determined
Plan Review Date:	October 5, 2015
Plan Approval Date:	October 12, 2015
Plan Approved By:	Mr. Richard Rote, CIH
Site Safety Supervisor:	To Be Determined
Site Contact:	Kevin Hayes
Safety Director:	To Be Determined
Proposed Date(s) of Field Activities:	To Be Determined
Site Conditions:	1.132 acres; Current Site features include a primary brick building of approximately 19,142 square feet and a garage outbuilding of 4,250 square feet. The balance of the one-acre property is covered by asphalt and bordered by chain link fencing.
Site Environmental Information Provided By:	❑ Phase I Environmental Site Assessment, 40-52 Ellicott Street, Rochester, New York, prepared by LaBella Associates, D.P.C. dated October 2012 ❑ Phase II Environmental Site Assessment, 40-52 Ellicott Street, Rochester, New York, prepared by LaBella Associates, D.P.C. dated July 2013
Air Monitoring Provided By:	To Be Determined
Site Control Provided By:	Contractor(s)

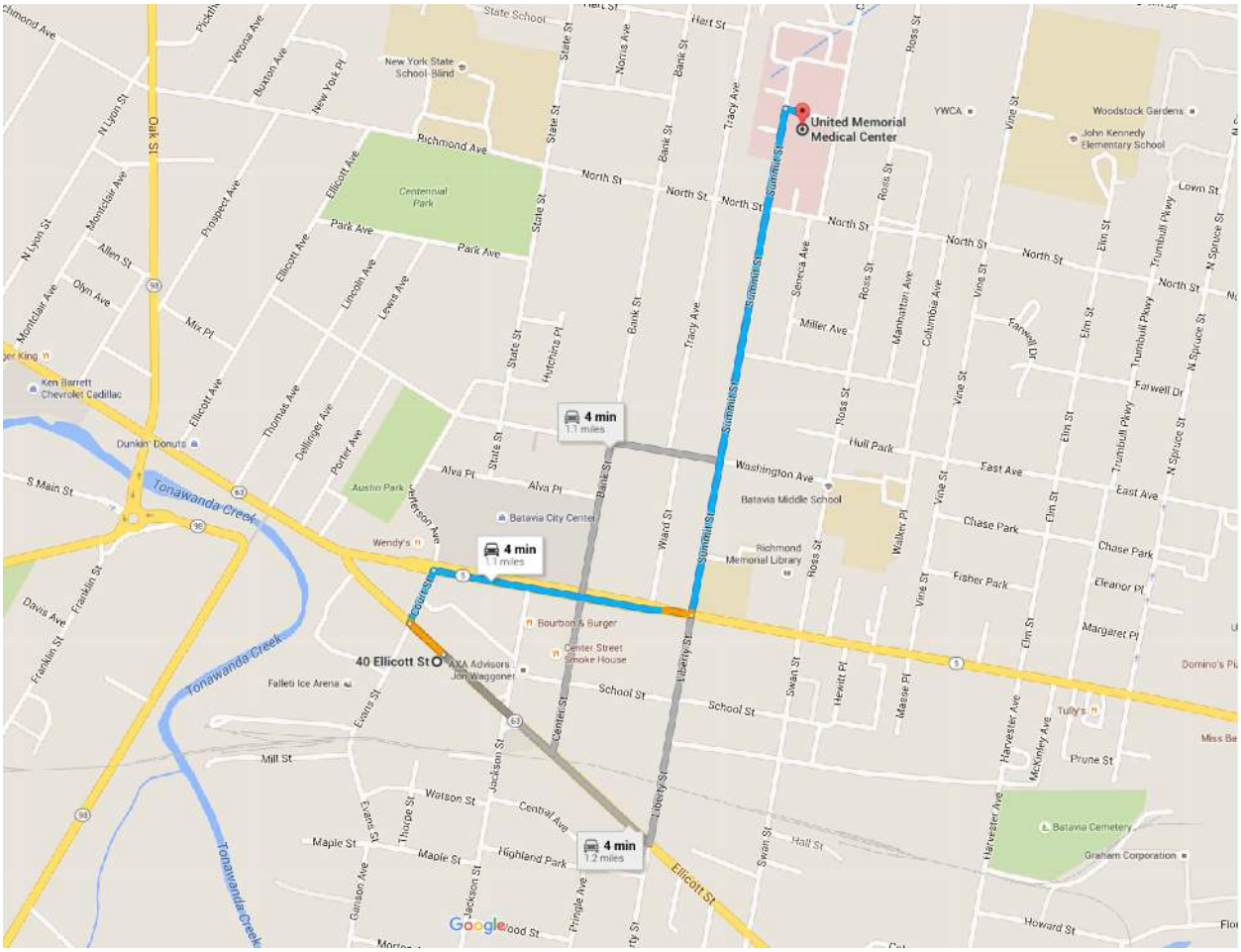
EMERGENCY CONTACTS

	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:	Kevin Hayes	716-332-5959
Agency Contact:	NYSDEC – Todd Caffoe NYSDOH – To Be Determined	585-226-5350 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 40-52 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 3

Quality Control Plan

Quality Control (QC) Program

Location:

Ellicott Station
40-52 Ellicott Street
Batavia, New York

Prepared For:

Ellicott Station, LLC
c/o Batavia Development Corporation
One City Centre
Batavia, New York 14020

LaBella Project No. 2151319

October 2015

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

Quality Control (QC) Program

Location:

Ellicott Station
40-52 Ellicott Street
Batavia, New York

Prepared For:

Ellicott Station, LLC
c/o Batavia Development Corporation
One City Centre
Batavia, New York 14020

LaBella Project No. 2151319

October 2015

LaBella Associates, D.P.C.
300 State Street
Rochester, New York 14614

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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.

<u>Hollow-Stem Auger Advanced Borings:</u>

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.

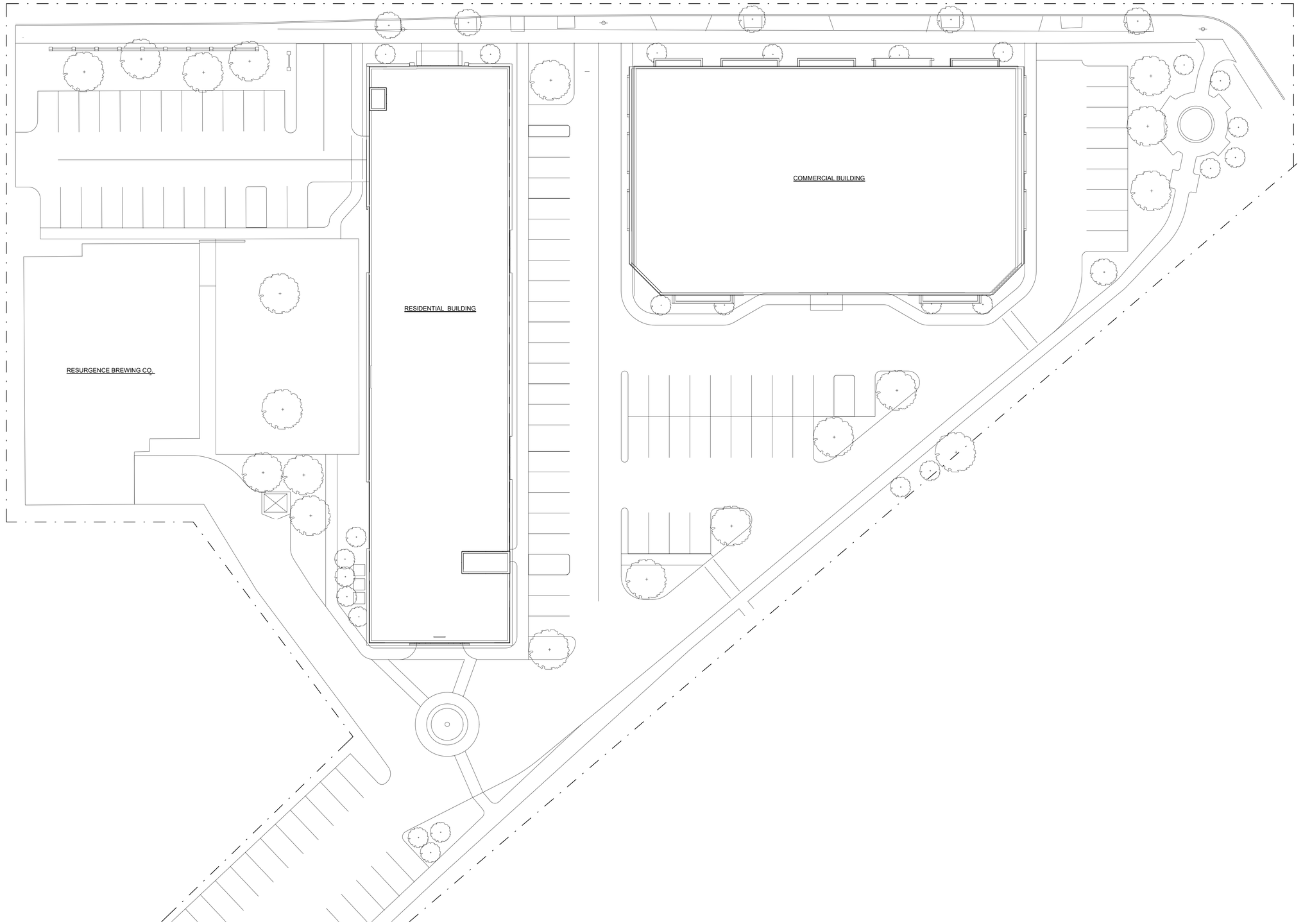
19.4 Quality Control Check Samples

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 4

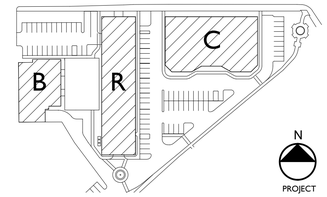
Conceptual Redevelopment Plan



1 COVER SITE PLAN
1" = 20'-0"

N TRUE

N PROJECT



THE REGISTERED PROFESSIONAL CERTIFIES THAT THIS PROJECT HAS BEEN DESIGNED BY ME, OR UNDER MY SUPERVISION, IN ACCORDANCE WITH: THE BUILDING CODE OF NEW YORK STATE AND THE ENERGY CONSERVATION CODE OF NEW YORK STATE AND APPLICABLE FEDERAL LAWS AND REGULATIONS AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, THESE CONSTRUCTION DOCUMENTS ARE IN CONFORMANCE THEREWITH.

DATE _____

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ELLICOTT STATION
REDEVELOPMENT
SAVARINO COMPANIES

ELLICOTT STREET
BATAVIA, NY

NOTES & REVISIONS:

DRAWING ISSUED:	05/25/17
Project Number: FBA PROJECT #00301.00	Scale: 1" = 20'-0"
Drawn By: ESE	Checked By: MW

Drawing Title
CONTRACT LIMIT SITE PLAN

Drawing Number
A1-00

01/26/18 4:30:58 PM

APPENDIX 5

Interim Site Management Plan

ELLICOTT STATION

GENESEE COUNTY

BATAVIA, NEW YORK

INTERIM SITE MANAGEMENT PLAN

NYSDEC Site Number: C819021

Prepared for:

Ellicott Station LLC

500 Seneca Street, Suite 508

Buffalo, New York 14204

Prepared by:

LaBella Associates, D.P.C.

300 State Street, Rochester, New York 14614

585-454-6110

Revisions to Final Approved Interim Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

NOVEMBER 2019

CERTIFICATION STATEMENT

I DANIEL NOLL certify that I am currently a NYS registered professional engineer 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).

D P N P.E.

11/12/19 DATE

ELLICOTT STATION
GENESEE COUNTY
BATAVIA, NEW YORK

INTERIM SITE MANAGEMENT PLAN

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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 Interim Site Management Plan:

Site Identification: C819021 ELLICOTT STATION

40-52 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.

Site Identification: C819021 ELLICOTT STATION

40-52 ELLICOTT STREET, BATAVIA, NEW YORK

	7. The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 1 (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 will be provided in detail in the final 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 Station Site located at 40-52 Ellicott Street in 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. C819021 which is administered by New York State Department of Environmental Conservation (NYSDEC).

Ellicott Station LLC entered into a Brownfield Cleanup Agreement (BCA) on July 16, 2015 with the NYSDEC to remediate the site. A figure showing the site location and boundaries of this site is provided in Figure 1.

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. ICs and ECs will likely 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, requiring compliance with this final SMP and all ECs and ICs placed on the site.

It is important to note that:

- Failure to comply with this ISMP is a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Index #C819021-06-15; Site #C819021) 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 ISMP 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 ISMP.

- 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 A 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 A: Notifications*

Name	**Contact Information**
NYSDEC Project Manager; Mr. Todd Caffoe	585-226-5350, todd.caffoe@dec.ny.gov
NYSDEC Regional HW Engineer; Mr. David Pratt, PE	585-226-5315, david.pratt@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 002 on the City of Batavia Tax Map (see Figure 2). The site is an approximately 1.132-acre area and is bounded by Ellicott Street to the northeast, commercial buildings to the southeast, northwest and southwest and undeveloped land to the south (see Figure 1 – Site Location Map). 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: one brick building approximately 19,142 square feet in size ("Main Building") and a garage outbuilding approximately 4,250 square feet in size ("Garage Building"). A small portion of vegetation is located south of the Main Building; the remainder of the Site is covered by asphalt. The Site is zoned C-3 Central Commercial District and is currently vacant. A historical sewer reportedly installed in the 1800s and known as the "Grand Canal Sewer" is present on the southern portion of the Site as shown on Figure 3. The sewer is reportedly approximately 3-ft wide and 4-ft in height with a flat bottom and arched, brick ceiling.

The properties adjoining the Site and in the neighborhood surrounding the Site primarily include commercial properties. The properties immediately south and southwest of the Site include undeveloped land and commercial properties; the properties immediately northeast, southeast and northwest of the Site include commercial properties.

Note that the property adjacent to the southwest of the Site was formerly utilized as the Batavia Manufactured Gas Plan (MGP) and subsurface impacts have been identified

at this property (NYSDEC State Superfund #819019; refer to Section 2.3 for additional information). In addition, petroleum impacts have also been identified at the property adjacent to the southeast of the Site (although not in direct proximity to the Site) and an application for this adjacent property for the BCP is currently pending (#C819023).

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 the RI. Cross sections depicting the general distribution and type of soils encountered at the Site are illustrated on Figures 4, 4A, 4B. Figure 4 illustrates the transect lines from which the cross sections were generated.

Surface Materials and Fill

Surface materials (generally 0-1 ft 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 small grass covered area located immediately south of the Main building where surface soil samples were collected (refer to Figure 3).

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 feet 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 feet bgs. Poorly-graded (fine grained) and well-graded (coarse, medium, and fine grained) sand was generally observed between 9 and 13 feet bgs and included lesser amounts of intermixed silt, gravel and clay. Silt with lesser amounts of sand, gravel and clay was observed between 13 and 25 feet bgs. Thirty (30) feet bgs was the greatest depth that soil was sampled but there was no significant recovery, likely due to running sands that were observed in the soil core between 25-ft and 30-ft bgs.

Bedrock

A bedrock evaluation has not been completed. However, based on the RI, 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.

Geologic cross sections are shown in Figures 4A and 4B. Transects are depicted on Figure 3. Site specific boring logs are provided in Appendix 2.

2.2.3 Hydrogeology

Though fluctuation in the depth to groundwater was observed during the RI due to significant rain events, groundwater was generally present between 7 and 9-ft bgs. Static water levels were collected on October 27, 2017 from each of the RI monitoring wells prior to groundwater sampling and again on February 21, 2018. Groundwater elevations were calculated by subtracting the static water levels from the top of PVC casing elevations. The October 2017 and February 2018 groundwater measurements indicate groundwater flow direction across the Site is generally towards the northwest. The hydraulic gradient is less than 1-ft. across the Site. Groundwater flow direction contours are included on Figures 5A and 5B. Refer to Table 1 for groundwater elevation data. Groundwater monitoring well construction logs are provided in Appendix 1.

Hydraulic conductivity testing was completed at wells RI-MW1, RI-MW5 and RI-MW6 as part of the RI. Using AQTESOLV Std 4.0, hydraulic conductivities for the wells

tested ranged from 1.02 x 10^{-4} feet per second (ft/s) at RI-MW6 to 3.13 x 10^{-4} ft/s at RI-MW5. Using these three (3) slug test values, the average hydraulic conductivity for the Site is 1.99 x 10^{-4} ft/s or 17.19 ft/day. It is noted that the observed rates of recovery in each well during slug testing were very quick. The majority of wells recharged to near static elevations within two (2) minutes or less of introduction of or removal of the slug.

The wells were screened across intervals that primarily included layers of sand with lesser varying amounts of silt, gravel and clay. Boring logs indicate that finer grained soils generally occur toward the bottom of the screened intervals, while coarser grained materials generally occur towards in the upper portion of the screened interval. Overall the coarser grained materials appear to enhance the rate of groundwater recharge across the Site. It is noted that lenses of coarser grained materials, including primarily fine sand, were also observed within the finer grained soil matrix in the lower portions of the wells screens. The range in values reflects the hydraulic conductivity of the primary overburden components, sand and silt, with only minor variations observed as a result of focused intervals of variable grain size.

The Site and surrounding area are connected to the municipal water system. Private water wells are not located in the vicinity of the Site and the municipal water source is Tonawanda Creek and primarily from two (2) public water wells located at Cedar Street (located approximately 1-mile from the Site) which pull from an aquifer. The City of Batavia treats and tests the municipal supply and releases an Annual Water Quality report each year.

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 and/or neighboring properties:

- Phase I Environmental Site Assessment (ESA) for Site, by LaBella dated April 2013
- Phase II ESA for Site, by LaBella dated June 2013
- DRAFT Remedial Investigation/Focused Feasibility Study (RI/FFS) for Batavia Former MGP, 11 Evans Street, Batavia, New York by Turnkey Environmental Restoration LLC (Turnkey) dated March 2017*
- Grand Canal Sewer Evaluation by LaBella in May 2017.
- DRAFT Remedial Investigation Report for Site, by LaBella, dated April 2018.

**Obtained from the NYSDEC in February 2018. As of February 2018, this report has not been finalized or approved by the NYSDEC.*

Previous investigations are summarized below. Please refer to the RI Report for a more comprehensive summary of prior investigations.

Phase I ESA by LaBella, dated April 2013:

A Phase I ESA report completed by LaBella for the Site and several adjacent parcels in April 2013 identified several Recognized Environmental Conditions (RECs) at the Site generally associated with historical operations. Specifically, RECs were identified associated with the following items.

NYSDEC Spill #0509078

Based on the review of active NYSDEC Spill Report #0509078, a subsurface investigation appears to have been previously conducted at the Site and gasoline impacted soil was reportedly encountered. However, a copy of the subsurface investigation report was not provided to the NYSDEC or LaBella.

Underground Storage Tanks

Records and historical mapping indicate the installation and removal of numerous underground storage tanks (USTs) at the Site.

Phase II ESA, by LaBella, dated June 2013:

Based on the RECs identified in the 2013 Phase I ESA and associated potential for subsurface petroleum impacts to be present, LaBella completed a Phase II ESA at the Site and adjacent parcels in June 2013. The Phase II investigation consisted of the advancement of 16 soil borings (designated BH1 through BH16), installation of four (4) groundwater monitoring wells and laboratory analysis of soil and groundwater samples. Investigation locations are depicted on Figure 6.

Evidence of impairment (i.e., elevated photoionization detection (PID) readings, staining, odors, etc.) were identified in several soil borings during the field program. One (1) volatile organic compound (VOC), methylene chloride, was detected above New York Codes, Rule and Regulations (NYCRR) Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs) in sample BH7. This compound was not identified at a concentration above NYCRR Part 375 Restricted Residential SCOs and is a common laboratory contaminant.

Two (2) semi-volatile organic compounds (SVOCs) were detected above Unrestricted Use SCOs in soil sample BH13, advanced along the southwestern property boundary, adjacent to the former MGP (NYSDEC #819019). Total SVOCs in soil were detected in BH13 at 15.545 milligrams per kilogram (mg/kg) or parts per million (ppm). One (1) SVOC, indeno(1.2.3-cd)pyrene was detected above NYSDEC Part 375 Restricted Residential Use SCOs in this sample. The analytical results are further described in attached Table 4A.

In addition, VOCs and SVOCs were identified above NYSDEC Part 703 Groundwater Standards in three (3) of the four (4) groundwater samples submitted for laboratory analysis. The elevated compounds appear to be generally associated with petroleum products and coal tar. The highest contaminant concentrations were identified near the

southwestern property line, which borders the adjacent former MGP. The analytical results are in attached Table 4B.

The soil and groundwater impacts were generally located in two (2) areas; 1) on the southern portion of the Site in the vicinity of the former MGP and adjacent fuel oil UST; and, 2) in the location of former gasoline USTs in the northern-central portion of the Site, east of the Main Building.

Site Visit completed by LaBella, October 2015

A site visit was completed by LaBella on October 13, 2015, to assess conditions within the Site buildings (the building interiors were inaccessible during the previous work completed at the Site by LaBella in 2013). It should be noted that access was not available to the garage building located to the southeast of the main building at this time. However, during LaBella's site visit, two (2) apparent hydraulic lifts with underground components were observed in a portion of the Main Building (refer to Figure 3). In addition, three (3) aboveground storage tanks (ASTs) labeled "ATF", "Motor Oil", and "Hoist" were observed in an elevated area in close proximity to the lifts. Each AST appeared to be approximately 250-gallons in capacity. These ASTs are located approximately 10-ft. above the floor surface on a ledge and thus could not be accessed during the site visit to assess the tank contents.

Although access to the garage building was unavailable at the time of the October 13, 2015, site visit, broken windows in the bay doors of this building allowed a limited visual inspection of the building. Scars associated with hydraulic lifts and/or other features potentially associated with petroleum products and/or hazardous substances were not observed; however, debris covering portions of the floor further limited the visual inspection.

Finally, it is noted that the four (4) wells installed during LaBella's 2013 Phase II ESA (i.e., TPMW1 through TPMW4) appear to have been removed by an unknown party

subsequent to the completion of that investigation. Refer to Figure 6 for the former well locations.

DRAFT Remedial Investigation/Focused Feasibility Study (RI/FFS) for Batavia Former MGP, completed by Turnkey, March 2017

This report was completed for the adjacent NYSDEC State Superfund Site #819019 addressed as 11 Evans Street, Batavia, New York. This property is located immediately adjacent to the southwest of the Site and was historically utilized as an MGP between the mid-1800s and early 1900s. This report was obtained from the NYSDEC in February 2018 and as of that date, has not been finalized or approved by the NYSDEC.

The DRAFT report describes multiple investigations completed at this property between 2012 and 2015. The DRAFT report provided the following findings relevant to the Ellicott Station Site:

- Non-aqueous phase liquid (NAPL) or potentially coal tar was encountered in boring/well SB-8/MW-1, located in the vicinity of a former tar house (refer to Figure 3). The former tar house appears to have been located on this adjacent property but along the property line shared with the Ellicott Station Site. The coal tar is reportedly present between approximately 5-ft and 10-ft bgs in this area. VOCs (specifically benzene) and over a dozen SVOCs were detected in a soil sample collected from SB-8 at concentrations above Commercial Use SCOs. A groundwater sample was reportedly not collected from this well due to the presence of NAPL.
- Test pit TP-1 was excavated in the vicinity of the former UST located on the southeastern portion of this adjacent property, directly adjacent to the Site (refer to Figure 3). This test pit reportedly encountered black stained soil, strong product odors and PID measurements of up to 399 parts per million (PPM) between approximately 6-ft to 7-ft bgs. A soil sample collected from a boring advanced in this location identified several SVOCs above Commercial Use SCOs and a groundwater sample identified petroleum-related compounds

above NYCRR Part 703 Groundwater Quality Standards. The report indicates these impacts appear to be from the former UST.

- Groundwater flow at in the portion of this property closest to the Site appears to be towards the east (i.e., towards the Site).
- Iron, magnesium, manganese and/or sodium were detected in groundwater samples collected from this adjacent property at concentrations above groundwater standards/guidance values. The report indicates that the presence of these metals at elevated concentrations is "not uncommon" and may be attributed to the natural occurrence of these metals in the environment.

Based on the findings of the investigation work, the RI/FFS for this adjacent property recommends the impacts located in the vicinity of the former tar house and the former UST be remediated as part of a Track 4 Cleanup to Commercial Use SCOs. Note that these two (2) areas are both located directly adjacent to the Ellicott Station Site (refer to Figure 3). The DRAFT RI/FFS recommends in-situ soil stabilization be completed in an approximately 1,600-square foot (sq ft) area in the vicinity of the former tar house and that a remedial soil excavation be completed in an approximately 1,200-sq ft area in the vicinity of the former UST. Refer to Figure 3 for the approximate locations of these proposed remedial actions based on the DRAFT RI/FFS.

Grand Canal Sewer Evaluation completed by LaBella, May 2017

Prior to implementation of the RIWP, LaBella was on-site to oversee test pitting in the vicinity of the historical Grand Canal Sewer (refer to Section 2.2.1) for geotechnical purposes. The precise location of the sewer had not been identified at this time and the objective of this evaluation was to locate the sewer and collect soil samples surrounding the sewer to assess for releases of potentially impacted wastewater from the structure into the Site subsurface.

LaBella mobilized to the Site on May 25, 2017 and excavated four (4) test pits in the southern portion of the property, designated TP-1 through TP-4. Test pit locations are depicted on Figure 6. Prior to initiating the test pitting program, LaBella personnel

removed the cover to a manhole immediately south of the Main Building which was previously reported to be an electrical vault. Several pipes and valves were observed in this manhole that appeared to be associated with a UST. Based on this observation, an RIWP Amendment letter was drafted and subsequently approved by the NYSDEC to complete additional test pitting in this area as part of the RI to trace the piping observed in the manhole. This test pitting resulted in the identification of an orphan 5,000-gallon fuel oil UST to the south of the Main Building.

The test pits completed as part of the May 2017 sewer evaluation were advanced to terminal depths between 6.0-ft and 8.6-ft bgs. The test pits did not uncover the sewer, although a concrete vault which appears to be related to the sewer was encountered in test pits TP-2 and TP-3.

Urban fill material including bricks, cinders, ash, glass and wood debris was encountered in all four (4) test pits generally between 1-ft and 4-ft bgs. A sample of the urban fill material was collected for laboratory analysis from TP-2 (3-ft to 4-ft bgs), which identified several SVOCs above Unrestricted Use and/or Restricted Residential Use SCOs. Elevated PID readings up to 39.2 ppm and faint to moderate petroleum odors were noted in test pits TP-2, TP-3 and TP-4. Higher PID readings (up to 325.7 ppm at 7-ft bgs) and a strong petroleum odor were noted in TP-1. TP-1 was advanced approximately 15-ft east of the Site's southwestern property line (shared with NYSDEC State Superfund Site #819019) and approximately 20-ft south of the orphan 5,000-gallon UST later discovered at the Site. TP-2 and TP-3 were advanced between TP-1 and this orphan UST.

Samples were analyzed for a combination of VOCs, SVOCs, metals and PCBs. Generally, the analytical results of the sewer evaluation identified impacts in the urban fill material, with SVOCs being the only parameter identified above Restricted Residential SCOs. PCBs were not identified above laboratory MDLs in any of the four (4) soil samples. Analytical data are summarized in Tables 2A through 2E.

DRAFT Remedial Investigation Report completed by LaBella, April 2018

Note that the RI Report has not yet been approved by the NYSDEC. A summary of analytical data generated as part of the RI is included in Tables 2A through 2E and 3A through 3E. The RI identified and defined the nature and extent of four (4) Remedial Areas of Concern (RAOCs), as summarized below.

RAOC #1 – Southern Impacts: SVOC impacts in soil and groundwater are present in the southern portion of the Site, along the southwestern property line. These impacts appear to be coming from the adjacent NYSDEC State Superfund Site (#819019), which was a former MGP and potentially from an on-site orphan 5,000-gallon fuel oil UST which was discovered as part of this RI (refer to Figure 3). The greatest impacts are generally present at and around the level of the water table (between 8-ft and 12-ft bgs). A SVOC groundwater plume appears to be emanating across the Site from the southern adjacent property, with the greatest impacts located in RAOC #1.

Remediation of RAOC #1 is planned to be primarily addressed by an Interim Remedial Measures (IRM) Work Plan, to be submitted under separate cover. Any remaining contamination present following the IRMs will be addressed in the Remedial Alternatives Analysis (RAA). However, based on anticipated upcoming redevelopment activities in summer 2018, development and implementation of this Interim SMP was recommended.

RAOC #2 – Central Impacts: Shallow SVOC impacts are present in the central portion of the Site, in the top approximately 1.5-ft to 2-ft below asphalt pavement in an approximately 1,000-sq ft area. The impacts identified in soil samples appear to be from a black, tar/slab-like material noted in a soil boring in this location, within 1.5-ft of the ground surface. Although the exact source is unknown, the presence of this material may be associated with the prior use of the Site by a commercial paving contractor from the mid-1980s to the mid-2000s. SVOC impacts in groundwater in this area appear to be associated with the apparent plume emanating from the southern adjacent property and not with these shallow impacts.

Remediation of RAOC #2 is planned to be primarily addressed by an IRM Work Plan, to be submitted under separate cover. Any remaining contamination present

following the IRMs will be addressed in the RAA. However, based on anticipated upcoming redevelopment activities in summer 2018, development and implementation of this Interim SMP was recommended.

RAOC #3 – Interior Components: This RAOC is associated with components within the buildings that appear to be affecting various media (e.g., soil and soil vapor) and will need to be removed prior to Site redevelopment. Hydraulic lifts, ASTs and numerous containers/drums which appear to contain petroleum products and/or hazardous substances are present in the Site buildings. PCBs and petroleum-related VOCs in soil as well as chlorinated VOCs in sub-slab and indoor air are attributed to current interior features and historical operations within the buildings.

Although soil vapor intrusion (SVI) data generated during the RI for the Garage Building did indicate mitigation to be completed prior to occupancy, this building is planned to be demolished and a new building with a first-floor, open air parking structure is planned to be constructed within the footprint of the Garage Building. As such, SVI mitigation does not appear warranted for the Site.

Remediation of RAOC #3 is planned to be primarily addressed by an IRM Work Plan, to be submitted under separate cover. Any remaining contamination present following the IRMs will be addressed in the RAA. However, based on anticipated upcoming redevelopment activities in summer 2018, development and implementation of this Interim SMP was recommended.

RAOC #4 – Surface Soil Impacts and Urban Fill: An approximate 550-square foot area of vegetation is present at the Site south of the Main Building. Surface soil sampling to 2-ft bgs in this area identified SVOCs, VOCs, PCBs, one (1) pesticide and one (1) metal at concentrations above SCGs. These impacts may be attributed to the long-term use of the Site and/or adjacent property for industrial purposes and/or due to contaminated storm water run-off from on-site and adjacent parking lots entering this area.

In addition to the surface soil impacts, 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. One (1) sample of this material 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.

Remediation of shallow soils in RAOC # is planned to be primarily addressed by an IRM Work Plan, to be submitted under separate cover. Any remaining contamination present following the IRMs and the presence of urban fill at the Site will be addressed in the RAA. However, based on anticipated upcoming redevelopment activities in summer 2018, development and implementation of this Interim SMP was recommended.

Remediation of surface soils in RAOC #4 is planned to be primarily addressed by an IRM Work Plan, to be submitted under separate cover. Any remaining contamination present following the IRMs will be addressed in the RAA. However, based on anticipated upcoming redevelopment activities in summer 2018, development and implementation of this Interim SMP was recommended.

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 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 ISMP 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 3) for the proper handling of 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.

Note that there are currently no ECs in place at the Site; ECs to be followed on an interim basis are set forth under Section 3.3. Final ECs will be determined following completion of a RAA and be set forth in the final SMP.

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/industrial) uses only. Adherence to these ICs on the site will be required by the Environmental Easement and will be implemented under this ISMP and the final SMP. ICs which will be identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement. The IC boundaries are shown on Figure 1 and include the entire Site at this time. 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 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;
- 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.
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 1 (note that an SVI evaluation was completed as part of the RI), 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 Garage Building, the northern portion of the Main Building and several pavement areas. Construction of a new building in the eastern portion of the Site and other impervious surfaces (asphalt parking, patio, etc.) is planned following demolition. 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 3 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 the final cover will be 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 4.

3.3.2 Sub-slab Depressurization Systems

The SVI evaluation completed as part of the RI did not identify the need for mitigation in the Site buildings based on NYSDOH Soil Vapor/Indoor Air Decision Matrices with the exception of the Garage Building. However, based on the planned demolition of the Garage Building and construction of a multiple story structure within the footprint of the Garage Building which will have a first-floor, open air parking garage, SVI mitigation does not appear to be necessary. However, any additional future Site buildings would be constructed in accordance with the final SMP and SVI evaluation and/or mitigation would occur in compliance with the final SMP.

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 ASSESSMENTS/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

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

7.0. REPORTING REQUIREMENTS

Soil removal work conducted outside the Interim Remedial Measure (IRM) Work Plan excavation will be documented in the IRM Construction Completion Report or under a separate cover.

7.1 Site Management Reports

All relevant inspections will be reported in periodic progress reports. Procedures for any required monitoring and associated forms as well as Periodic Review Reports (including certification of ICs and ECs) will be detailed in the final SMP.

7.2 Corrective Measures Work Plan

If any component of the existing ECs 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).

NYSDOH, 2006. Final Guidance for Evaluating Soil Vapor Intrusion in New York State. October 2006 (with subsequent updates).

Phase I Environmental Site Assessment (ESA) for Site, by LaBella dated April 2013.

Phase II ESA for Site, by LaBella dated June 2013.

DRAFT Remedial Investigation/Focused Feasibility Study (RI/FFS) for Batavia Former MGP, 11 Evans Street, Batavia, New York by Turnkey Environmental Restoration LLC (Turnkey) dated March 2017.

Grand Canal Sewer Evaluation by LaBella in May 2017.

DRAFT Remedial Investigation Report for Site, by LaBella, dated April 2018.

TABLES

Table 1 - Groundwater Elevation Data
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC BCP Site #C819021
LaBella Project No. 2172238

Monitoriong Well ID	Ground Surface Elevation	TOC Casing Elevation	Static Water Level 10/27/17	Groundwater Elevation 10/27/2017	Static Water Level 2/21/2018	Groundwater Elevation 2/21/2018
RI-MW1	890.10	889.49	8.94	880.55	8.01	881.48
RI-MW2	890.03	889.82	8.58	881.24	7.44	882.38
RI-MW3	888.94	888.67	7.14	881.53	6.05	882.62
RI-MW4	890.31	890.05	8.96	881.09	8.29	881.76
RI-MW5	889.73	889.35	8.20	881.15	7.44	881.91
RI-MW6	890.24	889.89	7.49	882.40	5.08	884.81
RI-TPMW1R	889.62	889.18	8.04	881.14	7.25	881.93
RI-TPMW3R	889.79	889.67	7.59	882.08	6.39	883.28
RI-TPMW4R	889.88	889.55	7.33	882.22	6.35	883.20

Notes:

Elevations in feet above mean sea level in NAVD 88 datum.

Elevations for interior groundwater monitoring wells (RI-MW1 and RI-MW2) were based on elevation of finished floor at the nearest exterior door. X and Y coordinates for these locations were measured from Site features and are considered approximate.

TOC indicates "top of casing".

Static water levels measured from top of casing.

Pre-BCP wells appear to have been removed before the RI.

Table 2A : Summary of Volatile Organic Compounds (VOCs) in Soil (Page 1 of 2)
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC BCP Site #C819021
LaBella Project No. 2172238

SAMPLE TYPE				TEST PIT							SURFACE SOIL	
SAMPLE ID	6NYCRR - 375-6.8(b) Soil Cleanup - Protection of Groundwater (ppm)	6NYCRR- 375-6.8(a) Soil Cleanup - Unrestricted Use (ppm)	6NYCRR - 375-6.8(b) Soil Cleanup - Restricted Residential Use (ppm)	RI-TP2 (7)	RI-TP3 (7)	TP-1 (5-7)	TP-2 (3-4)	TP-3 (8-8.6)	TP-4 (5-6)	TP-3 DUPLICATE	RI-SS01 (0-2")	RI-SS01 (2-24")
SAMPLE DATE				10/3/2017	10/2/2017	5/25/2017	5/25/2017	5/25/2017	5/25/2017	5/25/2017	10/13/2017	10/13/2017
SAMPLE DEPTH				7'	7'	5'-7'	3'-4'	8'-8.6'	5'-6'	8'-8.6'	0-2"	2-24"
Methylene chloride	0.05	0.05	100	0.0091 U	0.0091 U	0.190 U	0.0095 U	0.00595 U	0.00599 U	0.0061 U	0.0089 U	0.15 J
1,1-Dichloroethane	0.27	0.27	26	0.0014 U	0.0014 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0013 U	0.091 U
Chloroform	0.37	0.37	49	0.0014 U	0.0014 U	0.190 U	0.0095 U	0.00595 U	0.00599 U	0.0061 U	0.0013 U	0.091 U
Carbon tetrachloride	0.76	0.76	2.4	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
1,2-Dichloropropane	N/A	N/A	N/A	0.0032 U	0.0032 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0031 U	0.21 U
Dibromochloromethane	N/A	N/A	N/A	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
1,1,2-Trichloroethane	N/A	N/A	N/A	0.0014 U	0.0014 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0013 U	0.091 U
Tetrachloroethene	1.3	1.3	19	**0.0078**	**0.0078**	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	**0.024** J
Chlorobenzene	1.1	1.1	100	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
Trichlorofluoromethane	N/A	N/A	N/A	0.0046 U	0.0046 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0044 U	0.3 U
1,2-Dichloroethane	0.02	0.02	3.1	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
1,1,1-Trichloroethane	0.68	0.68	100	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
Bromodichloromethane	N/A	N/A	N/A	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
trans-1,3-Dichloropropene	N/A	N/A	N/A	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
cis-1,3-Dichloropropene	N/A	N/A	N/A	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
Bromoform	N/A	N/A	N/A	0.0036 U	0.0036 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0035 U	0.24 U
1,1,2,2-Tetrachloroethane	N/A	0.6	N/A	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
Benzene	0.06	0.06	4.8	**0.00021** J	0.00021 U	**0.0435**	**0.00276**	**0.00894**	0.0012 U	**0.00787**	0.00089 U	0.1
Toluene	0.7	0.7	100	0.0004 J	0.0004 U	0.190 U	0.0095 U	**0.0109**	0.0012 U	**0.0097**	0.0013 U	**0.5**
Ethylbenzene	1	1	41	0.00091 U	0.00091 U	**0.101**	0.0019 U	**0.00125**	0.0012 U	0.00122 U	0.00089 U	**0.1**
Chloromethane	N/A	N/A	N/A	0.0046 U	0.0046 U	0.095 U	0.00475 U	0.00297 U	0.00299 U	0.00305 U	0.0044 U	0.3 U
Bromomethane	N/A	N/A	N/A	0.0018 U	0.0018 U	0.190 U	0.0095 U	0.00595 U	0.00599 U	0.0061 U	0.0018 U	0.12 U
Vinyl chloride	0.02	0.02	0.9	0.0018 U	0.0018 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0018 U	0.12 U
Chloroethane	N/A	N/A	N/A	0.0018 U	0.0018 U	0.190 U	0.0095 U	0.00595 U	0.00599 U	0.0061 U	0.0018 U	0.12 U
1,1-Dichloroethene	0.33	0.33	100	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
trans-1,2-Dichloroethene	0.19	0.19	100	0.0014 U	0.0014 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0013 U	0.091 U
Trichloroethene	0.47	0.47	21	**0.0012**	0.0012 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
1,2-Dichlorobenzene	1.1	1.1	100	0.0046 U	0.0046 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0044 U	0.3 U
1,3-Dichlorobenzene	2.4	2.4	49	0.0046 U	0.0046 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0044 U	0.3 U
1,4-Dichlorobenzene	1.8	1.8	13	0.0046 U	0.0046 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0044 U	0.3 U
Methyl tert butyl ether	0.93	0.93	100	0.0018 U	0.0018 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0018 U	**0.011** J
p/m-Xylene	N/A	N/A	N/A	0.0018 U	0.0018 U	**0.0866**	0.0038 U	**0.00556**	0.0024 U	**0.00447**	0.0018 U	**0.55**
o-Xylene	N/A	N/A	N/A	0.0018 U	0.0018 U	**0.379**	0.0019 U	**0.00228**	0.0012 U	**0.00194**	0.0018 U	**0.35**
Xylene, mixed	1.6	0.26	100	0.0018 U	0.0021 U	0.4656	0.0038 U	**0.00784**	0.0024 U	**0.00641**	0.0018 U	0.9
cis-1,2-Dichloroethene	0.25	0.25	100	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	0.061 U
Styrene	N/A	N/A	N/A	0.0018 U	0.0018 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0018 U	0.12 U
Dichlorodifluoromethane	N/A	N/A	N/A	0.0091 U	0.0091 U	0.190 U	0.0095 U	0.00595 U	0.00599 U	0.0061 U	0.0089 U	0.61 U
Acetone	0.05	0.05	100	**0.0024** J	**0.0024**	1.900 U	0.095 U	0.0595 U	0.0599 U	0.061 U	0.0089 U	0.61 U
Carbon disulfide	2.7*	NL	NL	0.0091 U	0.0091 U	0.038 U	0.0019 U	0.00119 U	**0.00699**	0.00122 U	0.0089 U	0.61 U
2-Butanone	0.12	0.12	100	0.0091 U	0.0091 U	0.380 U	0.019 U	0.0119 U	0.012 U	0.0122 U	0.0089 U	0.61 U
4-Methyl-2-pentanone	1*	NL	NL	0.0091 U	0.0091 U	0.380 U	0.019 U	0.0119 U	0.012 U	0.0122 U	0.0089 U	0.61 U
2-Hexanone	N/A	N/A	N/A	0.0091 U	0.0091 U	0.380 U	0.019 U	0.0119 U	0.012 U	0.0122 U	0.0089 U	0.61 U
Bromochloromethane	N/A	N/A	N/A	0.0046 U	0.0046 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0044 U	0.3 U
1,2-Dibromoethane	N/A	N/A	N/A	0.0036 U	0.0036 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0035 U	0.24 U
n-Butylbenzene	NS	12	12	0.00091 U	0.00091 U	**0.0796**	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	**0.028** J
sec-Butylbenzene	11	11	100	0.00091 U	0.00091 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	**0.014** J
1,2-Dibromo-3-chloropropane	N/A	N/A	N/A	0.0046 U	0.0046 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0044 U	0.3 U
Isopropylbenzene	2.3*	NL	NL	0.00091 U	0.00091 U	0.380 U	0.019 U	0.0119 U	0.012 U	0.0122 U	0.00089 U	**0.038** J
p-Isopropyltoluene	10*	NL	NL	**0.0017**	0.0017 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	**0.00022** J	**0.022** J
Naphthalene	12	12	100	**0.0002** J	**0.0002** J	**1.390**	0.0095 U	0.00595 U	0.00599 U	0.0061 U	0.0044 U	**0.38**
n-Propylbenzene	3.9	3.9	100	0.00091 U	0.00091 U	**0.111**	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.00089 U	**0.048** J
1,2,3-Trichlorobenzene	N/A	N/A	N/A	0.0046 U	0.0046 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0044 U	0.3 U
1,2,4-Trichlorobenzene	N/A	3.4	N/A	0.0046 U	0.0046 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0044 U	0.3 U
1,3,5-Trimethylbenzene	8.4	8.4	52	0.0046 U	**0.0046** J	**0.0714**	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.0044 U	**0.047** J
1,2,4-Trimethylbenzene	3.6	3.6	52	**0.00057** J	**0.00057** J	**0.348**	0.0019 U	**0.00232**	0.0012 U	**0.00188**	0.0044 U	**0.24** J
Methyl Acetate	N/A	N/A	N/A	0.018 U	0.018 U	0.760 U	0.038 U	0.0238 U	0.024 U	0.024 U	0.018 U	**0.11** J
Cyclohexane	N/A	N/A	N/A	0.018 U	0.018 U	0.038 U	**0.00964**	**0.00612**	0.0012 U	**0.00535**	0.018 U	**0.28** J
1,4-Dioxane	0.1	0.1	13	0.036 U	0.036 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.035 U	2.4 U
Freon-113	6*	NL	NL	0.018 U	0.018 U	0.038 U	0.0019 U	0.00119 U	0.0012 U	0.00122 U	0.018 U	1.2 U
Methyl cyclohexane	N/A	N/A	N/A	**0.0015** J	0.0015 U	0.038 U	**0.016** J	**0.0133**	0.0012 U	**0.0109**	0.0035 U	**0.91**
Total TICs	***N/A***	***N/A***	***N/A***	***0.0438*** J	***0.0735*** J	***NS***	***NS***	***NS***	***NS***	***NS***	***None detected***	***1.85*** J
TOTAL VOCS	***N/A***	***N/A***	***N/A***	***0.01558***	***0.01557***	***2.610***	***0.0284***	***0.05067***	***0.00699***	***0.04211***	***0.00022***	***4.802***
TOTAL VOCS + TICs	***N/A***	***N/A***	***N/A***	***0.05938***	***0.08907***	***2.610***	***0.0284***	***0.05067***	***0.00699***	***0.04211***	***0.00022***	***6.652***

Notes:
VOCs analyzed via USEPA Method 8260.
Concentrations in milligrams per kilogram (mg/kg) or parts per million (ppm).
Bold font indicates the compound was detected above laboratory method detection limit.
Underlined indicates the concentration exceeds 6NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO).
Red font indicates the concentration exceeds the 6NYCRR Part 375-6.8(b) Unrestricted Use SCO.
Yellow highlight indicates the concentration exceeds the 6NYCRR Part 375-6.8(a) Restricted Residential Use SCO.
N/A indicates not applicable.
NS indicates not sampled.
U indicates that the analyte was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
R- Analytical results are from sample re-analysis
* Indicates no Part 375 SCO; CP-51 Supplemental SCOs for Protection of Groundwater was used.
TICs = tentatively identified compounds
Total VOCs includes all detected VOCs.
Total VOCs + TICs includes all detected VOCs and TICs.
Data not yet validated
*indicates no Part 375 value, corresponding CP-51 Supplemental Soil Cleanup Objective is listed.

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Table 2A : Summary of Volatile Organic Compounds (VOCs) in Soil (Page 2 of 2)
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC BCP Site #C819021
LaBella Project No. 2172238

SAMPLE TYPE				SOIL BORINGS																			
SAMPLE ID	6NYCRR - 375-6.8(b) Soil Cleanup - Protection of Groundwater (ppm)	6NYCRR- 375-6.8(a) Soil Cleanup - Unrestricted Use (ppm)	6NYCRR - 375-6.8(b) Soil Cleanup - Restricted Residential Use (ppm)	RI-GP1 (10.5)		RI-GP2 (8.5)		RI-GP2D (8.5)		RI-GP3 (9)		RI-GP4 (0.25-2)		RI-GP5 (7)		RI-GP7 (3)		RI-GP8 (8-9)		RI-GP8D (8-9)		RI-GP9 (9)		RI-GP10 (10-11)		RI-GP11 (13)		RI-GP13 (10-12)	
SAMPLE DATE				10/3/2017		10/3/2017		10/3/2017		10/3/2017		10/4/2017		10/6/2017		10/9/2017		10/10/2017		10/10/2017		10/10/2017		10/10/2017		10/10/2017		10/10/2017	
SAMPLE DEPTH				10.5'		8.5'		8.5'		9'		0.25-2'		7'		3'		8-9'		8-9'		9'		10-11'		13'		10-12'	
Methylene chloride	0.05	0.05	100	0.0074	UR	0.0086	U	0.0093	U	0.0084	U	2.6	U	0.64	U	0.8	U	0.6	J	0.49	U	0.008	U	0.59	U	0.57	U	0.0088	U
1,1-Dichloroethane	0.27	0.27	26	0.0011	UR	0.0013	U	0.0014	U	0.0012	U	0.4	U	0.096	U	0.12	U	0.33	U	0.074	U	0.0012	U	0.088	U	0.086	U	0.0013	U
Chloroform	0.37	0.37	49	0.0011	UR	0.0013	U	0.0014	U	0.0012	U	0.4	U	0.096	U	0.12	U	0.33	U	0.074	U	0.0012	U	0.088	U	0.086	U	0.0013	U
Carbon tetrachloride	0.76	0.76	2.4	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
1,2-Dichloropropane	N/A	N/A	N/A	0.0026	UR	0.003	U	0.0033	U	0.0029	U	0.92	U	0.22	U	0.28	U	0.77	U	0.17	U	0.0028	U	0.2	U	0.2	U	0.0031	U
Dibromochloromethane	N/A	N/A	N/A	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
1,1,2-Trichloroethane	N/A	N/A	N/A	0.0011	UR	0.0013	U	0.0014	U	0.0012	U	0.4	U	0.096	U	0.12	U	0.33	U	0.074	U	0.0012	U	0.088	U	0.086	U	0.0013	U
Tetrachloroethene	1.3	1.3	19	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
Chlorobenzene	1.1	1.1	100	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
Trichlorofluoromethane	N/A	N/A	N/A	0.0037	UR	0.0043	U	0.0047	U	0.0042	U	1.3	U	0.32	U	0.4	U	1.1	U	0.24	U	0.004	U	0.29	U	0.29	U	0.0044	U
1,2-Dichloroethane	0.02	0.02	3.1	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
1,1,1-Trichloroethane	0.68	0.68	100	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
Bromodichloromethane	N/A	N/A	N/A	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
trans-1,3-Dichloropropene	N/A	N/A	N/A	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
cis-1,3-Dichloropropene	N/A	N/A	N/A	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
Bromoform	N/A	N/A	N/A	0.003	UR	0.0035	U	0.0037	U	0.0034	U	1	U	0.26	U	0.32	U	0.88	U	0.2	U	0.0032	U	0.24	U	0.23	U	0.0035	U
1,1,2,2-Tetrachloroethane	N/A	0.6	N/A	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
Benzene	0.06	0.06	4.8	**0.00067**	**JR**	0.00086	U	0.00093	U	**0.00027**	**J**	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.066		0.057	U	0.00088	U
Toluene	0.7	0.7	100	**0.0016**	**R**	0.0013	U	0.0014	U	**0.00051**	**J**	**0.081**	J	0.096	U	0.12	U	0.33	U	0.074	U	**0.00024**	**J**	**0.19**		0.086	U	**0.00019**	**J**
Ethylbenzene	1	1	41	**0.00041**	**JR**	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	**0.024**	**J**	0.057	U	0.00088	U
Chloromethane	N/A	N/A	N/A	0.0037	UR	0.0043	U	0.0047	U	0.0042	U	1.3	U	0.32	U	0.4	U	1.1	U	0.24	U	0.004	U	0.29	U	0.29	U	0.0044	U
Bromomethane	N/A	N/A	N/A	0.0015	UR	0.0017	U	0.0019	U	0.0017	U	0.53	U	0.13	U	0.16	U	0.44	U	0.098	U	0.0016	U	0.12	U	0.11	U	0.0018	U
Vinyl chloride	0.02	0.02	0.9	0.0015	UR	0.0017	U	0.0019	U	0.0017	U	0.53	U	0.13	U	0.16	U	0.44	U	0.098	U	0.0016	U	0.12	U	0.11	U	0.0018	U
Chloroethane	N/A	N/A	N/A	0.0015	UR	0.0017	U	0.0019	U	0.0017	U	0.53	U	0.13	U	0.16	U	0.44	U	0.098	U	0.0016	U	0.12	U	0.11	U	0.0018	U
1,1-Dichloroethene	0.33	0.33	100	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
trans-1,2-Dichloroethene	0.19	0.19	100	0.0011	UR	0.0013	U	0.0014	U	0.0012	U	0.4	U	0.096	U	0.12	U	0.33	U	0.074	U	0.0012	U	0.088	U	0.086	U	0.0013	U
Trichloroethene	0.47	0.47	21	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	**0.048**	**J**	0.057	U	0.00088	U
1,2-Dichlorobenzene	1.1	1.1	100	**0.012**	**R**	0.0043	U	0.0047	U	0.0042	U	1.3	U	0.32	U	0.4	U	1.1	U	0.24	U	0.004	U	0.29	U	0.29	U	0.0044	U
1,3-Dichlorobenzene	2.4	2.4	49	**0.0032**	**JR**	0.0043	U	0.0047	U	0.0042	U	1.3	U	0.32	U	0.4	U	1.1	U	0.24	U	0.004	U	0.29	U	0.29	U	0.0044	U
1,4-Dichlorobenzene	1.8	1.8	13	**0.0051**	**R**	0.0043	U	0.0047	U	0.0042	U	1.3	U	0.32	U	0.4	U	1.1	U	0.24	U	0.004	U	0.29	U	0.29	U	0.0044	U
Methyl tert butyl ether	0.93	0.93	100	0.0015	UR	0.0017	U	0.0019	U	0.0017	U	0.53	U	0.13	U	0.16	U	0.44	U	**0.0085**	**J**	0.0016	U	**0.0096**	**J**	0.11	U	0.0018	U
p/m-Xylene	N/A	N/A	N/A	**0.00096**	**JR**	0.0017	U	0.0019	U	0.0017	U	0.53	U	0.13	U	0.16	U	0.44	U	0.098	U	0.0016	U	**0.15**		0.11	U	0.0018	U
o-Xylene	N/A	N/A	N/A	0.0015	UR	0.0017	U	0.0019	U	0.0017	U	**0.22**	**J**	0.13	U	0.16	U	0.44	U	0.098	U	0.0016	U	**0.029**	**J**	0.11	U	0.0018	U
Xylene, mixed	1.6	0.26	100	**0.00096**	**JR**	0.0017	U	0.0019	U	0.0017	U	**0.22**	**J**	0.13	U	0.16	U	0.44	U	0.098	U	0.0016	U	**0.179**		0.11	U	0.0018	U
cis-1,2-Dichloroethene	0.25	0.25	100	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
Styrene	N/A	N/A	N/A	0.0015	UR	0.0017	U	0.0019	U	0.0017	U	0.53	U	0.13	U	0.16	U	0.44	U	0.098	U	0.0016	U	**0.026**	**J**	0.11	U	0.0018	U
Dichlorodifluoromethane	N/A	N/A	N/A	0.0074	UR	0.0086	U	0.0093	U	0.0084	U	2.6	U	0.64	U	0.8	U	2.2	U	0.49	U	0.008	U	0.59	U	0.57	U	0.0088	U
Acetone	0.05	0.05	100	**0.034**	**R**	0.0086	U	0.0093	U	0.052		2.6	U	0.64	U	0.8	U	2.2	U	0.49	U	0.008	U	0.59	U	0.57	U	**0.0084**	**J**
Carbon disulfide	2.7*	NL	NL	**0.0029**	**JR**	0.0086	U	0.0093	U	**0.0012**	**J**	2.6	U	0.64	U	0.8	U	2.2	U	0.49	U	0.008	U	0.59	U	0.57	U	**0.0021**	**J**
2-Butanone	0.12	0.12	100	0.0074	UR	0.0086	U	0.0093	U	0.0084	U	2.6	U	0.64	U	0.8	U	2.2	U	0.49	U	0.008	U	0.59	U	0.57	U	0.0088	U
4-Methyl-2-pentanone	1*	NL	NL	0.0074	UR	0.0086	U	0.0093	U	0.0084	U	2.6	U	0.64	U	0.8	U	2.2	U	0.49	U	0.008	U	0.59	U	0.57	U	0.0088	U
2-Hexanone	N/A	N/A	N/A	0.0074	UR	0.0086	U	0.0093	U	0.0084	U	2.6	U	0.64	U	0.8	U	2.2	U	0.49	U	0.008	U	0.59	U	0.57	U	0.0088	U
Bromochloromethane	N/A	N/A	N/A	0.0037	UR	0.0043	U	0.0047	U	0.0042	U	1.3	U	0.32	U	0.4	U	1.1	U	0.24	U	0.004	U	0.29	U	0.29	U	0.0044	U
1,2-Dibromoethane	N/A	N/A	N/A	0.003	UR	0.0035	U	0.0037	U	0.0034	U	1	U	0.26	U	0.32	U	0.88	U	0.2	U	0.0032	U	0.24	U	0.23	U	0.0035	U
n-Butylbenzene	NS	12	12	**0.005**	**R**	0.00086	U	0.00093	U	0.00084	U	0.26	U	0.064	U	0.08	U	**0.76**		**0.13**		0.0008	U	0.059	U	0.057	U	0.00088	U
sec-Butylbenzene	11	11	100	**0.051**	**R**	0.00086	U	0.00093	U	0.00084	U	**0.48**		**0.12**		0.08	U	**0.98**		**0.26**		0.0008	U	0.059	U	0.057	U	0.00088	U
1,2-Dibromo-3-chloropropane	N/A	N/A	N/A	0.0037	UR	0.0043	U	0.0047	U	0.0042	U	1.3	U	0.32	U	0.4	U	1.1	U	0.24	U	0.004	U	0.29	U	0.29	U	0.0044	U
Isopropylbenzene	2.3*	NL	NL	**0.0032**	R	0.00086	U	0.00093	U	**0.00019**	**J**	0.26	U	**0.13**		0.08	U	**0.57**		**0.054**		0.0008	U	0.059	U	0.057	U	0.00088	U
p-Isopropyltoluene	10*	NL	NL	0.00074	UR	0.00086	U	0.00093	U	0.00084	U	**2.3**		0.064	U	0.08	U	0.22	U	0.049	U	0.0008	U	0.059	U	0.057	U	0.00088	U
Naphthalene	12	12	100	**0.0039**	**R**	0.0043	U	0.0047	U	**0.00028**	**J**	27		**0.093**	**J**	**0.27**	**J**	**0.32**	**J**	0.24	U	**0.00041**	**J**	**0.38**		0.29	U	**0.0015**	**J**
n-Propylbenzene	3.9	3.9	100	0.00074	UR	0.00086	U	0.00093	U	**0.00019**	**J**	0.26	U	**0.22**		0.08	U	**1.5**		**0.14**		0.0008	U	0.059	U	0.057	U	0.00088	U
1,2,3-Trichlorobenzene	N/A	N/A	N/A	0.0037	UR	0.0043	U	0.0047	U	0.0042	U	1.3	U	0.32	U	0.4	U	1.1	U	0.24	U	0.004	U	0.29	U	0.29	U	0.0044	U
1,2,4-Trichlorobenzene	N/A	3.4	N/A	0.0037	UR	0.0043	U	0.0047	U	0.0042	U	1.3	U	0.32	U	0.4	U	1.1	U	0.24	U	0.004	U	0.29	U	0.29	U	0.0044	U
1,3,5-Trimethylbenzene	8.4	8.4	52	0.0037	UR	0.0043	U	0.0047	U	0.0042	U	14		**0.56**		0.4	U	**1.4**		**0.044**	**J**	0.004	U	**0.016**	**J**	0.29	U	0.0044	U
1,2,4-Trimethylbenzene	3.6	3.6	52	0.0037	UR	0.0043	U	0.0047	U	**0.00036**	**J**	33		**0.22**	**J**	0.4	U	**1.8**		**0.12**	**J**	0.004	U	**0.048**	**J**	0.29	U	0.0044	U
Methyl Acetate	N/A	N/A	N/A	0.015	UR	0.017	U	0.019	U	0.017	U	5.3	U	1.3	U	1.6	U	4.4	U	0.98	U	0.016	U	**0.78**	**J**	1.1	U	0.018	U
Cyclohexane	N/A	N/A	N/A	**0.0014**	**JR**	0.017	U	0.019	U	**0.00062**	**J**	**0.43**	**J**	1.3	U	1.6	U	4.4	U	0.98	U	0.016	U	**0.043**	**J**	1.1	U	0.018	U
1,4-Dioxane	0.1	0.1	13	0.03	UR	0.035	U	0.037	U	0.034	U	10	U	2.6	U	3.2	U	8.8	U	2	U	0.032	U	2.4	U	2.3	U	0.035	U
Freon-113	6*	NL	NL	0.015	UR	0.017	U	0.019	U	0.017	U	5.3	U	1.3	U	1.6	U	4.4	U	0.98	U	0.016	U	1.2	U	1.1	U	0.018	U
Methyl cyclohexane	N/A	N/A	N/A	**0.0028**	**JR**	0.0035	U	0.0037	U	**0.0011**	**J**	**4.7**		**1.6**		**0.13**	**J**	**14**		**1.1**		**0.0014**	**J**	**0.2**	**J**	0.23	U	**0.00057**	**J**
Total TICs	***N/A***	***N/A***	***N/A***	***1.11***	***JR***	***None detected***		***None detected***		***0.0349***	***J***	***217***	***J***	***36***	***J***	***2.42***	***J***	***187***	***J***	***27.1***	***J***	***0.0184***	***J***	***2.05***	***J***	***4.18***	***J***	***None detected***	
TOTAL VOCS	***N/A***	***N/A***	***N/A***	***0.12789***	***R***	***None detected***		***None detected***		***0.05672***		***82.431***		***2.943***		***0.40***		***22.25***		***1.8565***		***0.00205***		***2.1886***		***None detected***		***0.01276***	
TOTAL VOCS + TICs	***N/A***	***N/A***	***N/A***	***1.23789***	***R***	***None detected***		***None detected***		***0.09162***		***299.431***		***38.943***		***2.82***		***22.85***		***2.0205***		***0.02045***		***4.2386***		***4.18***		***0.01276***	

Notes:
VOCs analyzed via USEPA Method 8260.
Concentrations in milligrams per kilogram (mg/kg) or parts per million (ppm).
Bold font indicates the compound was detected above laboratory method detection limit.
Underlined indicates the concentration exceeds 6NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO).
Red font indicates the concentration exceeds the 6NYCRR Part 375-6.8(b) Unrestricted Use SCO.
Yellow highlight indicates the concentration exceeds the 6NYCRR Part 375-6.8(a) Restricted Residential Use SCO.
N/A indicates not applicable.
NS indicates not sampled.
U indicates that the analyte was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
R- Analytical results are from sample re-analysis
* Indicates no Part 375 SCO; CP-51 Supplemental SCOs for Protection of Groundwater was used.
TICs = tentatively identified compounds
Total VOCs includes all detected VOCs.
Total VOCs + TICs includes all detected VOCs and TICs.
Data not yet validated
*indicates no Part 375 value, corresponding CP-51 Supplemental Soil Cleanup Objective is listed.

Table 2B: Summary of Semi-Volatile Organic Compounds (SVOCs) in Soil (Page 1 of 2)
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC Site #C819021
LaBella Project No. 2172238

SAMPLE TYPE	6NYCRR - 375-6.8(b) Soil Cleanup - Protection of Groundwater (ppm)	6NYCRR- 375-6.8(a) Soil Cleanup - Unrestricted Use (ppm)	6NYCRR - 375-6.8(b) Soil Cleanup - Restricted Residential Use (ppm)	TEST PIT							SURFACE SOIL	
SAMPLE ID				RI-TP2 (7)	RI-TP3 (7)	TP-1 (5-7)	TP-2 (3-4)	TP-3 (8-8.6)	TP-4 (5-6)	TP-3 DUPLICATE	RI-SS01 (0-2")	RI-SS01 (2-24")
SAMPLE DATE				10/3/2017	10/2/2017	5/25/2017	5/25/2017	5/25/2017	5/25/2017	5/25/2017	10/13/2017	10/13/2017
SAMPLE DEPTH				7'	7'	5'-7'	3'-4'	8'-8.6'	5'-6'	8'-8.6'	0-2"	2-24"
Hexachlorobenzene	1.4*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.12 U	0.12 U
Bis(2-chloroethyl)ether	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.18 U	0.17 U
2-Chloronaphthalene	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
3,3'-Dichlorobenzidine	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
2,4-Dinitrotoluene	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
2,6-Dinitrotoluene	1*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
4-Chlorophenyl phenyl ether	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
4-Bromophenyl phenyl ether	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Bis(2-chloroisopropyl)ether	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.23 U	0.23 U
Bis(2-chloroethoxy)methane	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.21 U	0.21 U
Hexachlorobutadiene	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Hexachlorocyclopentadiene	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.56 U	0.55 U
Hexachloroethane	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.16 U	0.15 U
Isophorone	4.4*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.18 U	0.17 U
Naphthalene	12	12	100	NS	NS	0.0415 U	**0.549 J**	0.0392 U	0.0395 U	**0.0622**	**0.11 J**	**0.13 J**
Nitrobenzene	0.17*	N/A	15*	NS	NS	NS	NS	NS	NS	NS	0.18 U	0.17 U
NDPA/DPA	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.16 U	0.15 U
n-Nitrosodi-n-propylamine	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Bis(2-ethylhexyl)phthalate	435*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Butyl benzyl phthalate	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Di-n-butylphthalate	8.1*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Di-n-octylphthalate	120*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Diethyl phthalate	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Dimethyl phthalate	27*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Biphenyl	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.45 U	0.44 U
4-Chloroaniline	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
2-Nitroaniline	0.4*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
3-Nitroaniline	0.5*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
4-Nitroaniline	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Dibenzofuran	210	7	59	NS	NS	NS	NS	NS	NS	NS	**0.027 J**	**0.051 J**
2-Methylnaphthalene	36.4*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.23 U	0.11 J
1,2,4,5-Tetrachlorobenzene	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Acetophenone	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
2,4,6-Trichlorophenol	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.12 U	0.12 U
p-Chloro-m-cresol	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
2-Chlorophenol	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
2,4-Dichlorophenol	0.4*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.18 U	0.17 U
2,4-Dimethylphenol	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
2-Nitrophenol	0.3*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.42 U	0.42 U
4-Nitrophenol	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.27 U	0.27 U
2,4-Dinitrophenol	120*	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.94 U	0.92 U
4,6-Dinitro-o-cresol	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.51 U	0.5 U
Pentachlorophenol	0.8	0.8	6.7	NS	NS	NS	NS	NS	NS	NS	0.16 U	0.15 U
Phenol	0.33	0.33	100	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
2-Methylphenol	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
3-Methylphenol/4-Methylphenol	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.28 U	0.28 U
2,4,5-Trichlorophenol	N/A	100	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Carbazole	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	**0.28**	**0.11 J**
Atrazine	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.16 U	0.15 U
Benzaldehyde	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.26 U	0.25 U
Caprolactam	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
2,3,4,6-Tetrachlorophenol	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	0.2 U	0.19 U
Acenaphthene	98	20	100	**0.032 J**	**0.087 J**	0.0415 U	0.486 U	0.0392 U	0.0395 U	0.0403 U	**0.026 J**	**0.028 J**
Fluoranthene	1,000	100	100	**2.2**	**6.8**	**0.0928**	**3.300 J**	**0.0811**	**0.0573**	**0.293**	**4.6**	**1.6**
Benzo(a)anthracene	1	1	1	**1.6**	**4**	**0.0474**	**2.12 J**	**0.0569**	0.0395 U	**0.165**	**1.8**	**0.87**
Benzo(a)pyrene	22	1	1	**1.4**	**4.2**	0.0415 U	**2.200 J**	**0.0422**	0.0395 U	**0.132**	**2.2**	**1.2**
Benzo(b)fluoranthene	1.7	1	1	**1.7**	**5.1**	**0.0532**	**2.930 JV**	**0.0583**	**0.0834**	**0.175**	**3.3**	**1.5**
Benzo(k)fluoranthene	1.7	0.8	3.9	**0.64**	**1.9**	0.0415 U	**1.140 J**	0.0392 U	0.0395 U	**0.0644**	**1**	**0.52**
Chrysene	1	1	3.9	**1.4**	**3.8**	**0.0559**	**2.150 J**	**0.0476**	**0.121**	**0.142**	**2.4**	**0.99**
Acenaphthylene	107	100	100	**0.17**	**0.5**	0.0415 U	0.486 U	0.0392 U	0.0395 U	0.0403 U	**0.076 J**	**0.099 J**
Anthracene	1,000	100	100	**0.33**	**0.77**	0.0415 U	**0.691 J**	0.0392 U	0.0395 U	**0.0631**	**0.31**	**0.13**
Benzo(ghi)perylene	1,000	100	100	**0.64**	**2.1**	0.0415 U	**2.750 J**	0.0392 U	0.0395 U	**0.0898**	**1.9**	**0.93**
Fluorene	386	30	100	**0.074 J**	**0.27**	0.0415 U	0.486 U	0.0392 U	0.0395 U	**0.0409**	**0.049 J**	**0.04 J**
Phenanthrene	1,000	100	100	**0.74**	**3.1**	**0.0911**	**1.760 J**	0.0392 U	0.0395 U	**0.206**	**1.4**	**0.64**
Dibenzo(a,h)anthracene	1,000	0.33	0.33	**0.2**	**0.68**	0.0415 U	**0.568 J**	0.0392 U	0.0395 U	0.0403 U	**0.38**	**0.22**
Indeno(1,2,3-cd)pyrene	8.2	0.5	0.5	**0.71**	**2.8**	0.0415 U	**1.940 J**	0.0392 U	0.0395 U	**0.0767**	**1.8**	**0.93**
Pyrene	1,000	100	100	**2**	**5.6**	**0.106**	**3.180 J**	**0.0763**	**0.0631**	**0.254**	**3.9**	**1.4**
Total TICs	***N/A***	***N/A***	***N/A***	***NS***	***NS***	***NS***	***NS***	***NS***	***NS***	***NS***	***7.13 J***	***2.56 J***
Total SVOCs	***N/A***	***N/A***	***N/A***	***13.836***	***41.707 J***	***0.4464***	***25.278***	***0.3624***	***0.3248***	***1.7019***	***25.531***	***11.337***
Total SVOCs	***N/A***	***N/A***	***N/A***	***13.836***	***41.707***	***0.4464***	***25.278***	***0.3624***	***0.3248***	***1.7019***	***32.661***	***13.897***

Notes:
SVOCs analyzed via USEPA Method 8270.
Concentrations in milligrams per kilogram (mg/kg) or parts per million (ppm).
Bold font indicates the compound was detected above laboratory method detection limit.
Underlined indicates the concentration exceeds 6NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO) .
Red font indicates the concentration exceeds the 6NYCRR Part 375-6.8(b) Unrestricted Use SCO.
Yellow highlight indicates the concentration exceeds the 6NYCRR Part 375-6.8(a) Restricted Residential Use SCO.
N/A indicates not applicable.
NS indicates not sampled.
U indicates that the analyte was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
TICs = tentatively identified compounds
Total SVOCs includes all detected SVOCs.
Total SVOCs + TICs includes all detected SVOCs and TICs.
Data not yet validated
*indicates no Part 375 value, corresponding CP-51 Supplemental Soil Cleanup Objective is listed.

Table 2B: Summary of Semi-Volatile Organic Compounds (SVOCs) in Soil (Page 2 of 2)
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC Site #C819021
LaBella Project No. 2172238

SAMPLE TYPE	6NYCRR - 375-6.8(b) Soil Cleanup - Protection of Groundwater (ppm)	6NYCRR- 375-6.8(a) Soil Cleanup - Unrestricted Use (ppm)	6NYCRR - 375-6.8(b) Soil Cleanup - Restricted Residential Use (ppm)	SOIL BORING									
SAMPLE ID				RI-GP1 (10.5)	RI-GP3 (9)	RI-GP4 (0.25-2)	RI-GP5 (7)	RI-GP8 (8-9)	RI-GP8D (8-9)	RI-GP9 (9)	RI-GP10 (10-11)
SAMPLE DATE				10/3/2017	10/3/2017	10/4/2017	10/6/2017	10/10/2017	10/10/2017	10/10/2017	10/10/2017
SAMPLE DEPTH				10.5'	9'	0.25-2'	7'	8-9'	8-9'	9'	10-11'
Hexachlorobenzene	1.4*	N/A	N/A	0.11 U	NS	0.54 U	NS	0.11 U	0.11 U	NS	0.11 U
Bis(2-chloroethyl)ether	N/A	N/A	N/A	0.16 U	NS	0.81 U	NS	0.17 U	0.17 U	NS	0.16 U
2-Chloronaphthalene	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
3,3'-Dichlorobenzidine	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
2,4-Dinitrotoluene	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
2,6-Dinitrotoluene	1*	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
4-Chlorophenyl phenyl ether	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
4-Bromophenyl phenyl ether	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Bis(2-chloroisopropyl)ether	N/A	N/A	N/A	0.21 U	NS	1.1 U	NS	0.23 U	0.22 U	NS	0.22 U
Bis(2-chloroethoxy)methane	N/A	N/A	N/A	0.19 U	NS	0.98 U	NS	0.2 U	0.2 U	NS	0.19 U
Hexachlorobutadiene	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Hexachlorocyclopentadiene	N/A	N/A	N/A	0.51 U	NS	2.6 U	NS	0.54 U	0.53 U	NS	0.51 U
Hexachloroethane	N/A	N/A	N/A	0.14 U	NS	0.72 U	NS	0.15 U	0.15 U	NS	0.14 U
Isophorone	4.4*	N/A	N/A	0.16 U	NS	0.81 U	NS	0.17 U	0.17 U	NS	0.16 U
Naphthalene	12	12	100	0.18 U	NS	54	NS	0.19 U	0.19 U	NS	**0.15 J**
Nitrobenzene	0.17*	N/A	15*	0.16 U	NS	0.81 U	NS	0.17 U	0.17 U	NS	0.16 U
NDPA/DPA	N/A	N/A	N/A	0.14 U	NS	0.72 U	NS	0.15 U	0.15 U	NS	0.14 U
n-Nitrosodi-n-propylamine	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Bis(2-ethylhexyl)phthalate	435*	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Butyl benzyl phthalate	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Di-n-butylphthalate	8.1*	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Di-n-octylphthalate	120*	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Diethyl phthalate	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Dimethyl phthalate	27*	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Biphenyl	N/A	N/A	N/A	0.4 U	NS	**3.7**	NS	0.43 U	0.42 U	NS	0.41 U
4-Chloroaniline	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
2-Nitroaniline	0.4*	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
3-Nitroaniline	0.5*	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
4-Nitroaniline	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Dibenzofuran	210	7	59	0.18 U	NS	21	NS	0.19 U	0.19 U	NS	**0.021 J**
2-Methylnaphthalene	36.4*	N/A	N/A	0.21 U	NS	**12**	NS	0.23 U	0.22 U	NS	**0.038 J**
1,2,4,5-Tetrachlorobenzene	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Acetophenone	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
2,4,6-Trichlorophenol	N/A	N/A	N/A	0.11 U	NS	0.54 U	NS	0.11 U	0.11 U	NS	0.11 U
p-Chloro-m-cresol	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
2-Chlorophenol	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
2,4-Dichlorophenol	0.4*	N/A	N/A	0.16 U	NS	0.81 U	NS	0.17 U	0.17 U	NS	0.16 U
2,4-Dimethylphenol	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
2-Nitrophenol	0.3*	N/A	N/A	0.38 U	NS	2 U	NS	0.41 U	0.4 U	NS	0.39 U
4-Nitrophenol	N/A	N/A	N/A	0.25 U	NS	1.3 U	NS	0.26 U	0.26 U	NS	0.25 U
2,4-Dinitrophenol	120*	N/A	N/A	0.85 U	NS	4.3 U	NS	0.9 U	0.89 U	NS	0.86 U
4,6-Dinitro-o-cresol	N/A	N/A	N/A	0.46 U	NS	2.3 U	NS	0.49 U	0.48 U	NS	0.47 U
Pentachlorophenol	0.8	0.8	6.7	0.14 U	NS	0.72 U	NS	0.15 U	0.15 U	NS	0.14 U
Phenol	0.33	0.33	100	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	**0.069 J**
2-Methylphenol	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
3-Methylphenol/4-Methylphenol	N/A	N/A	N/A	0.25 U	NS	**0.29 J**	NS	0.27 U	0.27 U	NS	**0.067 J**
2,4,5-Trichlorophenol	N/A	100	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Carbazole	N/A	N/A	N/A	0.18 U	NS	**23**	NS	**0.068 J**	0.19 U	NS	**0.025 J**
Atrazine	N/A	N/A	N/A	0.14 U	NS	0.72 U	NS	0.15 U	0.15 U	NS	0.14 U
Benzaldehyde	N/A	N/A	N/A	0.23 U	NS	1.2 U	NS	0.25 U	0.25 U	NS	0.24 U
Caprolactam	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
2,3,4,6-Tetrachlorophenol	N/A	N/A	N/A	0.18 U	NS	0.9 U	NS	0.19 U	0.19 U	NS	0.18 U
Acenaphthene	98	20	100	0.14 U	0.14 U	**18**	**0.24**	0.15 U	0.15 U	**0.19**	0.14 U
Fluoranthene	1,000	100	100	**0.035 J**	0.11 U	160	**0.3**	**0.078 J**	**0.088 J**	**2.3**	**0.89**
Benzo(a)anthracene	1	1	1	0.11 U	0.11 U	64	**0.1 J**	**0.037 J**	**0.049 J**	**1**	**0.7**
Benzo(a)pyrene	22	1	1	0.14 U	0.14 U	52	**0.094 J**	0.15 U	0.15 U	**1**	**0.56**
Benzo(b)fluoranthene	1.7	1	1	0.11 U	0.11 U	65	**0.078 J**	0.11 U	**0.043 J**	1.2	**0.67**
Benzo(k)fluoranthene	1.7	0.8	3.9	0.11 U	0.11 U	17	0.12 U	0.11 U	0.11 U	**0.46**	**0.22**
Chrysene	1	1	3.9	**0.018 J**	0.11 U	56	**0.093 J**	**0.051 J**	**0.062 J**	**0.84**	**0.6**
Acenaphthylene	107	100	100	0.14 U	0.14 U	**0.58 J**	**0.033 J**	0.15 U	0.15 U	0.14 U	**0.094 J**
Anthracene	1,000	100	100	0.11 U	0.11 U	**53**	**0.23**	**0.072 J**	**0.066 J**	**0.66**	**0.14**
Benzo(ghi)perylene	1,000	100	100	0.14 U	0.14 U	**19**	**0.061 J**	0.15 U	**0.028 J**	**0.49**	**0.21**
Fluorene	386	30	100	0.18 U	0.18 U	**30**	**0.14 J**	0.19 U	**0.034 J**	**0.38**	**0.042 J**
Phenanthrene	1,000	100	100	**0.035 J**	0.11 U	180	**0.88**	**0.14**	**0.14**	**2**	**0.21**
Dibenzo(a,h)anthracene	1,000	0.33	0.33	0.11 U	0.11 U	6.1	0.12 U	0.11 U	0.11 U	**0.13**	**0.08 J**
Indeno(1,2,3-cd)pyrene	8.2	0.5	0.5	0.14 U	0.14 U	26	**0.052 J**	0.15 U	0.15 U	0.63	**0.23**
Pyrene	1,000	100	100	**0.026 J**	0.11 U	110	**0.44**	**0.13**	**0.14**	**1.6**	**0.86**
Total TICs	***N/A***	***N/A***	***N/A***	***None detected***	***NS***	***91.6 J***	***NS***	***15.5 J***	***14.7 J***	***NS***	***2.68 J***
Total SVOCs	***N/A***	***N/A***	***N/A***	***0.079 J***	***None detected***	***949.67***	***2.741***	***0.576***	***0.65***	***12.88***	***5.855***
Total SVOCs	***N/A***	***N/A***	***N/A***	***0.079***	***None detected***	***1041.27***	***2.741***	***16.076***	***15.35***	***12.88***	***8.535***

Notes:
SVOCs analyzed via USEPA Method 8270.
Concentrations in milligrams per kilogram (mg/kg) or parts per million (ppm).
Bold font indicates the compound was detected above laboratory method detection limit.
Underlined indicates the concentration exceeds 6NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO) .
Red font indicates the concentration exceeds the 6NYCRR Part 375-6.8(b) Unrestricted Use SCO.
Yellow highlight indicates the concentration exceeds the 6NYCRR Part 375-6.8(a) Restricted Residential Use SCO.
N/A indicates not applicable.
NS indicates not sampled.
U indicates that the analyte was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
TICs = tentatively identified compounds
Total SVOCs includes all detected SVOCs.
Total SVOCs + TICs includes all detected SVOCs and TICs.
Data not yet validated
*indicates no Part 375 value, corresponding CP-51 Supplemental Soil Cleanup Objective is listed.

Table 2C : Summary of Metals in Soil
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC BCP Site #C819021
LaBella Project No. 2172238

SAMPLE TYPE	6NYCRR - 375-6.8(b) Soil Cleanup - Protection of Groundwater (ppm)	6NYCRR- 375-6.8(a) Soil Cleanup - Unrestricted Use (ppm)	6NYCRR - 375-6.8(b) Soil Cleanup - Restricted Residential Use (ppm)	SURFACE SOIL		TEST PIT					SOIL BORING				
SAMPLE ID				RI-SS01 (0-2")	RI-SS01 (2-24")	TP-1 (5-7)	TP-2 (3-4)	TP-3 (8-8.6)	TP-4 (5-6)	TP-3 DUPLICATE	RI-GP1 (10.5)	RI-GP4 (0.25-2)	RI-GP8 (8-9)	RI-GP8D (8-9)	RI-GP10 (10-11)
SAMPLE DATE				10/13/2017	10/13/2017	5/25/2017	5/25/2017	5/25/2017	5/25/2017	5/25/2017	10/3/2017	10/4/2017	10/10/2017	10/10/2017	10/10/2017
SAMPLE DEPTH				0-2"	2-24"	5'-7'	3'-4'	8'-8.6'	5'-6'	8'-8.6'	10.5'	0.25-2'	8-9'	8-9'	10-11'
Aluminum, Total	N/A	N/A	N/A	**6,120**	**4,300**	**8570**	**5530**	**4850**	**7390**	**5790**	**2,330**	**162**	**2,500**	**2,060**	**2,460**
Antimony, Total	N/A	N/A	N/A	4.64 U	4.38 U	<2.51 U	<2.94 U	<2.38 U	<2.4 U	<2.44 U	4.38 U	4.36 U	4.53 U	4.32 U	4.28 U
Arsenic, Total	16	13	16	**3.53**	**4.45**	**5.2**	**12.4**	**7.82**	**5.25**	**6.3**	**2.85**	**1.01**	**2.03**	**1.5**	**1.76**
Barium, Total	820	350	400	**48.4**	**46**	**33**	**557**	**28.2**	**34.5**	**21.6**	**24.9**	**3.3**	**7.58**	**6.49**	**10.2**
Beryllium, Total	47	7.2	72	**0.269 J**	**0.219 J**	**0.521**	**0.44**	<0.238 U	**0.42**	<0.244 U	**0.053 J**	0.436 U	**0.073 J**	**0.052 J**	**0.034 J**
Cadmium, Total	7.5	2.5	4.3	**0.836 J**	**0.63 J**	<0.628 U	**4.27**	<0.595 U	<0.599 U	<0.61 U	**0.342 J**	**0.096 J**	**0.372 J**	**0.311 J**	**0.471 J**
Calcium, Total	N/A	N/A	N/A	**6,520**	**30,200**	**1200**	**61800**	**50300**	**971**	**82100**	**65,300**	**286,000**	**48,700**	**42,100**	**124,000**
Chromium, Total	NS	30	180	**8.75**	**6.22**	**11.9**	**29**	**7.34**	**9.38**	**7.97**	**4.14**	**1.59**	**4.68**	**4.82**	**4.51**
Cobalt, Total	N/A	N/A	N/A	**6.59**	**3.29**	**8.18**	**4.44**	**4.94**	**9.77**	**3.21**	**2.52**	**0.523 J**	**2.72**	**2.34**	**2.43**
Copper, Total	1,720	50	270	**14.5**	**20.8**	**27.8**	**356**	**15.9**	**22.8**	**9.27**	**8**	**2.2**	**12.7**	**10.4**	**12.9**
Iron, Total	N/A	N/A	N/A	**11,700**	**9,300**	**18400**	**16100**	**14300**	**16600**	**12100**	**6,430**	**1,420**	**6,110**	**5,250**	**8,460**
Lead, Total	450	63	400	**24.4**	**36.2**	**19.5**	**1720**	**7.71**	**11.1**	**5.86**	**3.34 J**	**1.66 J**	**5.73**	**4.58**	**7.54**
Magnesium, Total	N/A	N/A	N/A	**3,210**	**6,270**	**2390**	**12800**	**17300**	**2230**	**31500**	**13,900**	**4,560**	**10,000**	**8,560**	**25,400**
Manganese, Total	2,000	1,600	2,000	**621**	**256**	**172**	**190**	**238**	**598**	**240**	**197**	**89.5**	**318**	**233**	**258**
Mercury, Total	0.73	0.18	0.81	**0.03 J**	**0.06 J**	**0.246**	**0.262**	<0.0238 U	<0.024 U	<0.0244 U	**0.02 J**	0.07 U	0.07 U	0.07 U	**0.067 J**
Nickel, Total	130	30	310	**10.1**	**7.4**	**22**	**17.1**	**12.8**	**27.1**	**7.88**	**5.84**	**2.63**	**8.23**	**6.67**	**6.89**
Potassium, Total	N/A	N/A	N/A	**623**	**320**	**1630**	**984**	**1460**	**1420**	**2290**	**491**	**141 J**	**313**	**256**	**454**
Selenium, Total	4	3.9	180	1.86 U	1.75 U	<2.51 U	<2.94 U	<2.38 U	<2.4 U	<2.44 U	**0.456 J**	1.74 U	1.81 U	**0.294 J**	**1.24 J**
Silver, Total	8.3	2	180	0.929 U	0.875 U	<1.26 U	<1.47 U	<1.19 U	<1.2 U	<1.22 U	0.876 U	0.872 U	0.906 U	0.864 U	0.857 U
Sodium, Total	N/A	N/A	N/A	**84.9 J**	**274**	<126 U	**151**	**159**	<120 U	**203**	**119 J**	**106 J**	**108 J**	**107 J**	**136 J**
Thallium, Total	N/A	N/A	N/A	1.86 U	1.75 U	<2.51 U	<2.94 U	<2.38 U	<2.4 U	<2.44 U	1.75 U	1.74 U	1.81 U	1.73 U	1.71 U
Vanadium, Total	N/A	N/A	N/A	**14.7**	**10.5**	**20.3**	**14.1**	**12**	**14.9**	**15**	**8.65**	**6.47**	**6.31**	**5.76**	**5.97**
Zinc, Total	2,480	109	10,000	**113**	**59**	**78.8**	**1150**	**60.2**	**56.9**	**39.7**	**15.4**	**3.13 J**	**26.6**	**22**	**28.5**
Cyanide, Total	40	27	27	1.1 U	1.1 U	NA	NA	NA	NA	NA	1.1 U	1.1 U	1.1 U	1.1 U	1 U

Notes:
Metals analyzed via USEPA Method 6010/7470. Cyanide analyzed via USEPA Method 9012.
Concentrations in milligrams per kilogram (mg/kg) or parts per million (ppm).
Bold font indicates the compound was detected above laboratory method detection limit.
Underlined indicates the concentration exceeds 6NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO).
Red font indicates the concentration exceeds the 6NYCRR Part 375-6.8(b) Unrestricted Use SCO.
Yellow highlight indicates the concentration exceeds the 6NYCRR Part 375-6.8(a) Restricted Residential Use SCO.
N/A indicates not applicable.
U indicates that the analyte was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
Data not yet validated

Table 2D : Summary of Polychlorinated Biphenyls (PCBs) in Soil
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC BCP Site #C819021
LaBella Project No. 2172238

SAMPLE TYPE	6NYCRR - 375-6.8(b) Soil Cleanup - Protection of Groundwater (ppm)	6NYCRR- 375-6.8(a) Soil Cleanup - Unrestricted Use (ppm)	6NYCRR - 375-6.8(b) Soil Cleanup - Restricted Residential Use (ppm)	SURFACE SOIL		TEST PIT					SOIL BORING							
SAMPLE ID				RI-SS01 (0-2")	RI-SS01 (2-24")	TP-1 (5-7)	TP-2 (3-4)	TP-3 (8-8.6)	TP-4 (5-6)	TP-3 DUPLICATE	RI-GP1 (10.5)	RI-GP2 (8.5)	RI-GP4 (0.25-2)	RI-GP8 (8-9)	RI-GP8D (8-9)	RI-GP10 (1-2)	RI-GP10 (10-11)	RI-GP13 (10-12)
SAMPLE DATE				10/13/2017	10/13/2017	5/25/2017	5/25/2017	5/25/2017	5/25/2017	5/25/2017	10/3/2017	10/3/2017	10/4/2017	10/10/2017	10/10/2017	10/10/2017	10/10/2017	10/10/2017
SAMPLE DEPTH				0-2"	2-24"	5'-7'	3'-4'	8'-8.6'	5'-6'	8'-8.6'	10.5'	8.5'	0.25-2'	8-9'	8-9'	1-2'	10-11'	10-12'
Aroclor 1016	N/A	N/A	N/A	0.0382 U	0.0378 U	<0.0641 U	<0.025 U	<0.0202 U	<0.0204 U	<0.0207 U	0.035 U	0.0364 U	0.0356 U	0.038 U	0.0369 U	0.0419 U	0.0364 U	0.039 U
Aroclor 1221	N/A	N/A	N/A	0.0382 U	0.0378 U	<0.0642 U	<0.025 U	<0.0202 U	<0.0204 U	<0.0207 U	0.035 U	0.0364 U	0.0356 U	0.038 U	0.0369 U	0.0419 U	0.0364 U	0.039 U
Aroclor 1232	N/A	N/A	N/A	0.0382 U	0.0378 U	<0.0643 U	<0.025 U	<0.0202 U	<0.0204 U	<0.0207 U	0.035 U	0.0364 U	0.0356 U	0.038 U	0.0369 U	0.0419 U	0.0364 U	0.039 U
Aroclor 1242	N/A	N/A	N/A	0.0382 U	0.0378 U	<0.0644 U	<0.025 U	<0.0202 U	<0.0204 U	<0.0207 U	0.035 U	0.0364 U	0.0356 U	0.038 U	0.0369 U	0.0419 U	0.0364 U	0.039 U
Aroclor 1248	N/A	N/A	N/A	0.0382 U	**0.046**	<0.0645 U	<0.025 U	<0.0202 U	<0.0204 U	<0.0207 U	0.035 U	0.0364 U	0.0356 U	0.038 U	0.0369 U	**0.0905**	**0.121**	0.039 U
Aroclor 1254	N/A	N/A	N/A	0.0382 U	**0.0417**	<0.0646 U	<0.025 U	<0.0202 U	<0.0204 U	<0.0207 U	0.035 U	0.0364 U	0.0356 U	0.038 U	0.0369 U	**0.0571**	**0.111**	0.039 U
Aroclor 1260	N/A	N/A	N/A	0.0382 U	**0.0158** J	<0.0647 U	<0.025 U	<0.0202 U	<0.0204 U	<0.0207 U	**0.00389** J	0.0364 U	**0.009** J	0.038 U	0.0369 U	0.0419 U	0.0364 U	0.039 U
Aroclor 1262	N/A	N/A	N/A	0.0382 U	0.0378 U	<0.0648 U	<0.025 U	<0.0202 U	<0.0204 U	<0.0207 U	0.035 U	0.0364 U	0.0356 U	0.038 U	0.0369 U	0.0419 U	0.0364 U	0.039 U
Aroclor 1268	N/A	N/A	N/A	0.0382 U	0.0378 U	<0.0649 U	<0.025 U	<0.0202 U	<0.0204 U	<0.0207 U	0.035 U	0.0364 U	0.0356 U	0.038 U	0.0369 U	0.0419 U	0.0364 U	0.039 U
PCBs, Total	3.2	0.1	1	None detected	0.1035 J	None detected	None detected	None detected	None detected	None detected	**0.00389** J	None detected	**0.009** J	None detected	None detected	0.148	0.232	None detected

Notes:
PCBs analyzed via USEPA Method 8082.
Concentrations in milligrams per kilogram (mg/kg) or parts per million (ppm).
Bold font indicates the compound was detected above laboratory method detection limit.
Underlined indicates the concentration exceeds 6NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO).
Red font indicates the concentration exceeds the 6NYCRR Part 375-6.8(b) Unrestricted Use SCO.
Yellow highlight indicates the concentration exceeds the 6NYCRR Part 375-6.8(a) Restricted Residential Use SCO.
N/A indicates not applicable
U indicates that the analyte was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
Data not yet validated

Table 2E : Summary of Pesticides in Soil
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC BCP Site #C819021
LaBella Project No. 2172238

SAMPLE TYPE	6NYCRR - 375-6.8(b) Soil Cleanup - Protection of Groundwater (ppm)	6NYCRR- 375-6.8(a) Soil Cleanup - Unrestricted Use (ppm)	6NYCRR - 375-6.8(b) Soil Cleanup - Restricted Residential Use (ppm)	SURFACE SOIL				SOIL BORING											
SAMPLE ID				RI-SS01 (0-2")		RI-SS01 (2-24")		RI-GP1 (10.5)		RI-GP4 (0.25-2)		RI-GP8 (8-9)		RI-GP8D (8-9)		RI-GP10 (10-11)	
SAMPLE DATE				10/13/2017		10/13/2017		10/3/2017		10/4/2017		10/10/2017		10/10/2017		10/10/2017	
SAMPLE DEPTH				0-2"		2-24"		10.5'		0.25-2'		8-9'		8-9'		10-11'	
Delta-BHC	0.25	0.04	100	0.00187	U	0.00179	U	0.00167	U	0.00171	U	0.00183	U	0.00178	U	0.00172	U
Lindane	0.1	0.1	1.3	0.000779	U	0.000744	U	0.000696	U	0.000712	U	0.000763	U	0.000743	U	0.000717	U
Alpha-BHC	0.02	0.02	0.48	0.000779	U	0.000744	U	0.000696	U	0.000712	U	0.000763	U	0.000743	U	0.000717	U
Beta-BHC	0.09	0.036	0.36	0.00187	U	0.00179	U	0.00167	U	0.00171	U	0.00183	U	0.00178	U	0.00172	U
Heptachlor	0.38	0.042	2.1	0.000934	U	0.000893	U	0.000836	U	0.000854	U	0.000916	U	0.000891	U	0.000861	U
Aldrin	0.19	0.005	0.097	0.00187	U	0.00179	U	0.00167	U	0.00171	U	0.00183	U	0.00178	U	0.00172	U
Heptachlor epoxide	0.002	N/A	N/A	0.0035	U	0.00335	U	0.00313	U	0.0032	U	0.00343	U	0.00334	U	0.00323	U
Endrin	0.06	0.014	11	**0.00142**		0.000744	U	0.000696	U	0.000712	U	0.000763	U	0.000743	U	**0.000816**	PI
Endrin aldehyde	N/A	N/A	N/A	0.00234	U	0.00223	U	0.00209	U	0.00214	U	0.00229	U	0.00223	U	0.00215	U
Endrin ketone	N/A	N/A	N/A	0.00187	U	0.00179	U	0.00167	U	0.00171	U	0.00183	U	0.00178	U	0.00172	U
Dieldrin	0.1	0.005	0.2	0.00117	U	0.00112	U	0.00104	U	0.00107	U	0.00114	U	0.00111	U	0.00108	U
4,4'-DDE	17	0.0033	8.9	**0.000819**	J	0.00179	U	0.00167	U	0.00171	U	0.00183	U	0.00178	U	0.00172	U
4,4'-DDD	14	0.0033	13	0.00187	U	0.00179	U	0.00167	U	0.00171	U	0.00183	U	0.00178	U	0.00172	U
4,4'-DDT	136	0.0033	7.9	0.0035	U	**0.00518**		0.00313	U	**0.00624**	PI	0.00343	U	0.00334	U	**0.00216**	JPI
Endosulfan I	102	2.4	24	0.00187	U	0.00179	U	0.00167	U	**0.000977**	JPI	0.00183	U	0.00178	U	0.00172	U
Endosulfan II	102	2.4	24	**0.00169**	J	0.00179	U	0.00167	U	**0.00178**	PI	0.00183	U	0.00178	U	0.00172	U
Endosulfan sulfate	1,000	2.4	24	0.000779	U	0.000744	U	0.000696	U	0.000712	U	0.000763	U	0.000743	U	0.000717	U
Methoxychlor	900	N/A	N/A	0.0035	U	0.00335	U	0.00313	U	0.0032	U	0.00343	U	0.00334	U	0.00323	U
Toxaphene	N/A	N/A	N/A	0.035	U	0.0335	U	0.0313	U	0.032	U	0.0343	U	0.0334	U	0.0323	U
cis-Chlordane	N/A	N/A	N/A	0.00234	U	0.00223	U	0.00209	U	0.00214	U	0.00229	U	0.00223	U	0.00215	U
trans-Chlordane	N/A	N/A	N/A	0.00234	U	0.00223	U	0.00209	U	0.00214	U	0.00229	U	0.00223	U	0.00215	U
Chlordane	2.9	0.094	4.2	0.0152	U	0.0145	U	0.0136	U	0.0139	U	0.0149	U	0.0145	U	0.014	U

Notes:
Pesticides analyzed via USEPA Method 8081.
Concentrations in milligrams per kilogram (mg/kg) or parts per million (ppm).
Bold font indicates the compound was detected above laboratory method detection limit.
Underlined indicates the concentration exceeds 6NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO).
Red font indicates the concentration exceeds the 6NYCRR Part 375-6.8(b) Unrestricted Use SCO.
Yellow highlight indicates the concentration exceeds the 6NYCRR Part 375-6.8(a) Restricted Residential Use SCO.
N/A indicates not applicable.
U indicates that the analyte was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
I indicates lower value for the two columns has been reported due to obvious interference.
P indicates relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.
Data not yet validated

Table 3A : Summary of Volatile Organic Compounds (VOCs) in Groundwater
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC BCP Site #C819021
LaBella Project No. 2172238

SAMPLE ID	NYSDEC Part 703 Class GA Groundwater Quality Standards (ppb)	RI-MW1	RI-MW2	RI-MW3	RI-MW4	RI-MW5	RI-MW6	RI-TPMW1R	RI-TPMW1RD	RI-TPMW3R	RI-TPMW4R	TRIP BLANK
SAMPLE DATE		10/27/2017	10/27/2017	10/27/2017	10/26/2017	10/26/2017	10/30/2017	10/27/2017	10/27/2017	10/30/2017	10/30/2017	10/30/2017
SCREENED INTERVAL		17.9-7.9	15.5-5.5	15.85-5.85	17-7	15.8-5.8	16.14-6.14	15.03-5.03	15.03-5.03	15.92-5.92	16-6	NA
1,1,1-Trichloroethane	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
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
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
1,1-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
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
1,2,3-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
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
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
1,2-Dibromoethane	0.0006	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
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
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
1,3-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
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
1,4-Dioxane	NL	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
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
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
4-Methyl-2-pentanone	NL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	50*	5 U	5 U	5 U	5 U	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	**0.4** J	0.5 U	0.5 U
Bromochloromethane	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
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
Bromoform	50*	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
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
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
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
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
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
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
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
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
Cyclohexane	NL	10 U	10 U	10 U	10 U	10 U	**0.43** J	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	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
Dichlorodifluoromethane	5	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
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
Isopropylbenzene	5	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	**4.7**	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
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
Methyl cyclohexane	NL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**0.45** J	10 U
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
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
o-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	2.5 U	2.5 U	2.5 U
p/m-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	2.5 U	2.5 U	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
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
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
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
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
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
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
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
TICs	***N/A***	***None detected***	***None detected***	***None detected***	***None detected***	***None detected***	***169*** J	***None detected***	***None detected***	***None detected***	***None detected***	***None detected***
Total VOCs	***N/A***	***None detected***	***None detected***	***None detected***	***None detected***	***None detected***	***5.13***	***None detected***	***None detected***	***0.4***	***0.45***	***None detected***
Total VOCs + TICs	***N/A***	***None detected***	***None detected***	***None detected***	***None detected***	***None detected***	***174.13***	***None detected***	***None detected***	***0.4***	***0.45***	***None detected***

Legend:
VOCs analyzed via USEPA Method 8260.
Concentrations in micrograms per liter (ug/L) or parts per billion (ppb).
Bold font indicates the compound was detected above laboratory method detection limit.
Yellow highlight indicates that the compound exceeds NYCRR Part 703 Groundwater Quality Standards.
N/A - Not Applicable
NS indicates not sampled.
U indicates that the analyte was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
TICs = tentatively identified compounds
Total VOCs includes all detected VOCs.
Total VOCs + TICs includes all detected VOCs and TICs.
Data not yet validated
* indicates there is no water quality standard for the compound, the guidance value is listed.
"D" suffix after the sample ID indicates a duplicate sample.

Table 3B : Summary of Semi-Volatile Organic Compounds (SVOCs) in Groundwater
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC BCP Site #C819021
LaBella Project No. 2172238

SAMPLE ID	NYSDEC Part 703 Class GA Groundwater Quality Standards (ppb)	RI-MW1		RI-MW2		RI-MW3		RI-MW4		RI-MW5		RI-MW6		RI-TPMW1R		RI-TPMW1RD		RI-TPMW3R		RI-TPMW4R	
SAMPLE DATE		10/27/2017		10/27/2017		10/27/2017		10/26/2017		10/26/2017		10/30/2017		10/27/2017		10/27/2017		10/30/2017		10/30/2017	
SCREENED INTERVAL		17.9-7.9		15.5-5.5		15.85-5.85		17-7		15.8-5.8		16.14-6.14		15.03-5.03		15.03-5.03		15.92-5.92		16-6	
1,2,4,5-Tetrachlorobenzene	10*	10	U	NS		10	U	NS		NS		10	U	NS		NS		NS		NS	
2,3,4,6-Tetrachlorophenol	N/A	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
2,4,5-Trichlorophenol	1	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
2,4,6-Trichlorophenol	1	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
2,4-Dichlorophenol	5	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
2,4-Dimethylphenol	1	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
2,4-Dinitrophenol	10*	20	U	NS		20	U	NS		NS		20	U	NS		NS		NS		NS	
2,4-Dinitrotoluene	5	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
2,6-Dinitrotoluene	5	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
2-Chloronaphthalene	10*	0.2	U	NS		0.2	U	NS		NS		**0.2**		NS		NS		NS		NS	
2-Chlorophenol	N/A	2	U	NS		2	U	NS		NS		2	U	NS		NS		NS		NS	
2-Methylnaphthalene	N/A	0.1	U	NS		**0.27**		NS		NS		**0.09**	**J**	NS		NS		NS		NS	
2-Nitroaniline	5	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
2-Nitrophenol	1	10	U	NS		10	U	NS		NS		10	U	NS		NS		NS		NS	
3,3'-Dichlorobenzidine	N/A	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
3-Methylphenol/4-Methylphenol	1	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
3-Nitroaniline	5	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
4,6-Dinitro-o-cresol	N/A	10	U	NS		10	U	NS		NS		10	U	NS		NS		NS		NS	
4-Bromophenyl phenyl ether	N/A	2	U	NS		2	U	NS		NS		2	U	NS		NS		NS		NS	
4-Chloroaniline	5	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
4-Chlorophenyl phenyl ether	N/A	2	U	NS		2	U	NS		NS		2	U	NS		NS		NS		NS	
4-Nitroaniline	5	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
4-Nitrophenol	N/A	10	U	NS		10	U	NS		NS		10	U	NS		NS		NS		NS	
Acenaphthene	20*	**0.10**	**J**	0.1	U	**0.55**		0.1	U	**0.05**	**J**	**1**		**0.06**	**J**	**0.05**	**J**	**1.1**		**0.19**	
Acenaphthylene	N/A	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	**0.26**		0.1	U	0.1	U	**0.21**		0.1	U
Acetophenone	N/A	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
Anthracene	50*	**0.08**	**J**	ND	U	**0.56**		0.1	U	**0.05**	**J**	**0.47**		0.1	U	0.1	U	0.1	U	0.1	U
Atrazine	7.5	10	U	NS		10	U	NS		NS		10	U	NS		NS		NS		NS	
Benzaldehyde	N/A	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
Benzo(a)anthracene	0.002*	***0.05***	**J**	***0.1***		***0.26***		***0.05***	**J**	***0.03***	**J**	***0.19***		0.1	U	0.1	U	***0.03***	**J**	***0.06***	**J**
Benzo(a)pyrene	Not Detectable	0.1	U	**0.14**		**0.19**		0.1	U	0.1	U	**0.21**		0.1	U	**0.07**	**J**	0.1	U	**0.11**	
Benzo(b)fluoranthene	0.002*	***0.04***	**J**	***0.11***		***0.16***		***0.05***	**J**	***0.02***	**J**	***0.16***		0.1	U	0.1	U	***0.03***	**J**	***0.04***	**J**
Benzo(ghi)perylene	N/A	0.1	U	**0.08**	**J**	**0.09**	**J**	0.1	U	0.1	U	**0.11**		0.1	U	0.1	U	0.1	U	**0.05**	J
Benzo(k)fluoranthene	0.002*	0.1	U	***0.05***	**J**	***0.07***	**J**	0.1	U	0.1	U	***0.06***	**J**	0.1	U	0.1	U	0.1	U	0.1	U
Biphenyl	N/A	2	U	NS		2	U	NS		NS		2	U	NS		NS		NS		NS	
Bis(2-chloroethoxy)methane	N/A	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
Bis(2-chloroethyl)ether	N/A	2	U	NS		2	U	NS		NS		2	U	NS		NS		NS		NS	
Bis(2-chloroisopropyl)ether	N/A	2	U	NS		2	U	NS		NS		2	U	NS		NS		NS		NS	
Bis(2-ethylhexyl)phthalate	5	3	U	NS		3	U	NS		NS		3	U	NS		NS		NS		NS	
Butyl benzyl phthalate	N/A	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
Caprolactam	N/A	10	U	NS		10	U	NS		NS		10	U	NS		NS		NS		NS	
Carbazole	N/A	2	U	NS		2	U	NS		NS		2	U	NS		NS		NS		NS	
Chrysene	0.002*	***0.04***	**J**	***0.1***	**J**	***0.2***		***0.04***	**J**	0.1	U	***0.19***		0.1	U	0.1	U	0.1	U	***0.05***	**J**
Dibenzo(a,h)anthracene	N/A	0.1	U	**0.07**	**J**	**0.06**	**J**	0.1	U	0.1	U	**0.07**	**J**	0.1	U	**0.05**	**J**	0.1	U	**0.05**	**J**
Dibenzofuran	N/A	2	U	NS		2	U	NS		NS		2	U	NS		NS		NS		NS	
Diethyl phthalate	50*	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
Dimethyl phthalate	50*	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
Di-n-butylphthalate	50	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
Di-n-octylphthalate	50*	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
Fluoranthene	50*	**0.12**		**0.19**		**0.99**		**0.12**		**0.09**	**J**	**0.44**		0.1	U	0.1	U	**0.05**	**J**	**0.09**	**J**
Fluorene	50*	**0.07**	**J**	0.1	U	**0.68**		**0.04**	**J**	**0.07**	**J**	**1**		**0.1**	**J**	0.1	U	0.1	U	0.1	U
Hexachlorobenzene	0.04	0.8	U	NS		0.8	U	NS		NS		0.8		NS		NS		NS		NS	
Hexachlorobutadiene	N/A	0.5	U	NS		0.5	U	NS		NS		0.5		NS		NS		NS		NS	
Hexachlorocyclopentadiene	5	20	U	NS		20	U	NS		NS		20	U	NS		NS		NS		NS	
Hexachloroethane	5	0.8	U	NS		0.8	U	NS		NS		0.8		NS		NS		NS		NS	
Indeno(1,2,3-cd)pyrene	0.002*	0.1	U	***0.14***		***0.15***		0.1	U	0.1	U	***0.16***		0.1	U	***0.08***	**J**	0.1	U	***0.1***	**J**
Isophorone	50*	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
Naphthalene	10*	**0.18**		NS		**0.97**		NS		NS		**1.2**		NS		NS		NS		NS	
NDPA/DPA	NA	2	U	NS		2	U	NS		NS		2	U	NS		NS		NS		NS	
Nitrobenzene	0.4	2	U	NS		2	U	NS		NS		2	U	NS		NS		NS		NS	
n-Nitrosodi-n-propylamine	N/A	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
p-Chloro-m-cresol	N/A	2	U	NS		2	U	NS		NS		2	U	NS		NS		NS		NS	
Pentachlorophenol	1	0.8	U	NS		0.8	U	NS		NS		0.8		NS		NS		NS		NS	
Phenanthrene	50*	**0.19**		**0.12**		**1.1**		**0.09**	**J**	**0.1**	U	**0.94**		**0.05**	**J**	**0.04**	**J**	**0.05**	**J**	**0.04**	**J**
Phenol	1	5	U	NS		5	U	NS		NS		5	U	NS		NS		NS		NS	
Pyrene	50*	**0.11**		**0.16**		**0.72**		**0.13**		**0.07**	**J**	**0.59**		0.1	U	0.1	U	**0.09**	**J**	**0.26**	
Total TICs	***N/A***	***None Detected***		***NS***		***8.88***	***J***	***NS***		***NS***		***203***	***J***	***NS***		***NS***		***NS***		***NS***	
Total SVOCs	***N/A***	***0.98***		***1.26***		***7.02***		***0.52***		***0.48***		***6.34***		***0.16***		***0.29***		***1.56***		***1.04***	
Total SVOCs + TICs	***N/A***	***0.98***		***1.26***		***15.9***		***0.52***		***0.48***		***209.34***		***0.16***		***0.29***		***1.56***		***1.04***	

Legend:
SVOCs analyzed via USEPA Method 8270.
Concentrations in micrograms per liter (ug/L) or parts per billion (ppb).
Bold font indicates the compound was detected above laboratory method detection limit.
Yellow highlight indicates that the compound exceeds NYCRR Part 703 Groundwater Quality Standards.
N/A - Not Applicable
NS indicates not sampled.
U indicates that the analyte was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
TICs = tentatively identified compounds
Total SVOCs includes all detected SVOCs.
Total SVOCs + TICs includes all detected SVOCs and TICs.
Data not yet validated
* indicates there is no water quality standard for the compound, the guidance value is listed.
Italicized font indicates that the compound exceeds the Guidance Value.
"D" suffix after the sample ID indicates a duplicate sample.

Table 3C : Summary of Metals in Groundwater
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC BCP Site #C819021
LaBella Project No. 2172238

SAMPLE ID	NYSDEC Part 703 Class GA Groundwater Quality Standards (ppb)	RI-MW1		RI-MW3		RI-MW6	
SAMPLE DATE		10/27/2017		10/27/2017		10/30/2017	
SCREENED INTERVAL		17.9-7.9		15.85-5.85		16.14-6.14	
Aluminum, Total	100*	**93**		***1320***		***678***	
Antimony, Total	3	**0.74**	**J**	4	U	4	U
Arsenic, Total	25	**0.62**		**1.32**		**1.19**	
Barium, Total	1000	**126.2**		**331.6**		**103.7**	
Beryllium, Total	3*	0.5	U	**0.11**	**J**	0.5	U
Cadmium, Total	5	0.2	U	**0.06**	**J**	**0.06**	**J**
Calcium, Total	N/A	**153,000**		**157,000**		**146,000**	
Chromium, Total	50	**0.47**	**J**	**4.3**		**1.86**	
Cobalt, Total	N/A	**1.25**		**1.2**		**0.95**	
Copper, Total	200	**0.89**	**J**	**4.2**		**3.91**	
Iron, Total	300	**367**		**6,000**		**13,500**	
Lead, Total	25	**0.54**	**J**	**3.26**		**2.57**	
Magnesium, Total	35,000*	***38,700***		**31,200**		**16,800**	
Manganese, Total	300	**301.1**		**300.6**		**1,327**	
Mercury, Total	0.7	0.20	U	0.20	U	0.20	U
Nickel, Total	100	**1.91**	**J**	**3.86**		**3.01**	
Potassium, Total	N/A	**14,900**		**7,160**		**9,050**	
Selenium, Total	10	**9.48**		5	U	5	U
Silver, Total	50	0.40	U	0.40	U	0.40	U
Sodium, Total	20,000	**63,700**		**110,000**		**144,000**	
Thallium, Total	0.5*	0.50	U	0.50	U	0.50	U
Vanadium, Total	N/A	5	U	**3.19**	**J**	**1.91**	**J**
Zinc, Total	2,000*	**3.68**	**J**	**14.5**		**12.16**	
Cyanide, Total	200	5	U	**3**	**J**	**6**	

Legend:
Metals analyzed via USEPA Method 6010/7470. Cyanide analyzed via USEPA Method 9012.
Concentrations in micrograms per liter (ug/L) or parts per billion (ppb).
Bold font indicates the compound was detected above laboratory method detection limit.
Yellow highlight indicates that the compound exceeds NYCRR Part 703 Groundwater Quality Standards.
N/A - Not Applicable
U indicates that the analyte was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
* indicates there is no water quality standard for the compound, the guidance value is listed.
Italicized font indicates that the compound exceeds the Guidance Value.
Data not yet validated
"D" suffix after the sample ID indicates a duplicate sample.

Table 3D : Summary of Polychlorinated Biphenyls (PCBs) in Groundwater
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC BCP Site #C819021
LaBella Project No. 2172238

SAMPLE ID	NYSDEC Part 703 Class GA Groundwater Quality Standards (ppb)	RI-MW1		RI-MW3		RI-MW6	
SAMPLE DATE		10/27/2017		10/27/2017		10/30/2017	
SCREENED INTERVAL		17.9-7.9		15.85-5.85		16.14-6.14	
Aroclor 1016	N/A	0.083	U	0.083	U	0.083	U
Aroclor 1221	N/A	0.083	U	0.083	U	0.083	U
Aroclor 1232	N/A	0.083	U	0.083	U	0.083	U
Aroclor 1242	N/A	0.083	U	0.083	U	0.083	U
Aroclor 1248	N/A	0.083	U	0.083	U	0.083	U
Aroclor 1254	N/A	0.083	U	0.083	U	0.083	U
Aroclor 1260	N/A	0.083	U	0.083	U	0.083	U
Aroclor 1262	N/A	0.083	U	0.083	U	0.083	U
Aroclor 1268	N/A	0.083	U	0.083	U	0.083	U
PCBs, Total	0.09	None detected		None detected		None detected	

Legend:
PCBs analyzed via USEPA Method 8082.
Concentrations in micrograms per liter (ug/L) or parts per billion (ppb).
Bold font indicates the compound was detected above laboratory method detection limit.
Yellow highlight indicates that the compound exceeds NYCRR Part 703 Groundwater Quality Standards.
N/A - Not Applicable
U indicates that the analyte was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
Data not yet validated
"D" suffix after the sample ID indicates a duplicate sample.

Table 3E : Summary of Pesticides in Groundwater
Interim Site Management Plan
Ellicott Station, 40-52 Ellicott Street, Batavia, New York
NYSDEC BCP Site #C819021
LaBella Project No. 2172238

SAMPLE ID	NYSDEC Part 703 Class GA Groundwater Quality Standards (ppb)	RI-MW1		RI-MW3		RI-MW6	
SAMPLE DATE		10/27/2017		10/27/2017		10/30/2017	
SCREENED INTERVAL		17.9-7.9		15.85-5.85		16.14-6.14	
Delta-BHC	0.04	0.02	U	0.02	U	0.02	U
Lindane	0.05	0.02	U	0.02	U	0.02	U
Alpha-BHC	0.01	0.02	U	0.02	U	0.02	U
Beta-BHC	0.04	0.02	U	0.02	U	0.02	U
Heptachlor	0.04	0.02	U	0.02	U	0.02	U
Aldrin	Not detectable	0.02	U	0.02	U	0.02	U
Heptachlor epoxide	0.03	0.02	U	0.02	U	0.02	U
Endrin	Not detectable	0.04	U	0.04	U	0.04	U
Endrin aldehyde	5	0.04	U	0.04	U	0.04	U
Endrin ketone	5	0.04	U	0.04	U	0.04	U
Dieldrin	0.004	**0.006**	J	0.04	U	0.04	U
4,4'-DDE	0.2	0.04	U	0.04	U	0.04	U
4,4'-DDD	0.3	0.04	U	0.04	U	0.04	U
4,4'-DDT	0.2	0.04	U	0.04	U	0.04	U
Endosulfan I	N/A	0.02	U	0.02	U	0.02	U
Endosulfan II	N/A	0.04	U	0.04	U	0.04	U
Endosulfan sulfate	N/A	0.04	U	0.04	U	0.04	U
Methoxychlor	35	0.2	U	0.2	U	0.2	U
Toxaphene	0.06	0.2	U	0.2	U	0.2	U
cis-Chlordane	N/A	0.02	U	0.02	U	0.02	U
trans-Chlordane	N/A	0.02	U	0.02	U	0.02	U
Chlordane	0.05	0.2	U	0.2	U	0.2	U

Legend:
Pesticides analyzed via USEPA Method 8081.
Concentrations in micrograms per liter (ug/L) or parts per billion (ppb).
Bold font indicates the compound was detected above laboratory method detection limit.
Yellow highlight indicates that the compound exceeds NYCRR Part 703 Groundwater Quality Standards.
N/A - Not Applicable
U indicates that the analyze was not detected above the method reporting limit, with the limit shown.
J indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte.
Data not yet validated
"D" suffix after the sample ID indicates a duplicate sample.

Table 4A
Interim Site Management Plan
40-52 Ellicott Street Batavia, New York
2013 Phase II Environmental Site Assessment
Summary of Soil Analytical Results
(Detected Compounds Only)

Sample ID	BH2	BH7	BH9	BH12	BH13	Part 375 Unrestricted Soil Cleanup Objectives	Part 375 Restricted Residential Use SCOs	Part 375 Protection of Groundwater SCOs
Depth	10-12 ft. bgs	6-8 ft. bgs	8-10 ft. bgs	6-8 ft. bgs	9-11 ft. bgs			
Sample Date	4/23/2013	4/23/2013	4/24/2013	4/24/2013	4/24/2013			
Volatile Organic Compounds (ug/kg)								
sec-Butylbenzene	<0.22	200	160	<0.22	260	11,000	100,000	11,000
Acetone	<3.4	<360	<180	12	<170	50	100,000	50
p-Isopropyltoluene	<0.21	<22	160	<0.21	<10	NL	NL	NL
Carbon Disulfide	<2.2	<240	<120	5.8 J	<110	NL	NL	NL
n-Propylbenzene	<0.14	180	380	<0.14	190	3,900	100,000	3,900
Chlorobenzene	<0.38	<41	<20	<0.38	400	1,100	100,000	1,100
Naphthalene	<0.84	<90	1,200	4.1 J	920	NL	NL	NL
4-Ethyltoluene	<0.13	<14	57 J	<0.13	<6.4	NL	NL	NL
Isopropylbenzene	<0.18	<20	<9.8	200	140	NL	NL	NL
p/m-Xylene	<0.35	<38	36 J	<0.35	<18	260	100,000	1,600
n-Butylbenzene	<0.22	100 J	78	<0.22	240	12,000	100,000	12,000
Methylene Chloride	<2.2	270 J	<120	<2.2	<110	50	100,000	50
1,2-Dichlorobenzene	<0.2	<22	<11	1 J	<10	1,100	100,000	1,100
1,3,5-Trimethylbenzene	<0.16	<17	1,400	<0.16	<7.9	8,400	52,000	8,400
1,2,4-Trimethylbenzene	<0.63	<67	3,400	<0.62	<32	NL	NL	NL
1,2,4,5-Tetramethylbenzene	0.27 J	1,000	780	<0.14	1,000	NL	NL	NL
1,4-Diethylbenzene	0.28 J	<19	1,700	<0.17	280	NL	NL	NL
Semi-Volatile Organic Compounds (ug/kg)								
Anthracene	70 J	<32	750	170 J	610	100,000	100,000	1,000,000
Acenaphthylene	<34	<36	140 J	<170	<34	100,000	100,000	107,000
Acenaphthene	<37	<40	850	<180	920	20,000	100,000	98,000
Benzo(a)anthracene	150	<38	520	230 J	1,000	1,000	1,000	1,000
Benzo(a)pyrene	180	<47	520	<220	1,000	1,000	1,000	22,000
Benzo(k)fluoranthene	120	<37	150	<170	320	800	3,900	1,700
Benzo(b)fluoranthene	130	<39	410	190 J	820	1,000	1,000	1,700
Benzo(g,h,i)perylene	140	<40	320	<180	620	100,000	100,000	1,000,000
2-Methylnaphthalene	<58	<62	480	<280	64 J	NL	NL	NL
Chrysene	130	<38	480	200 J	920	1,000	3,900	1,000
Dibenzo(a,h)anthracene	53 J	<37	38 J	<170	81 J	330	330	1,000,000
Naphthalene	<60	<64	480	<300	300	12,000	100,000	12,000
Di-n-octylphthalate	<45	74 J	<47	<220	<45	NL	NL	NL
Fluorene	<52	<55	340	<250	440	30,000	100,000	386,000
Fluoranthene	320	<35	1,500	580	2,500	100,000	100,000	1,000,000
Indeno(1,2,3-cd)pyrene	180	<43	250	<200	540	500	500	8,200
Phenanthrene	210	<38	2,300	680	1,400	100,000	100,000	1,000,000
Pyrene	250	<38	2,200	450 J	4,000	100,000	100,000	1,000,000
Total SVOCs	1933	74	11728	2500	15390	NA	NA	NA
Metals (mg/kg)								
Arsenic	2.9	6.2	2.7	3.6	5.5	13	16	16
Barium	22	16	20	9.5	10	350	400	820
Cadmium	0.15 J	0.1 J	0.21 J	0.12 J	0.15 J	2.5	4.3	7.5
Chromium	7	8.8	9.9	4.2	4.8	30	180	NL
Lead	26	8	7.7	4.7	3.7	63	400	450
Mercury	0.02 J	<0.02	<0.02	<0.02	<0.02	0.18	0.81	0.73
Selenium	0.5 J	0.32 J	0.49 J	0.93	0.25 J	3.9	180	4
Silver	<0.08	<0.09	<0.09	<0.08	<0.09	2	180	8

NYSDEC Part 375 Soil Cleanup Objectives (December 2006).

NYSDEC Soil Cleanup Policy (CP) 51 (October 2010).

It should be noted that no detectable concentrations of PCBs were identied in any of the soil samples submitted for analysis.

NL=Not listed

J=The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.

Underlined indicates the concentration exceeds 6NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objective (SCO).

Red font indicates the concentration exceeds the 6NYCRR Part 375-6.8(b) Unrestricted Use SCO.

Yellow highlight indicates the concentration exceeds the 6NYCRR Part 375-6.8(a) Restricted Residential Use SCO.

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Table 4B
Interim Site Management Plan
40-52 Ellicott Street, Batavia, New York
2013 Phase II Environmental Site Assessment
Summary of Groundwater Analytical Results
(Detected Compounds Only)

Sample ID	TPMW1	TPMW2	TPMW3	TPMW4	
Sample Date	4/23/2013	4/23/2013	4/24/2013	4/24/2013	TOGS*
Volatile Organic Compounds (ug/l)					
Acetone	4.5 J	16 J	3.4 J	<10	50
sec-Butylbenzene	1.8 J	12 J	<0.7	<7	5
Isopropylbenzene	16	7.6 J	<0.7	8.2 J	5
Naphthalene	100	31	0.7 J	78	10
n-Propylbenzene	19	14 J	<0.7	9.9 J	5
1,4-Diethylbenzene	4.9 J	<7	<0.7	24	NL
1,3,5-Trimethylbenzene	<1.8	<7	<0.7	40	5
1,2,4-Trimethylbenzene	<1.8	13 J	<0.7	100	5
Toluene	<1.8	<7	0.76 J	<7	5
1,2,4,5-Tetramethylbenzene	28	63	0.65 J	14 J	5
2-Butanone	3.5 J	<10	<1	<10	NL
Benzene	0.93 J	<1.9	0.54	5.5	1
Semi-Volatile Organic Compounds (ug/l)					
Dibenzofuran	2.4	<0.47	<0.47	<2.4	NL
Fluoranthene	0.72	0.32	0.22	280	50
Benzo(a)anthracene	0.12 J	<0.06	0.12 J	98	0.002
Benzo(a)pyrene	0.07 J	<0.07	0.08 J	92	NL
Benzo(b)fluoranthene	0.1 J	<0.07	0.12 J	74	0.002
Benzo(k)fluoranthene	<0.07	<0.07	<0.07	29	0.002
Chrysene	0.11 J	<0.05	0.11 J	87	0.002
Fluorene	2.7	0.51	0.14 J	91	50
Biphenyl	<0.5	<0.5	<0.5	17	NL
Benzo(ghi)perylene	<0.07	<0.07	<0.07	61	NL
Phenanthrene	3	0.95	0.21	490	50
Dibenzo(a,h)anthracene	<0.07	<0.07	<0.07	7.4	NL
Pentachlorophenol	<0.19	0.53 J	<0.19	<2.6	1
Pyrene	0.45	0.2	0.21	450	50
Indeno(1,2,3-cd)pyrene	<0.08	<0.08	<0.08	49	0.002
2-Chloronaphthalene	<0.07	0.59	<0.07	<0.92	10
2-Methylnaphthalene	2.2	0.23	<0.06	18	NL
Anthracene	0.99	0.14 J	<0.06	140	50
Naphthalene	13	1.2	0.08 J	92	10
Acenaphthylene	<0.05	0.13 J	0.11 J	26	NL
Acenaphthene	2.5	0.13 J	0.13 J	180	20
Carbazole	3.9	<0.53	<0.53	<2.6	NL
Total SVOCs	31.9	4.0	0.6	2,281.4	NA
Metals (mg/l)					
Arsenic	0.12	0.08	0.03	0.01	25
Barium	1.07	1.75	0.59	0.43	1,000
Cadmium	0.002	0.02	0.003	<0.0002	5.0
Chromium	0.19	0.37	0.04	0.01	50
Lead	0.3	0.79	0.17	0.01	25
Mercury	0.002	0.01	0.01	0.001 J	0.7
Selenium	0.01 J	0.03 J	0.002 J	<0.002	10
Silver	<0.001	0.002 J	<0.001	<0.001	50.0

*Division of Technical and Operational Series (TOGS) (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations

NL=Not listed

J=The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.

Yellow highlight indicates analyte detected above NYSDEC Groundwater Standards

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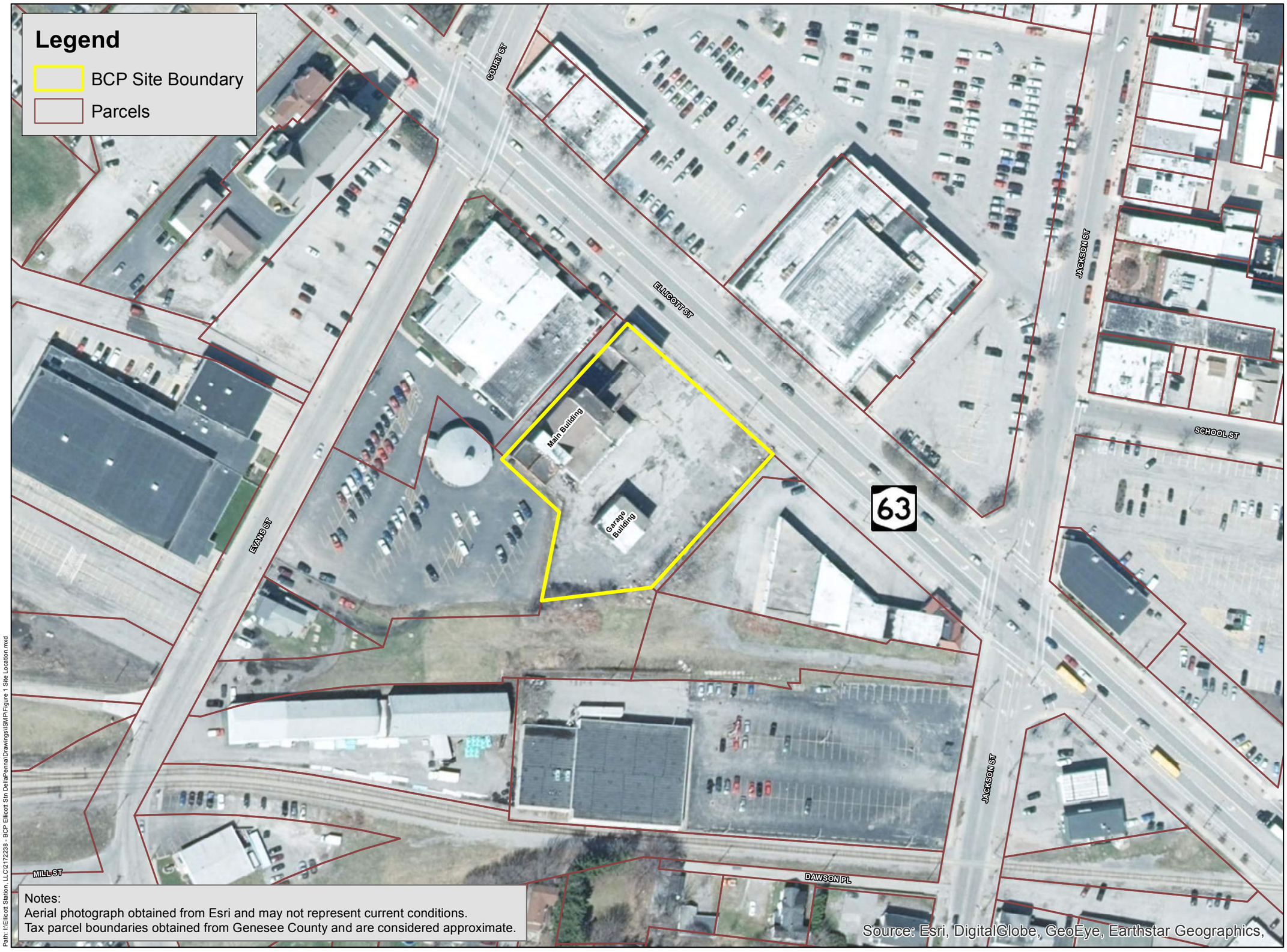
FIGURES



Path: I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\ISMP\Figure 1 Site Location.mxd

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0 25 50 100
Feet
1 inch = 100 feet

INTENDED TO PRINT AS: 11" X 17"

PROJECT:

Interim Site Management Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

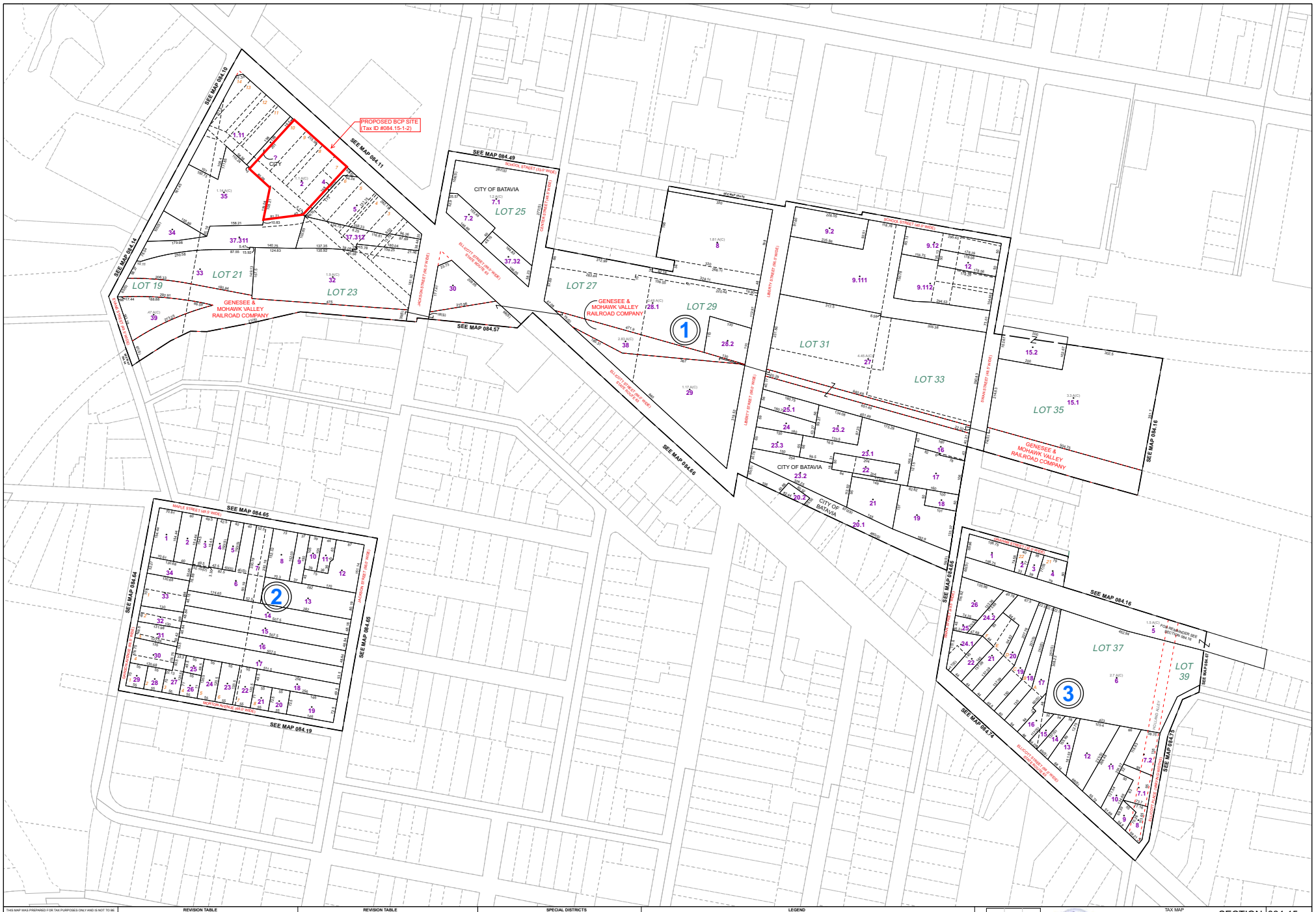
DRAWING NAME:

Site Location Map

PROJECT/DRAWING NUMBER:

2172238

FIGURE 1



THIS MAP WAS PREPARED FOR TAX PURPOSES ONLY AND IS NOT TO BE REPRODUCED OR USED FOR SURVEYING OR CONVEYANCING.

PRODUCED BY
McINTOSH & McINTOSH, LAND SURVEYORS
BATAVIA, NEW YORK
UNDER AUTHORITY
OF
GENESEE COUNTY BOARD OF SUPERVISORS

Data converted to digital fairway format, August 2004, by Vertex Mapping

Map created using ESRI®. Copyright 2007, Bergmann Associates

REVISION TABLE

DATE	MADE BY	CHANGES OR ADDITIONS

REVISION TABLE

DATE	MADE BY	CHANGES OR ADDITIONS

SPECIAL DISTRICTS

FIRE	NO TAXABLE FIRE
SCHOOL	BATAVIA CITY SCHOOLS

LEGEND

- PROPERTY LINE
- ORIGINAL LOT LINE
- RAILROAD
- STREAM OR DITCH
- ROAD OR RAILROAD BNDY
- BLOCK LIMIT
- GREAT LOT LINE
- DENOTE COMMON OWNER
- SCHOOL DISTRICT LINE
- FIRE DISTRICT LINE
- WATER DISTRICT LINE
- SEWER DISTRICT LINE
- EASEMENT
- TAX MAP BLOCK No
- TAX MAP PARCEL No
- FILED PLAN LOT No
- GREAT LOT No
- CALCULATED ACREAGE
- DEED ACREAGE
- SCALED DIMENSION
- DEED DIMENSION

084.10	084.11	084.12
084.14	**084.15**	084.16
084.18	084.19	084.20

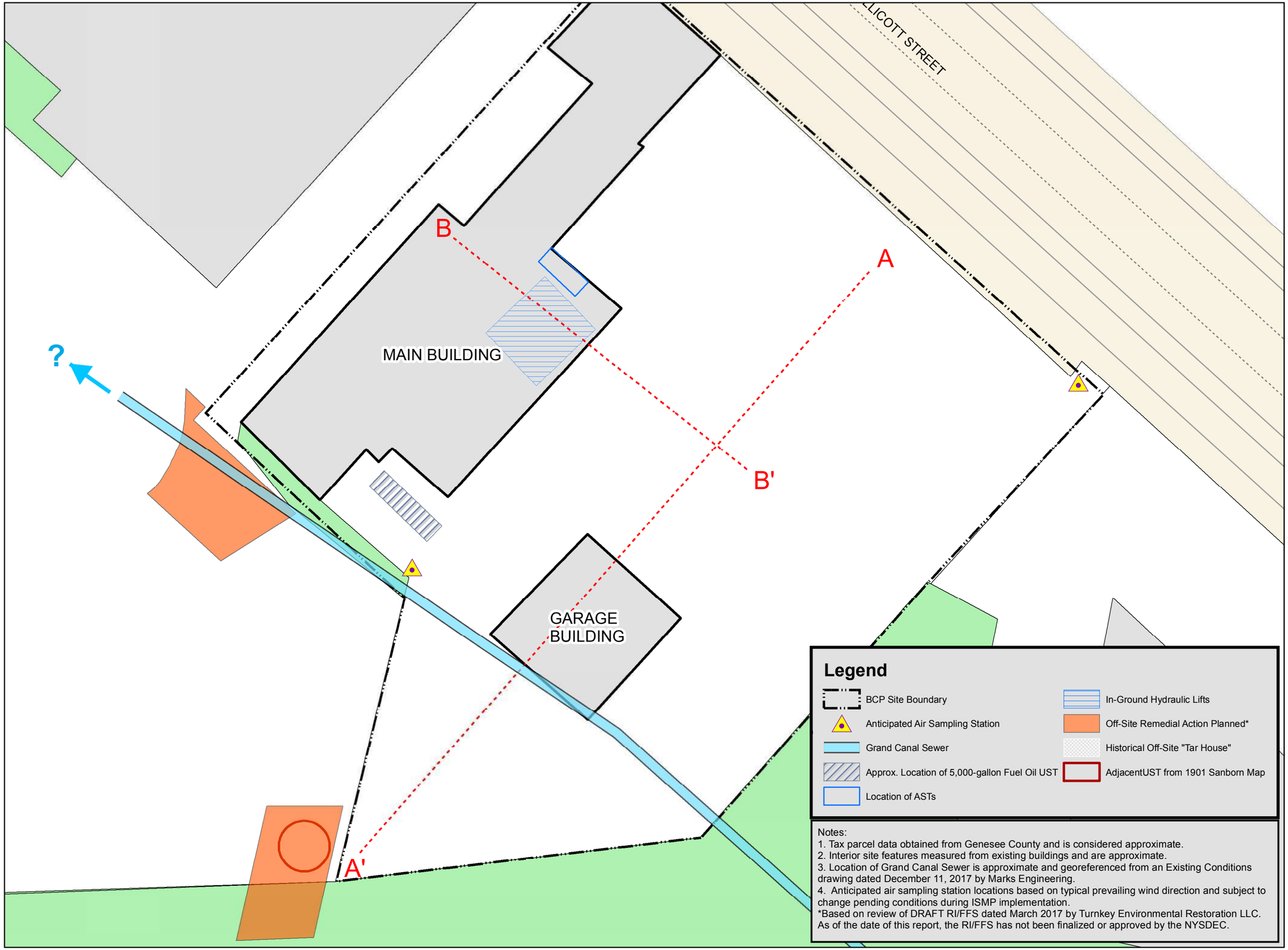
SHEET INDEX

TAX MAP
CITY OF BATAVIA
GENESEE COUNTY, NEW YORK

GRAPHIC SCALE
1" = 150'

SECTION 084.15

MAP DATE: March 2014



LaBella
Powered by partnership.

N
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Feet
1 inch = 30 feet

INTENDED TO PRINT AS: 11" X 17"

PROJECT:

Interim Site Management Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

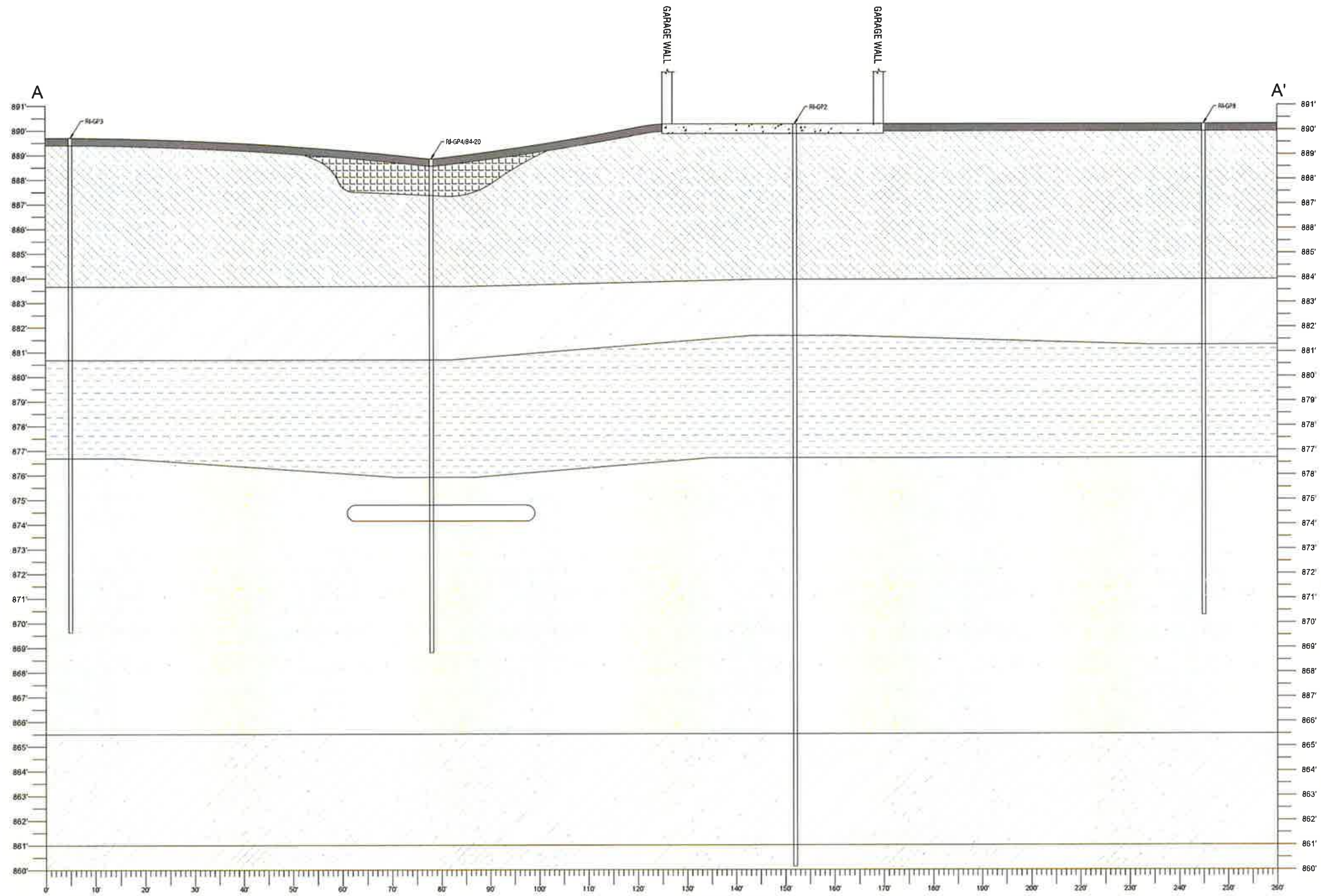
Site Features

PROJECT/DRAWING NUMBER:

2172238

FIGURE 3

I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\ISMP\Figure 3- Site Features.mxd



- GRAY-BROWN SILT, LITTLE SAND, CLAY MIX, TRACE GRAVEL
- GRAY SILT, SAND, LITTLE CLAY LITTLE GRAVEL
- BROWN CMF SAND, SOME SILT, LITTLE CMF GRAVEL
- WEATHERED ROCK (POTENTIALLY SHALE) FRAGMENTS
- SILT, CMF SAND, CMF GRAVEL WITH VARYING AMOUNTS OF URBAN FILL
- ASPHALT
- CONCRETE
- BLACK TAR-LIKE FRAGMENTS WITH COALTAR-LIKE ODOR
- CMF SAND
- BEDROCK PRESUMED SHALE OR LIMESTONE)

NOTES:

1. ELEVATIONS IN FEET ABOVE MEEN SEA LEVEL
2. ONLY BORINGS COMPLETED AS PART OF RI INCLUDED IN STRATIGRAPHIC INTERPRETATION.

NO. | REVISION | BY | DATE

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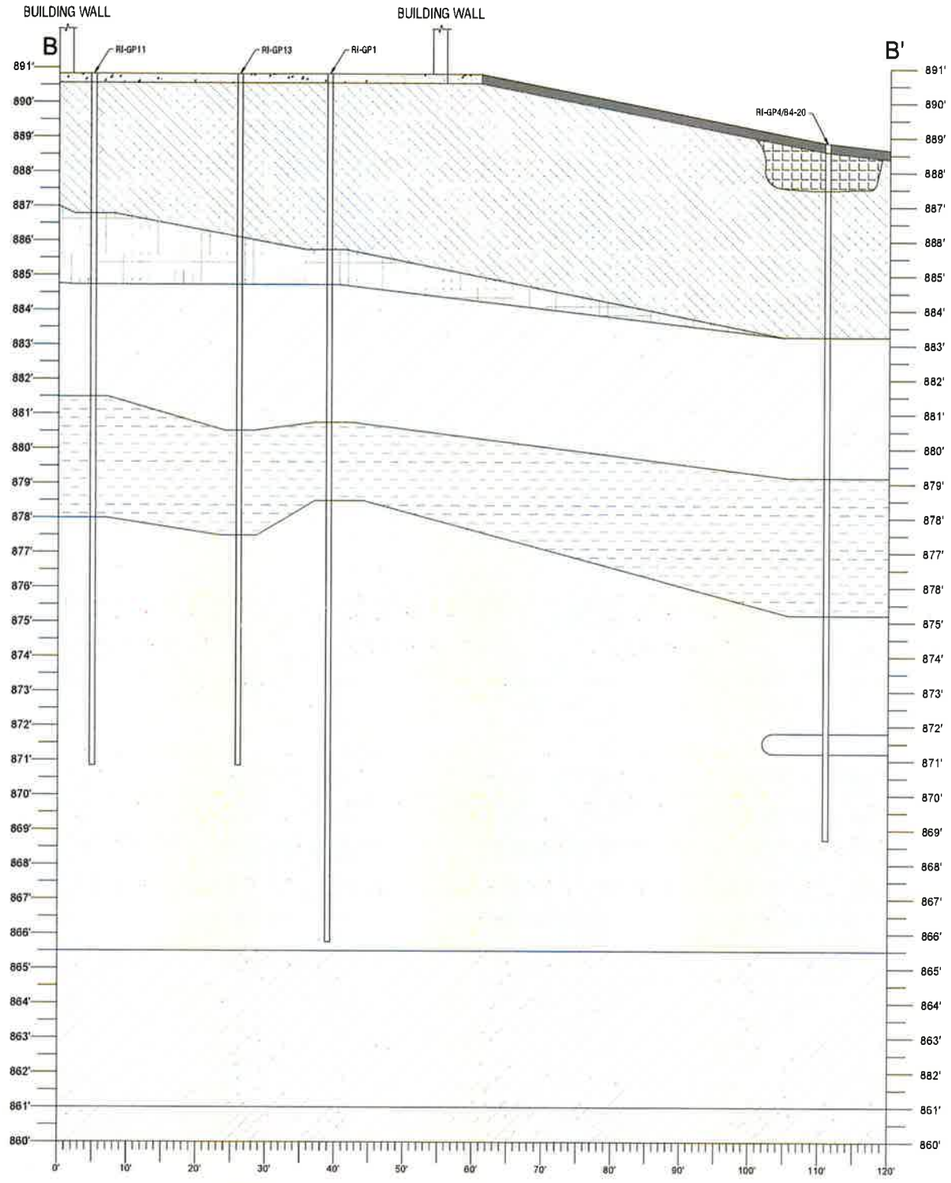
PROJECT/CLIENT
INTERIM SITE MANAGEMENT PLAN
ELLICOTT STATION
40-52 ELLICOTT ST
BATAVIA, NY
NYSDEC BCP SITE #C819021

DRAWING TITLE
CONCEPTUAL SITE MODEL CROSS SECTION A-A'

ISSUED FOR: FINAL
DATE: FEBRUARY, 2018
DESIGNED BY: ED
DRAWN BY: DRP
REVIEWED BY: JMG

PROJECT/DRAWING NUMBER
2172238

FIGURE 4A



GRAY-BROWN SILT, LITTLE SAND, CLAY MIX, TRACE GRAVEL

GRAY SILT, LITTLE SAND, LITTLE CLAY, LITTLE GRAVEL

ORANG-BROWN CMF SAND, SOME SILT, LITTLE CMF GRAVEL

WEATHERED ROCK (POTENTIALLY SHALE) FRAGMENTS

LIGHT BROWN INTERBEDDED SILT, SAND, CLAY

ASPHALT

CONCRETE

BLACK TAR-LIKE FRAGMENTS WITH COALTAR-LIKE ODOR

SILT, CMF SAND, CMF GRAVEL WITH VARYING AMOUNTS OF URBAN FILL

CMF SAND

BEDROCK PRESUMED SHALE OR LIMESTONE)

NOTES:

1. ELEVATIONS IN FEET ABOVE MEEN SEA LEVEL
2. ONLY BORINGS COMPLETED AS PART OF RI INCLUDED IN STRATIGRAPHIC INTERPRETATION.

NO. | BY | DATE | REVISION

LaBella
Powered by partnership.

PROJECT/CLIENT
INTERIM SITE MANAGEMENT PLAN

ELLICOTT STATION
40-52 ELLICOTT ST
BATAVIA, NY
NYSDEC BCP SITE #C819021

DRAWING TITLE
CONCEPTUAL SITE MODEL
CROSS SECTION B-B'

DESIGNED BY: BD
DRAWN BY: DRP
REVIEWED BY: AWC
ISSUED FOR: FINAL
DATE: FEBRUARY, 2018

PROJECT/DRAWING NUMBER
2172238

FIGURE 4B

Legend

- Pre-BCP Soil Boring/ Monitoring Well
- RI Soil Boring/ Monitoring Well
- Groundwater Flow Direction Adjacent MGP Site (May 2016)
- Groundwater Flow Direction (October 2017)
- Groundwater Elevation Contours (October 2017)
- BCP Site Boundary

ELLICOTT STREET

MAIN BUILDING

GARAGE BUILDING

RI-GP6/ RI-MW4

BH3/TPMW1

RI-GP-1/ RI-MW1

RI-GP3/ TPMW1R

RI-GP7/ RI-MW5

RI-GP4/ RI-MW3

881

881.5

881.25

880.75

BH11/TPMW3

RI-TPMW3R

RI-GP-2/ RI-MW2

RI-TPMW4R

BH9/TPMW4

881.5

881.75

882

882.25

RI-GP8/ RI-MW6

BH7/TPMW2

Notes:
1. Site boundary obtained from Genesee County and is considered approximate.
2. Exterior BCP testing locations located using a Carlson S320 GPS. Interior well elevations calculated using elevation of finished floor at the nearest exterior door.
3. Static water level data collected October 27, 2017. Elevations expressed in NAVD88 feet above mean sea level (fmsl).
4. Contours developed using Surfer 14, kriging method and include static water levels from RI wells only; does not include pre-BCP wells.
5. Groundwater flow direction at the western adjacent property based on a review of DRAFT RI/FFS dated March 2017 by Turnkey Environmental Restoration LLC. As of the date of this report, the RI/FFS has not been finalized or approved by the NYSDEC.

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0 15 30
Feet
1 inch = 30 feet

INTENDED TO PRINT AS: 11" X 17"

PROJECT:

Interim Site Management Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

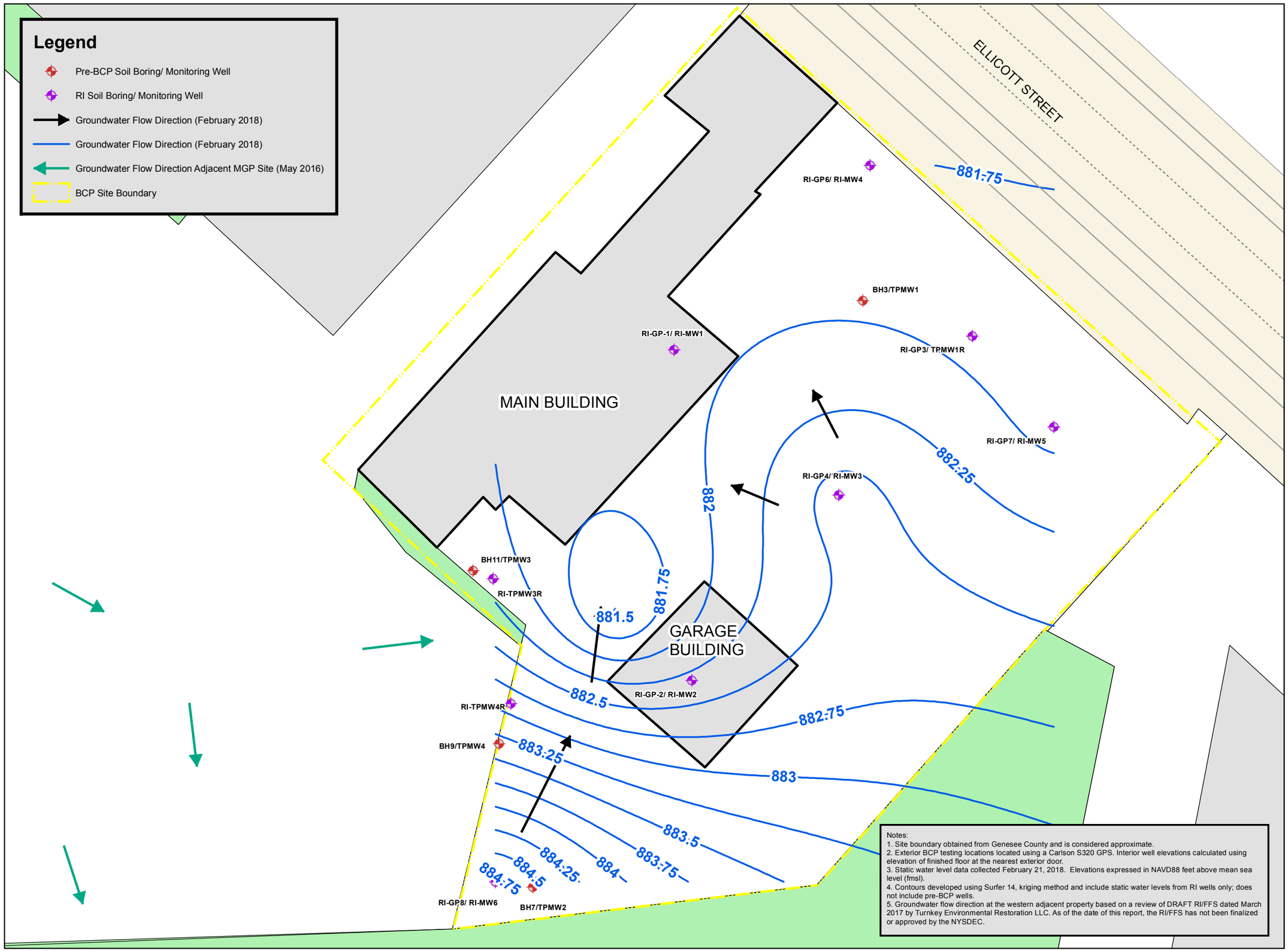
Groundwater Flow Direction October 2017

PROJECT/DRAWING NUMBER:

2172238

FIGURE 5A

I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\ISMP\Figure 5A- GW Flow Direction.mxd



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N
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0 15 30
Feet
1 inch = 30 feet

INTENDED TO PRINT AS: 11" X 17"

PROJECT:

Interim Site Management Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

Groundwater Flow Direction February 2018

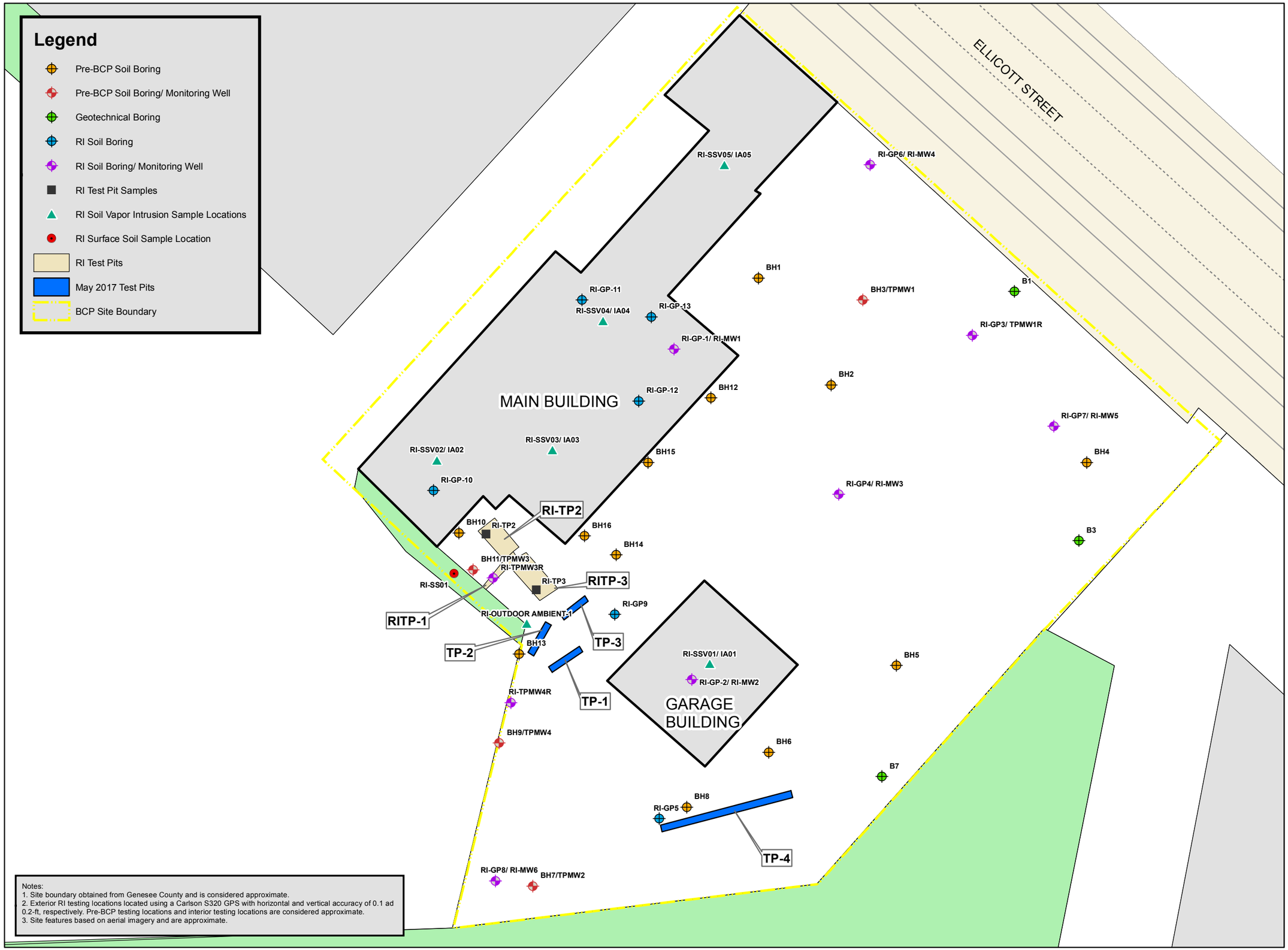
PROJECT/DRAWING NUMBER:

2172238

FIGURE 5B

4/5/2018

I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\ISMP\Figure 5B- GW Flow Direction.mxd



Notes:
1. Site boundary obtained from Genesee County and is considered approximate.
2. Exterior RI testing locations located using a Carlson S320 GPS with horizontal and vertical accuracy of 0.1 ad 0.2-ft, respectively. Pre-BCP testing locations and interior testing locations are considered approximate.
3. Site features based on aerial imagery and are approximate.

INTENDED TO PRINT AS: 11" X 17"

PROJECT:

Interim Site Management Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

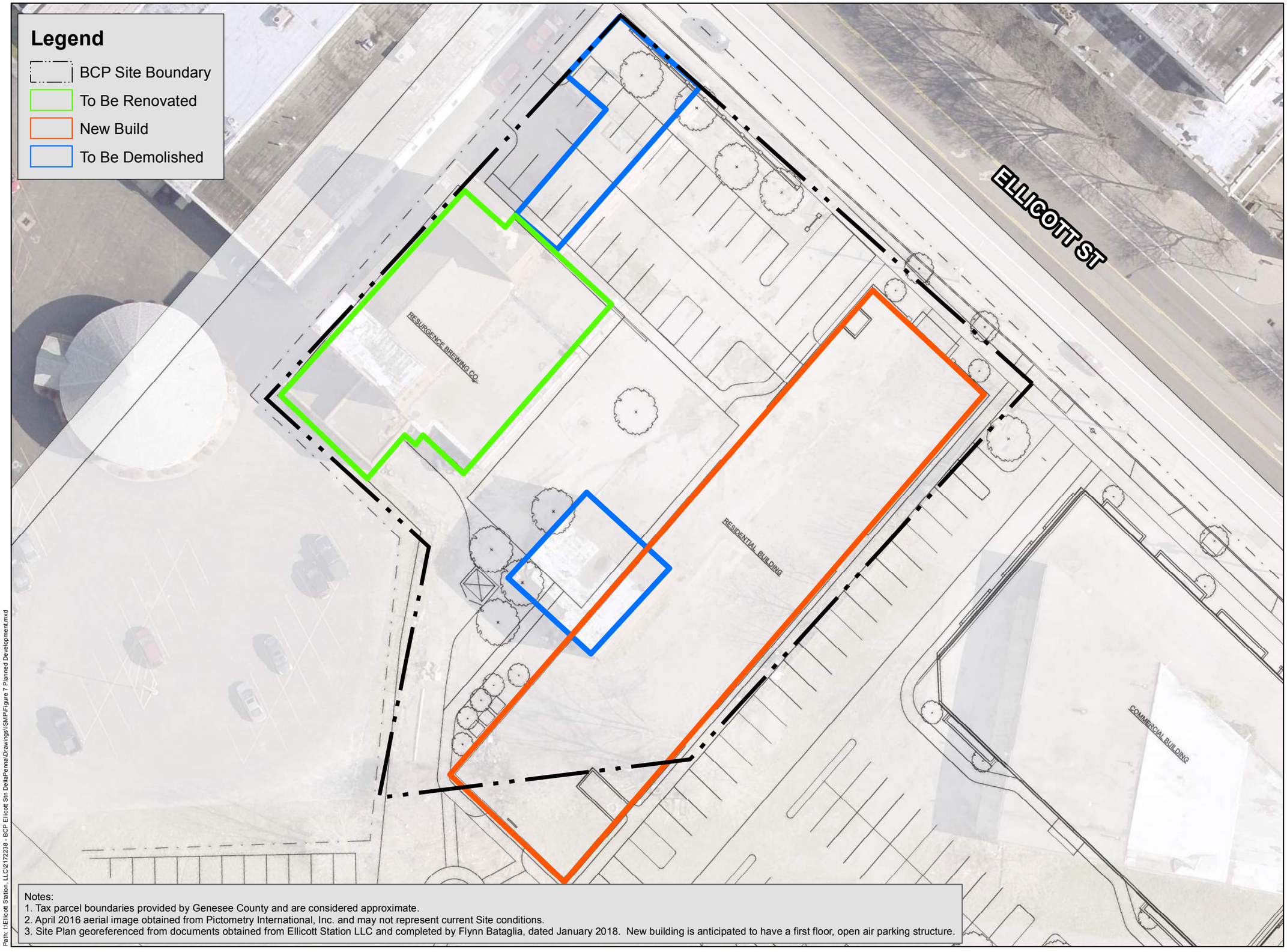
Cumulative Testing Locations

PROJECT/DRAWING NUMBER:

2172238

FIGURE 6

I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\ISMP\Figure 6- Invest Locations.mxd



Notes:
1. Tax parcel boundaries provided by Genesee County and are considered approximate.
2. April 2016 aerial image obtained from Pictometry International, Inc. and may not represent current Site conditions.
3. Site Plan georeferenced from documents obtained from Ellicott Station LLC and completed by Flynn Bataglia, dated January 2018. New building is anticipated to have a first floor, open air parking structure.

Path: I:\Ellicott Station, LLC\2172238 - BCP Ellicott Stn DellaPenna\Drawings\ISMP\Figure 7 Planned Development.mxd

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N
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0 10 20 40
Feet
1 inch = 35 feet

INTENDED TO PRINT AS: 11" X 17"

PROJECT:

Interim Site Management Plan

Ellicott Station
40-52 Ellicott St
Batavia, NY

NYSDEC BCP
Site #C819021

DRAWING NAME:

Redevelopment Plan

PROJECT/DRAWING NUMBER:

2172238

FIGURE 7

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; Mr. David Pratt, PE	585-226-5315, david.pratt@dec.ny.gov
NYSDEC Site Control Kelly Lewandowski	518-402-9547 kelly.lewandowski@dec.ny.gov

APPENDIX 2

Field Logs

LaBella
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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/3/2017

BORING: RI-GP1
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: hydraulic lift area
GROUND SURFACE ELEVATION NA
START DATE: 10/3/17 END DATE: 10/3/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				0-0.4 ft: concrete floor slab		
				@ 0.45 ft:brown SILT and cmf Sand, some cmf Gravel, moist, fill		
				@ 1.0 ft: pushed through layer of c Gravel & cobbles; fill		
			1			
2	15" ↓				0-5 ft: 0	no recovery below cobble/gravel layer
4						
			5	@ 5 ft: light brown SILT, some f Sand, trace Clay, moist		
			5.3	@ 5.3 ft: as above but brown, little cmf Gravel		
6				@ 6 ft: medium brown SILT, some cmf Sand, little cmf Gravel		
8	30" ↓				5-10 ft: 0	
			9	@ 9 ft: brown f SAND, trace mf Gravel, moist		
				@ 9.5 ft: wet		
10				@10 ft: dark grey cmf SAND and cmf Gravel, some Silt, saturtated, oily film		
		1 @ 10.-11.5 ft	10	petroleum/oil type odor, sheen	10.5 ft: 1.5	
					11 ft: 0.6	
12				@ 12 ft: grey-brown SILT, some f Sand, little cmf Gravel, trace Clay,	12 ft: 0.3	
	39" ↓		12	saturated, light petrol/oil odor		
					13 ft: 0.1	
14					14 ft: 0	
				@ 14.5 ft: same as 10 ft but no odor or evidence of petroleum odor	15 ft: 0	
	52" ↓					
16					16 ft: 0	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			19'	32'	9.5'

NOTES: Collect soil sample from 10.5-11.5 ft bgs
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/3/2017

BORING: RI-GP1
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/3/17 END DATE: 10/3/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16	(15-20 ft) 52" ↓			@16 ft: dark grey cmf SAND and cmf Gravel, some Silt, saturtated, no odor or evidence of petroleum odor	16-20 ft: 0	
18						
20	54" ↓				20-25 ft: 0	
22						
24				25		
26				Total depth of sampling = 25 ft bgs (macrocore overpacking)		
28				Drive expendable tip with rods to refusal from 25-32 ft bgs ↓		
30						
32				Drilling refusal at 32 ft bgs (likely bedrock)		

WATER LEVEL DATA			DEPTH (FT)			NOTES: set 2" well RI-MW1 at 19 ft bgs
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			19'	32'	9.5'	NA = Not Applicable

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

and = 35 to 50 %	little = 10 to 20%	c - coarse	ND = Non Detect
some = 20 to 35%	trace = 1 to 10%	m = medium	BGS = Below the Ground Surface
		f = fine	NA = Not Applicable

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/3/2017

BORING: RI-GP2
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: in center of garage building
GROUND SURFACE ELEVATION NA
START DATE: 10/3/17 END DATE: 10/3/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				0-0.4 ft: concrete floor slab		
				@ 0.45 ft: brown SILT, some mf Sand, little mf Gravel, moist, fill		
2	7" ↓				0-5 ft: 0	limited recovery due to gravel/cobble layer
4						
6				@ 6 ft: brown cmf SAND, some Silt, little mf Gravel, moist		
			6			
8	24" ↓	1 @ 8.5-11 ft			5-10 ft: 0	
				@ 9 ft: grey-brown f SAND, little Silt, saturated		
			9	@ 9.5 ft: as above but cmf SAND		
10						
12	33" ↓				10-15 ft: 0	
				@ 13 ft: as above with trace cmf Gravel		
14				@ 14.5 ft: grey-brown SILT, little f Sand, little cmf Gravel, saturated		
16	36" ↓				15-16 ft: 0	

WATER LEVEL DATA			DEPTH (FT)			NOTES: Collect soil sample from 8.5-11 ft bgs
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			17'	30'	9'	NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/3/2017

BORING: RI-GP2
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/3/17 END DATE: 10/3/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16	(15-20 ft) 52" ↓			@16 ft: grey-brown cmf SAND, some cmf Gravel, little Silt, saturated	16-20 ft: 0	
18						
20	54" ↓				20-25 ft: 0	
22						
24				@ 25-30 ft: not able to retrieve intact soil sample due to saturated cmf sand running out of macrocore barrel and onto ground during retrieval		
26	48" (+/-) ↓				25-30 ft: 0	
28						
30				30 Total depth = 30 ft bgs; did not encounter refusal		
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES: set 2" well at 17 ft bgs
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			17'	30'	9'	NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/3/2017

BORING: RI-GP3
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: see map
GROUND SURFACE ELEVATION NA
START DATE: 10/3/17 END DATE: 10/3/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				0-0.25 ft: asphalt, gravel base @ 0.25 ft: medium brown SILT, trace f Sand, trace mf Gravel, moist, fill		
2	10" ↓				0-5 ft: 0	limited recovery due to gravel/cobble layer
4						
6				@ 6 ft: light brown cmf SAND, some Silt, little cmf Gravel, moist		
			6			
8	28" ↓				5-10 ft: 0	
		1 @ 9 ft		@ 9 ft: saturated		
10				@ 9.5 ft: grey-brown SILT, some f Sand, saturated		
			9.5			
				@ 10.5 ft: grey-brown cmf SAND, little Silt, little cmf Gravel, saturated		
			10.5			
12	34" ↓				10-15 ft: 0	
				@ 13 ft: grey SILT, some f Sand, little cmf Gravel, trace Clay, saturated		
			13			
14						
16	38" ↓				15-16 ft: 0	

WATER LEVEL DATA			DEPTH (FT)			NOTES: Collect soil sample from 9 ft bgs
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	20'	9.5'	NA = Not Applicable

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

and = 35 to 50 %	little = 10 to 20%	c - coarse	ND = Non Detect
some = 20 to 35%	trace = 1 to 10%	m = medium	BGS = Below the Ground Surface
		f = fine	NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/3/2017

BORING: RI-GP3
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/3/17 END DATE: 10/3/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16	(15-20 ft) 47" ↓			@ 16 ft: grey SILT, some f Sand, little cmf Gravel, trace Clay, saturated	16-20 ft: 0	
18						
20				20		
				Total depth = 20 ft bgs (did not encounter refusal)		
22						
24						
26						
28						
30						
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	20'	9.5'	NA = Not Applicable

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

and = 35 to 50 %	little = 10 to 20%	c - coarse	ND = Non Detect
some = 20 to 35%	trace = 1 to 10%	m = medium	BGS = Below the Ground Surface
		f = fine	NA = Not Applicable

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ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY

Date: 10/4/2017

BORING: RI-GP4 / B4
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: see map
GROUND SURFACE ELEVATION NA
START DATE: 10/4/17 END DATE: 10/4/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 2' split spoon (geotech boring)
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	18"	1 @ 0.25-2 ft		0-0.25 ft: asphalt, gravel base @ 0.25 ft: brown cmf SAND, some cmf Gravel, some Silt, dry, black tarry fragments (sticky, coal tar-like odor), fill	0.25 ft: 24 0.5 ft: 270 1 ft: 48	
2			2	@ 1.8 ft: black slag-like material, shiny, brittle, fill @ 2 ft: brown cmf SAND, some mf Gravel, some Silt, brick fragments, fill	2 ft: 0	
4	18"			@ 3 ft: light brown mf SAND, some Silt, little mf Gravel, red/iron mottling, moist mottling, moist @ 4.1 ft: orange-brown SILT, some Clay, trace mf Sand, moist, red/iron mottling	3 ft: 0 4 ft: 0	
6	24"		5.6	@ 4.2 ft: brown-black SILT, little f Sand, trace mf Gravel, moist @ 5.6 ft: grey-brown cmf SAND, some Silt, some CMF Gravel, dry	4.2 ft: 14.6 4.5 ft: 0 5 ft: 0 6 ft: 0	odor
8	18"			@ 7 ft: as above, little Silt, wet @ 8 ft: saturated	7 ft: 0 8 ft: 0	
10	17"		9	@ 9 ft: grey mf SAND, some Silt, trace f Gravel, saturated	9 ft: 0 10 ft: 0	
12	15"			@ 12.8 ft: as above, some cmf Gravel @ 13 ft: grey cmf SAND, some Silt (20%), trace f Gravel, saturated	11 ft: 0 12 ft: 0 13 ft: 0	macrocore used from 10-13 ft bgs
14	18"			@ 14.25 ft: weathered rock fragments	14 ft: 0 15 ft: 0	
16	6"				16 ft: 0	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			16'	23'	7'

NOTES: Collect soil sample from 0.25-2 ft bgs (VOCs at 0.5 ft bgs)
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/4/2017

BORING: RI-GP4 / B4
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/4/17 END DATE: 10/4/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 2' split spoon & 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16	6"			@ 16 ft: grey mf SAND, some Silt, saturated	17 ft: 0	macrocore barrel used from 15-18 ft bgs
18	18"			@ 18.5 ft: as above with weathered shale fragments and cmf Gravel	18 ft: 0 19 ft: 0 20 ft: 0	
20				20		
22				Total depth = 20 ft bgs with spoons (did not encounter refusal) Total depth = 23 ft bgs with augers		
24						
26						
28						
30						
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES: set 2" well RI-MW3 at 16 ft bgs
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			16'	23'	7'	NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/6/2017

BORING: RI-GP5 / B20
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: see map
GROUND SURFACE ELEVATION NA
START DATE: 10/6/17 END DATE: 10/6/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 2' split spoon (geotech boring)
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				0-0.25 ft: asphalt, gravel base		
	18"			@ 0.25 ft: black-brown SILT, some cmf Sand, some mf Gravel, moist, fill		
			0.5	@ 0.5 ft: grey-brown cmf Gravel and cobbles, asphalt fragments, fill	0.5 ft: 0	
					1 ft: 0.4	
				@ 1.5 ft: light brown SILT, little f Sand, little cmf Gravel, dry, fill	1.5 ft: 4.2	
2					2 ft: 0	
	8"				3 ft: 0	
4				@ 4 ft: light olive-grey SILT and Clay, medium plasticity, Fe mottling, moist	4 ft: 0	
	24"			@ 5 ft: grey-brown cmf SAND, some Silt, moist, light petroleum odor from	5 ft: 0	
			5	5.5-6 ft bgs	5.5 ft: 2.4	
6					6 ft: 15.8	light petrol odor
	18"	1 @ 7 ft bgs		@ 7 ft: grey-brown f SAND, some Silt, wet, petrol odor, sheen on water	7 ft: 1311	strong petrol odor
8				@ 8 ft: saturated, petrol odor and sheen	8 ft: 12.2	
	16"				9 ft: 658	
			9			
10					10 ft: 680	
					11 ft: 78	
						macrocore used from
12					12 ft: 16.4	10-13 ft bgs
				@ 13 ft: light olive-grey cmf SAND, some cmf Gravel, some Silt (20%), saturated	13 ft: 0.4	
14	18"				14 ft: 2.2	no sheen
					15 ft: 1.4	
16						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	20'	7'

NOTES: Collect soil sample from 7 ft bgs
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/6/2017

BORING: RI-GP5 / B20
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/6/17 END DATE: 10/6/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 2' split spoon & 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16	NA			@ 16 ft: light olive-grey cmf SAND, some cmf Gravel, some Silt (20%), saturated	17 ft: 0	macrocore barrel used from 15-18 ft bgs, no sample collected
18	18"				18 ft: 0.6 19 ft: 0	no odor, no sheen
20				20 Total depth = 18 ft bgs with augers, 20 ft bgs with spoons (did not encounter refusal)	20 ft: 0	
22						
24						
26						
28						
30						
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	20'	7'	NA = Not Applicable

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

and = 35 to 50 %	little = 10 to 20%	c - coarse	ND = Non Detect
some = 20 to 35%	trace = 1 to 10%	m = medium	BGS = Below the Ground Surface
		f = fine	NA = Not Applicable

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ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/9/2017

BORING: RI-GP6
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: see map
GROUND SURFACE ELEVATION NA
START DATE: 10/9/17 END DATE: 10/9/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				0-0.25 ft: asphalt, gravel base @ 0.25 ft: orange-brown SILT, some f Sand, little f Gravel, moist, fill @ 1.0 ft: as above with brick fragments, fill		
2	36" ↓		1.2	@ 1.2 ft: light brown SILT, little Clay, moist, red/iron mottling, fill @ 2 ft: medium brown SILT, some cmf Sand, little cmf Gravel, moist, fill	0-5 ft: 0	
4			4	@ 4 ft: light brown SILT, some Clay, trace f Sand, moist, red/iron mottling @ 5 ft: light brown SILT and f Sand, little f Gravel, moist		
6						
8	29" ↓			@ 7 ft: light brown cmf SAND, some Silt (20%), little cmf Gravel, moist @8.5 ft: as above but saturated	5-10 ft: 0	
10						
12	36" ↓		11	@ 11 ft: grey-brown SILT and f Sand, little cmf Gravel, saturated	10-15 ft: 0	
14						
16	42" ↓ (15-20 ft)		15.5	@ 15.5 ft: grey-brown cmf SAND, little Silt, trace f Gravel, saturated	15-16 ft: 0	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			17'	20'	8.5'

NOTES: Collect soil sample from 8-10 ft bgs (VOC at 9 ft bgs)
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/9/2017

BORING: RI-GP6
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/9/17 END DATE: 10/9/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16	(15-20 ft) 42" ↓				16-20 ft: 0	
18			18	@ 18 ft: grey-brown SILT, some f Sand, some cmf Gravel, saturated		
20				20		
				Total depth = 20 ft bgs (did not encounter refusal)		
22						
24						
26						
28						
30						
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES: set 2" well RI-MW4 at 17 ft bgs with 4" dual tube
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			17'	20'	8.5'	NA = Not Applicable

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

and = 35 to 50 %	little = 10 to 20%	c - coarse	ND = Non Detect
some = 20 to 35%	trace = 1 to 10%	m = medium	BGS = Below the Ground Surface
		f = fine	NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/9/2017

BORING: RI-GP7
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: see map
GROUND SURFACE ELEVATION NA
START DATE: 10/9/17 END DATE: 10/9/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				0-0.2 ft: asphalt, gravel base @ 0.2 ft: grey SILT and cmf Gravel, some CMF Sand, moist, fill	0.5 ft: 2.3 1 ft: 4.9	
				@ 1.5 ft: c Gravel and cobbles, dry, fill		
			1.5			
2	22" ↓				2 ft: 7.9	
		1 @ 3-4 ft bgs		@ 3 ft: grey SILT and Clay, some cmf Gravel, moist, fill	3 ft: 23	sample
			3	@ 3.5 ft: light olive grey, trace f Gravel, moist, red/iron mottling		
4					4 ft: 0.6	
				@ 5 ft: grey-brown SILT, some f Sand, little cmf Gravel, moist	5 ft: 0.7	
6				@ 6 ft: light brown mf SAND, some cmf Gravel, some Silt, trace Clay,		
			6	moist, loose		
	27" ↓				6-10 ft: 0	
8				@ 8.5 ft: saturated		
10						
12	18" ↓				10-15 ft: 0	
				@ 13 ft: brown mf SAND, some Silt, trace mf Gravel, saturated		
			13			
14						
	19" ↓			@ 15 ft: grey SILT, some cmf Gravel, some cmf Sand, saturated		
16	(15-20 ft)				15-16 ft: 0	

WATER LEVEL DATA			DEPTH (FT)			NOTES: Collect soil sample from 3-4 ft bgs (VOC at 3 ft bgs)
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			17'	20'	8.5'	NA = Not Applicable

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

and = 35 to 50 %	little = 10 to 20%	c - coarse	ND = Non Detect
some = 20 to 35%	trace = 1 to 10%	m = medium	BGS = Below the Ground Surface
		f = fine	NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/9/2017

BORING: RI-GP7
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/9/17 END DATE: 10/9/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16	(15-20 ft) 19" ↓			@ 16 ft: grey SILT, some cmf Gravel, some cmf Sand, saturated	16-20 ft: 0	
18						
20				20		
22				Total depth = 20 ft bgs (did not encounter refusal)		
24						
26						
28						
30						
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES: set 2" well RI-MW5 at 17 ft bgs with 4" dual tube
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			17'	20'	8.5'	NA = Not Applicable

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

and = 35 to 50 %	little = 10 to 20%	c - coarse	ND = Non Detect
some = 20 to 35%	trace = 1 to 10%	m = medium	BGS = Below the Ground Surface
		f = fine	NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY

Date: 10/10/2017

BORING: RI-GP8
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: see map
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				@ 0 ft: grey mf SAND, some cmf Gravel, some Silt, dry, fill @ 0.5 ft: black SILT and cinder-like fill		
				@ 1.0 ft: orange-brown f SAND, some Silt, dry		
			1	@ 1.5 ft: black-brown SILT, some f Sand, little f Gravel, trace slag, moist, fill		
2	34" ↓				0-5 ft: 0	
				@3 ft: black cinder/slag-like fill		
4				@ 4 ft: light brown SILT, some f Sand, little Clay, moist		
			4			
6				@ 6 ft: grey f SAND, little Silt, wet	6 ft: 0.6	
			6		7 ft: 201.7	
	29" ↓					
8		1 @ 8-9 ft bgs		@ 8.5 ft: saturated, strong petroleum odor, sheen on water	8 ft: 733	
					9 ft: 755	
				@ 9.5 ft: light brown f SAND and Silt		
10					10 ft: 120	sheen on groundwater from 10-15 ft bgs
					11 ft: 484	
12					12 ft: 692	
	44" ↓					
				@ 13 ft: grey SILT, some cmf Sand and cmf Gravel, little Clay, saturated	13 ft: 41.7	
14				@ 14 ft: grey SILT, some f Sand, little cmf Gravel, saturated	14 ft: 125	
					15 ft: 6.8	
	37" ↓					
16	(15-20 ft)				16 ft: 15.9	

WATER LEVEL DATA			DEPTH (FT)			NOTES: Collect soil sample from 8-9 ft bgs (VOC at 9 ft bgs)
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			16'	20'	6'	NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/10/2017

BORING: RI-GP8
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16					16 ft: 15.9	
				@ 17 ft: grey-brown cmf SAND, some Silt, some cmf Gravel, saturated	17 ft: 12.4	
			17			
	(15-20 ft) 19" ↓					
18					18 ft: 2.8	
					19 ft: 1.0	
20					20 ft: 0	
				20		
				Total depth = 20 ft bgs (did not encounter refusal)		
22						
24						
26						
28						
30						
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES: set 2" well RI-MW6 at 16 ft bgs with 4" dual tube
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			16'	20'	6'	NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
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f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/10/2017

BORING: RI-GP9
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: see map
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				@ 0 ft: black cmf SAND, f Gravel, some Silt, dry, fill	0 ft: 0	
				@ 1.0 ft: grey-brown SILT, little f Sand and cinder, little cmf Gravel, moist, fill	1 ft: 0.7	
2	18" ↓			@ 2.5 ft: black cinder and mf Gravel fill	2 ft: 1.8	
					3 ft: 4.8	
4					4 ft: 3.7	
					5 ft: 2.1	
6				@ 5.5 ft: grey-brown SILT, some cmf Sand, some cmf Gravel, moist	6 ft: 1.4	
					7 ft: 2.1	
8	22" ↓	1 @ 8-10 ft		@ 8 ft: light brown mf Sand, some Silt, little mf Gravel, saturated	8 ft: 0.2	
			8		9 ft: 0.1	
10					10 ft: 0	
					11 ft: 0.5	
12	35" ↓			@ 12 ft: light brown cmf SAND, some cmf Gravel, saturated	12 ft: 0	
					13 ft: 0	
14				@ 14 grey-brown SILT and mf Sand, some cmf Gravel, trace Clay, saturated	14 ft: 0.1	
			14		15 ft: 0	
16	43" ↓ (15-20 ft)				16 ft: 0	

WATER LEVEL DATA			DEPTH (FT)			NOTES: Collect soil sample from 8-10 ft bgs (VOC at 9 ft bgs)
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	20'	8'	NA = Not Applicable

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 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/10/2017

BORING: RI-GP9
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16				@ 16 ft: grey-brown cmf SAND, some cmf Gravel, some Silt, saturated	16 ft: 0	
					17 ft: 0	
	(15-20 ft)					
18	19" ↓				18 ft: 0	
					19 ft: 0	
20					20 ft: 0	
				20		
				Total depth = 20 ft bgs (did not encounter refusal)		
22						
24						
26						
28						
30						
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	20'	8'	NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/10/2017

BORING: RI-GP10
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: see map
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				0-0.3 ft: concrete floor slab	0 ft: 0	
				@ 0.3 ft: grey SILT, little f Sand, little cmf Gravel, moist, brick fragments, fill	1 ft: 0.4	
2	23" ↓				2 ft: 0.5	
					3 ft: 0.1	
4					4 ft: 0	
					5 ft: 0	
6			5.5	@ 5.5 ft: SILT and cmf Gravel, some cmf Sand, some c Gravel/cobbles, moist	6 ft: 0	
					7 ft: 0	
8	16" ↓				8 ft: 0	
				@ 9 ft: grey SILT, some mf Sand, some cmf Gravel, wet		
			9		9 ft: 0.5	
10					10 ft: 0	
				@ 10.5 ft: saturated	11 ft: 2.0	
12	27" ↓				12 ft: 0.4	
					13 ft: 0	
14					14 ft: 0	
					15 ft: 0	
16	21" ↓ (15-18 ft)				16 ft: 0.1	

WATER LEVEL DATA			DEPTH (FT)			NOTES: Collect soil sample from 1-2 ft bgs & 10-11 ft bgs
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	18'	9'	NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
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trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/10/2017

BORING: RI-GP10
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16	(15-18 ft) 21" ↓			@ 16.5 ft: charcoal grey SILT, some weathered shale, little cmf Gravel,	16 ft: 0.1	
			16.5	trace Sand, moist	17 ft: 2.0	
18					18 ft: 0.4	
				18		
				Total depth = 18 ft bgs due to refusal with macrocore		
20						
22						
24						
26						
28						
30						
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	18'	9'	NA = Not Applicable

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

and = 35 to 50 %	little = 10 to 20%	c - coarse	ND = Non Detect
some = 20 to 35%	trace = 1 to 10%	m = medium	BGS = Below the Ground Surface
		f = fine	NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY

Date: 10/10/2017

BORING: RI-GP11
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: former chemical storage room
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				@ 0-0.7 ft: concrete floor slab @ 0.7 ft: light brown cmf SAND and cmf Gravel, some Silt, moist, fill	0 ft: 0 1 ft: 0.2	
2	10" ↓				2 ft: 0.2 3 ft: 0.3	
4			4	@ 4 ft: light brown SILT, little Clay, little f Sand, moist @ 5 ft: light brown Silty CLAY, moist	4 ft: 0 5 ft: 0	
6			6	@ 6 ft: light orange-brown f SAND, some Silt, little cmf Gravel, moist	6 ft: 0 7 ft: 0	
8	31" ↓			@ 9 ft: saturated	8 ft: 0	
10				@ 9.5 ft: grey, faint petroleum odor, sheen on groundwater	9 ft: 2.3 10 ft: 7.0	faint petrol odor
			10.5	@ 10.5 ft: grey mf SAND, some Silt, little mf Gravel, saturated	11 ft: 7.5	
12	21" ↓				12 ft: 10.6	
		1 @ 13 ft bgs			13 ft: 13	petroleum odor and sheen on water
14					14 ft: 11.7 15 ft: 4.5	(fuel oil type odor)
16	24" ↓ (15-20 ft)				16 ft: 0	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	20'	9'

NOTES: Collect soil sample from 13 ft bgs
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/10/2017

BORING: RI-GP11
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16				@ 16 ft: grey mf SAND, some Silt, little mf Gravel, saturated	16 ft: 1.1	
					17 ft: 0	
	(15-20 ft)					
18	24"				18 ft: 0	
	↓					
					19 ft: 0	
20					20 ft: 0	
				20		
				Total depth = 20 ft bgs (did not encounter refusal)		
22						
24						
26						
28						
30						
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	20'	9'	NA = Not Applicable

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

and = 35 to 50 %	little = 10 to 20%	c - coarse	ND = Non Detect
some = 20 to 35%	trace = 1 to 10%	m = medium	BGS = Below the Ground Surface
		f = fine	NA = Not Applicable

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY

Date: 10/10/2017

BORING: RI-GP12
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: south of hydraulic floor lift
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				@ 0-0.5 ft: concrete floor slab @ 0.5 ft: brown mf SAND, some Silt, some cmf Gravel, dry, fill		
2	21" ↓			@ 1.5 ft: brown-black cmf SAND and mf Gravel, some black slag-like fill material (hard, brittle), no odor @ 1.75 ft: grey-brown SILT and mf Sand, some cmf Gravel, moist, fill @ 2.0 ft: c Gravel and cobble layer, brick fragments, fill	0-5 ft: 0	
			2			
4				@ 4.0 ft: brown SILT, some mf Sand, trace Clay, moist		
			4			
6				@ 6 ft: brown Silty CLAY, trace f Gravel, moist		
			6		5-10 ft: 0	
8	18" ↓					
10				@ 10 ft: brown cmf SAND, some Silt, some cmf Gravel, saturated		
		1 @ 10.5	10			
12	29" ↓			@ 12.0 ft: grey-brown cmf SAND, some Silt, trace Clay	10-15 ft:0	
14						
16	27" ↓ (15-20 ft)				16 ft: 0	

WATER LEVEL DATA			DEPTH (FT)			NOTES: Collect soil sample from 10.5 ft bgs
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	20'	10'	NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/10/2017

BORING: RI-GP12
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16	(15-20 ft) 27" ↓			@ 16 ft: grey-brown cmf SAND, some Silt, trace Clay; intermixed silt and sand, little to some mf Gravel, saturated	15-20 ft: 0	
18						
20				20		
22				Total depth = 20 ft bgs (did not encounter refusal)		
24						
26						
28						
30						
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	20'	10'	NA = Not Applicable

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

and = 35 to 50 %
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c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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Powered by partnership.

300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/10/2017

BORING: RI-GP13
SHEET 1 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION: NW of hydraulic floor lift
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				@ 0-0.5 ft: concrete floor slab @ 0.5 ft: brown mf SAND, some Silt, some cmf Gravel, dry, fill @ 1.0 ft: pushed through layer of c Gravel & cobbles; fill		
			1			
2	0" ↓				0-5 ft: 0 in sleeve	no recovery
4						
				@ 5 ft: light brown SILT, some f Sand, trace Clay, moist		
			5	@ 5.5 ft: as above but brown, little cmf Gravel		
6				@ 6 ft: medium brown SILT, some cmf Sand, little cmf Gravel		
					5-10 ft: 0 in sleeve	no recovery
8	0" ↓					
10				@ 10 ft: light brown SILT, some Clay, little f Sand, little cmf Gravel, moist		
		1 @ 10.5		@ 10.5 ft: grey-brown f SAND, little Silt, little f Gravel		
			10.5			
				@ 11 ft: grey cmf SAND, some Silt, some cmf Gravel, saturated		
12	28" ↓				10-15 ft:0	
14				@ 14 ft: grey-brown SILT, little Clay, little f Sand, little mf Gravel, saturated		
			14			
	26" ↓					
16	(15-20 ft)				16 ft: 0	

WATER LEVEL DATA			DEPTH (FT)			NOTES: Collect soil sample from 10-12 ft bgs (VOC at 11 ft bgs)
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	20'	11'	NA = Not Applicable

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

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

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300 STATE STREET, ROCHESTER, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
Ellicott Station BCP Site - Remedial Investigation
Geoprobe Overburden Soil Sampling
Location: 40-52 Ellicott St., Batavia, NY
Date: 10/10/2017

BORING: RI-GP13
SHEET 2 OF 2
JOB: 2172238
CHKD BY:

CONTRACTOR: LaBella Env. LLC
DRILLER: M. Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler

BORING LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 10/10/17 END DATE: 10/10/17

TIME: TO
DATUM: NA

TYPE OF DRILL RIG: Geoprobe 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPLING METHOD: Direct Push; continuous

DRIVE SAMPLER TYPE: 5' macrocore barrel
INSIDE DIAMETER:
OTHER:

DEPTH (FEET)	SAMPLE RECOVERY (INCHES)	SAMPLE NO. AND DEPTH	STRATA CHANGE (FEET)	VISUAL CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
16	(15-20 ft) 26" ↓			@ 16 ft: grey-brown SILT, little Clay, little f Sand, little mf Gravel, saturated	15-20 ft: 0	
18						
20				20		
22				Total depth = 20 ft bgs (did not encounter refusal)		
24						
26						
28						
30						
32						

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	ND = Non Detect BGS = Below the Ground Surface
			NA	20'	11'	NA = Not Applicable

GENERAL NOTES

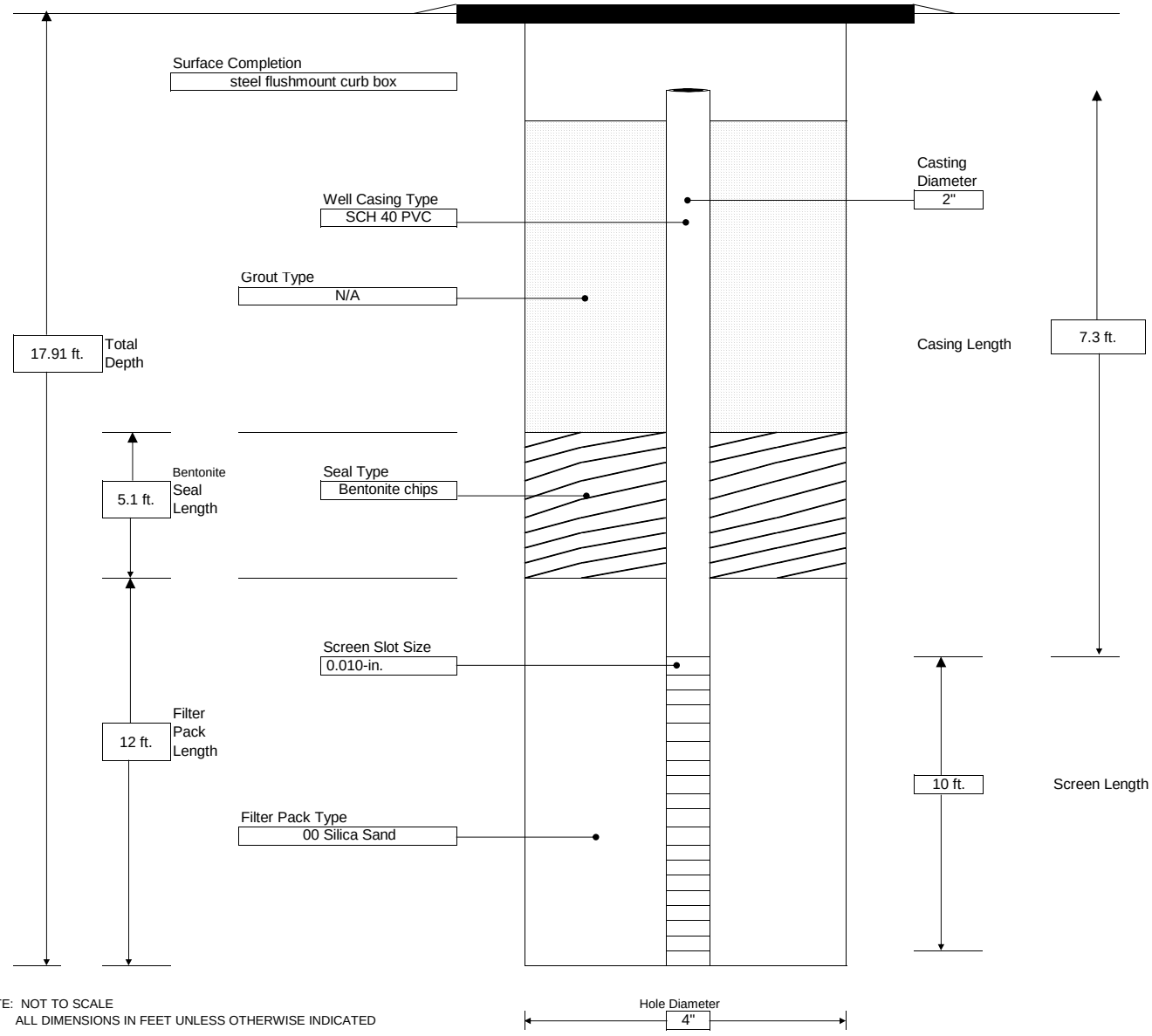
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

and = 35 to 50 %
some = 20 to 35%
little = 10 to 20%
trace = 1 to 10%
c - coarse
m = medium
f = fine
ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

LaBella 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Remedial Investigation Ellicott Station BCP Site 40-52 Ellicott St., Batavia, NY	BORING: RI-MW1 SHEET 1 OF 1 JOB # 2172238 CHKD. BY:

CONTRACTOR: Labella Env, LLC	BORING LOCATION: RI-GP1	
DRILLER: Mike Windrel Jr.	GROUND SURFACE ELEVATION:	DATUM:
LABELLA REPRESENTATIVE: E. Detweiler	START DATE: 10/3/17	END DATE: 10/3/17

	WATER LEVEL DATA				
TYPE OF DRILL RIG: 6620 DT	DATE	TIME	WATER	CASING	REMARKS
AUGER SIZE AND TYPE: N/A - 4" dual tube					
OVERBURDEN SAMPLING METHOD: Direct-Push, 5' macrocore					
ROCK DRILLING METHOD: N/A					



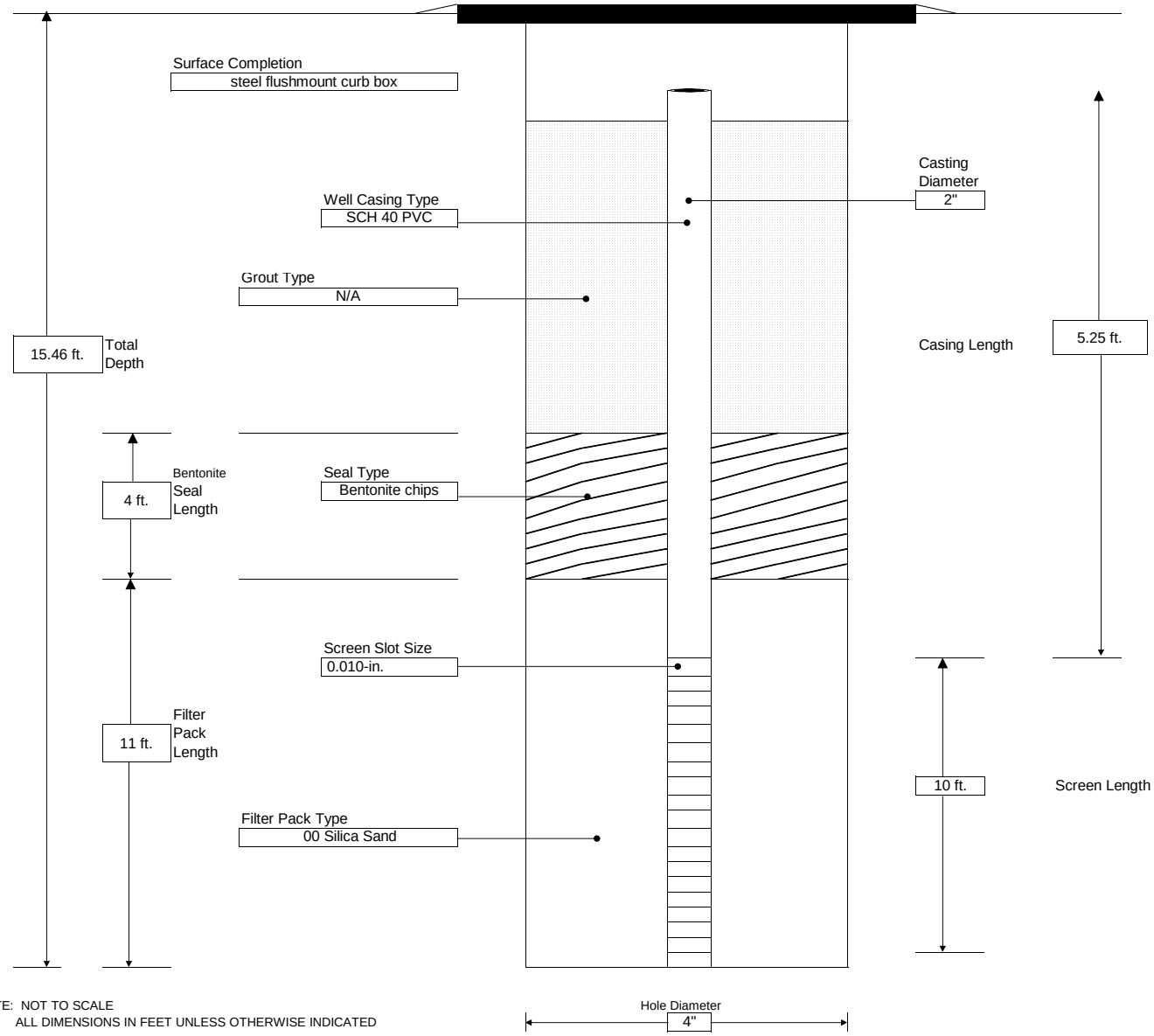
NOTE: NOT TO SCALE
ALL DIMENSIONS IN FEET UNLESS OTHERWISE INDICATED

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 MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

LaBella Powered by partnership 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Remedial Investigation Ellicott Station BCP Site 40-52 Ellicott St., Batavia, NY	BORING: RI-MW2 SHEET 1 OF 1 JOB # 2172238 CHKD. BY:

CONTRACTOR: Labella Env, LLC	BORING LOCATION: RI-GP2					
DRILLER: Mike Windrel Jr.	GROUND SURFACE ELEVATION: DATUM:					
LABELLA REPRESENTATIVE: E. Detweiler	START DATE: 10/3/17 END DATE: 10/3/17					
	WATER LEVEL DATA					
TYPE OF DRILL RIG: 6620 DT	DATE	TIME	WATER	CASING	REMARKS	
AUGER SIZE AND TYPE: N/A - 4" dual tube						
OVERBURDEN SAMPLING METHOD: Direct-Push, 5' macrocore						
ROCK DRILLING METHOD: N/A						



NOTE: NOT TO SCALE
ALL DIMENSIONS IN FEET UNLESS OTHERWISE INDICATED

GENERAL NOTES:
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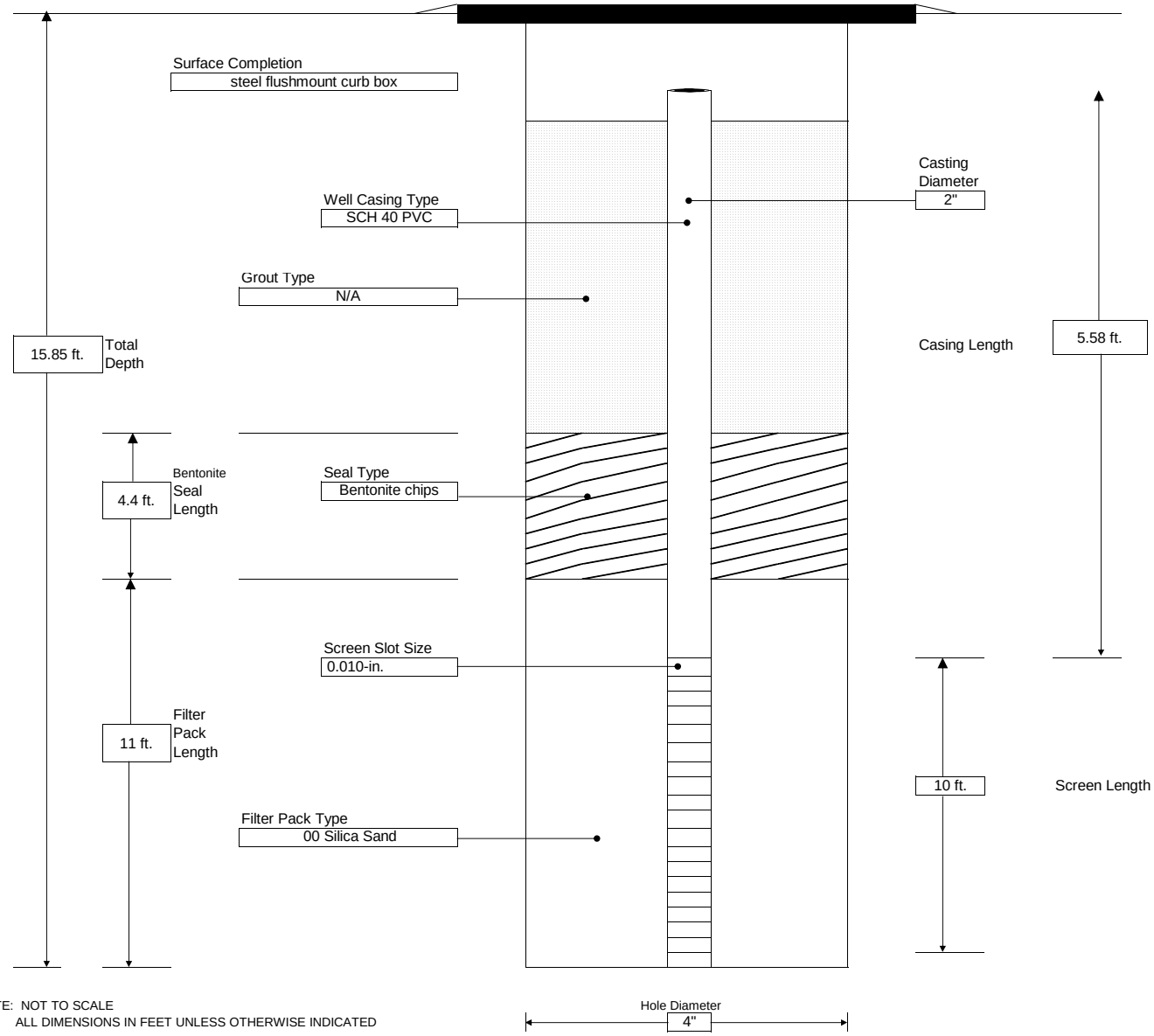
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

LaBella 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Remedial Investigation Ellicott Station BCP Site 40-52 Ellicott St., Batavia, NY	BORING: RI-MW3 SHEET 1 OF 1 JOB # 2172238 CHKD. BY:

CONTRACTOR: Labella Env, LLC	BORING LOCATION: RI-GP4					
DRILLER: Mike Windrel Jr.	GROUND SURFACE ELEVATION: DATUM:					
LABELLA REPRESENTATIVE: E. Detweiler	START DATE: 10/9/17 END DATE: 10/9/17					
	WATER LEVEL DATA					
TYPE OF DRILL RIG: 6620 DT	DATE	TIME	WATER	CASING	REMARKS	
AUGER SIZE AND TYPE: N/A - 4" dual tube						
OVERBURDEN SAMPLING METHOD: Direct-Push, 5' macrocore						
ROCK DRILLING METHOD: N/A						

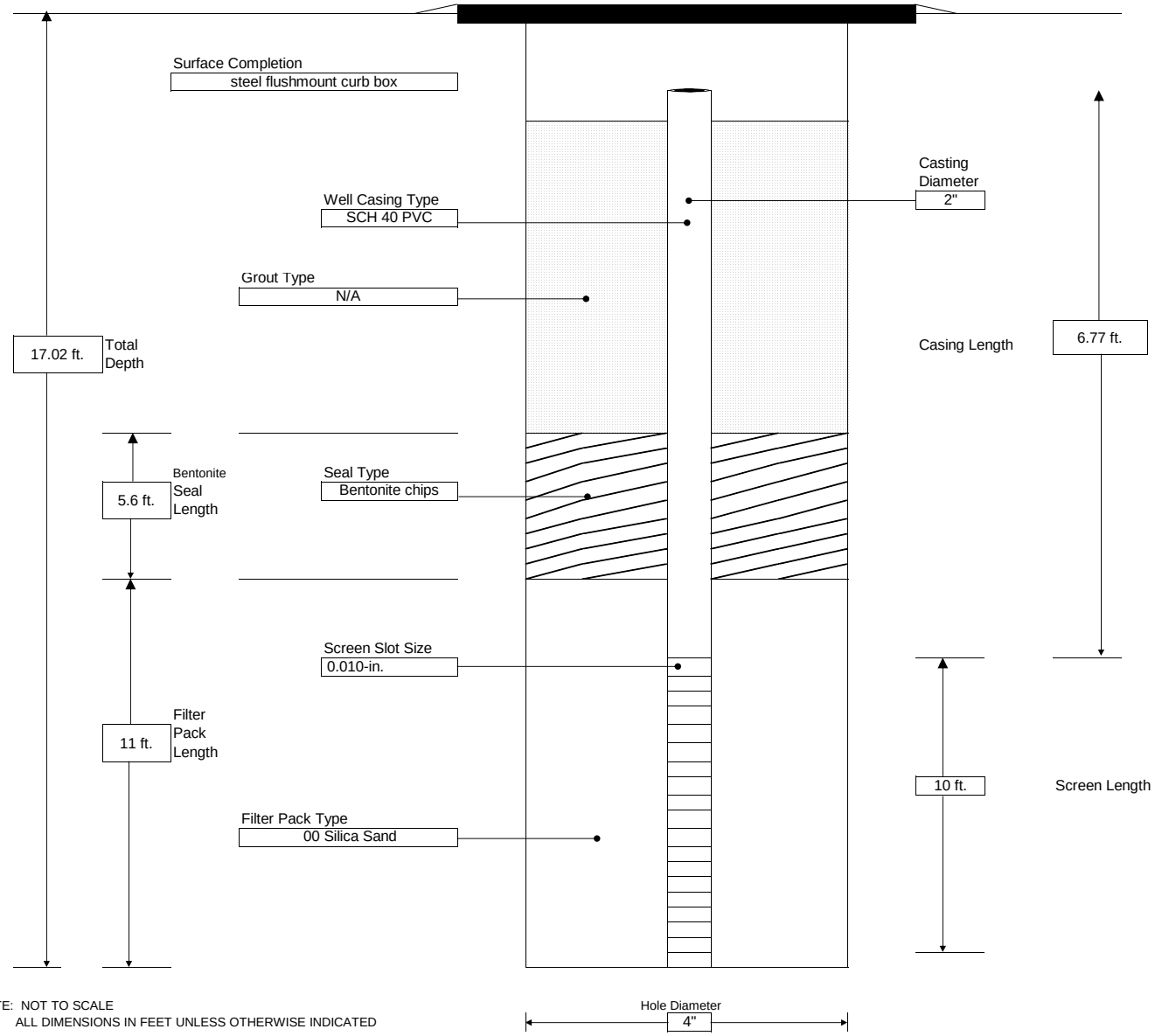


NOTE: NOT TO SCALE
ALL DIMENSIONS IN FEET UNLESS OTHERWISE INDICATED

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 MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

LaBella Associates 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Remedial Investigation Ellicott Station BCP Site 40-52 Ellicott St., Batavia, NY	BORING: RI-MW4 SHEET 1 OF 1 JOB # 2172238 CHKD. BY:

CONTRACTOR: Labella Env, LLC	BORING LOCATION: RI-GP6					
DRILLER: Mike Windrel Jr.	GROUND SURFACE ELEVATION: DATUM:					
LABELLA REPRESENTATIVE: E. Detweiler	START DATE: 10/9/17 END DATE: 10/9/17					
	WATER LEVEL DATA					
TYPE OF DRILL RIG: 6620 DT	DATE	TIME	WATER	CASING	REMARKS	
AUGER SIZE AND TYPE: N/A - 4" dual tube						
OVERBURDEN SAMPLING METHOD: Direct-Push, 5' macrocore						
ROCK DRILLING METHOD: N/A						



NOTE: NOT TO SCALE
ALL DIMENSIONS IN FEET UNLESS OTHERWISE INDICATED

GENERAL NOTES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL
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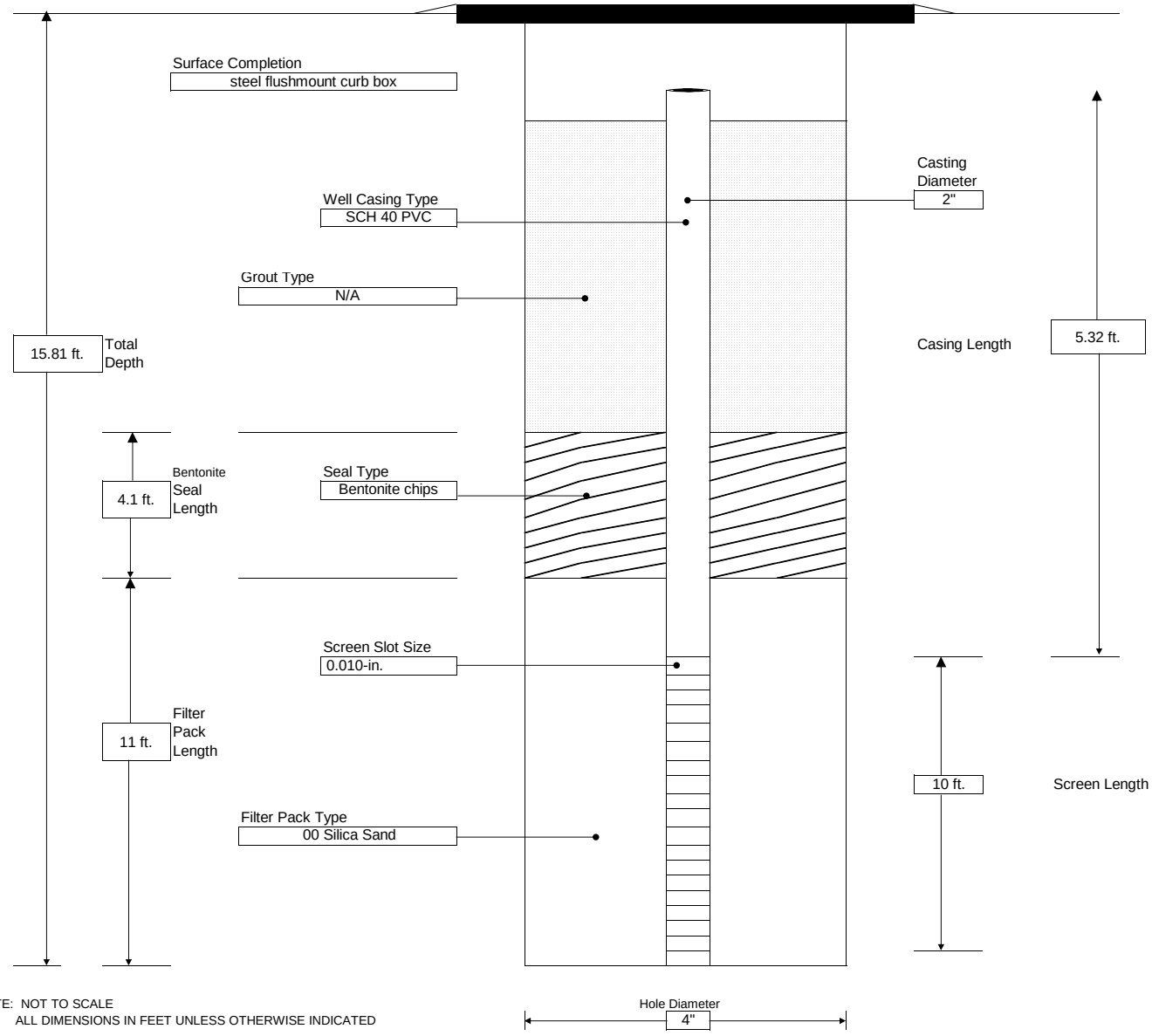
LaBella Powered by partnership 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Remedial Investigation Ellicott Station BCP Site 40-52 Ellicott St., Batavia, NY	BORING: RI-MW5 SHEET 1 OF 1 JOB # 2172238 CHKD. BY:

CONTRACTOR: Labella Env, LLC	BORING LOCATION: RI-GP7	
DRILLER: Mike Windrel Jr.	GROUND SURFACE ELEVATION:	DATUM:
LABELLA REPRESENTATIVE: E. Detweiler	START DATE: 10/9/17	END DATE: 10/9/17

	WATER LEVEL DATA				
TYPE OF DRILL RIG: 6620 DT	DATE	TIME	WATER	CASING	REMARKS
AUGER SIZE AND TYPE: N/A - 4" dual tube					
OVERBURDEN SAMPLING METHOD: Direct-Push, 5' macrocore					
ROCK DRILLING METHOD: N/A					



NOTE: NOT TO SCALE
ALL DIMENSIONS IN FEET UNLESS OTHERWISE INDICATED

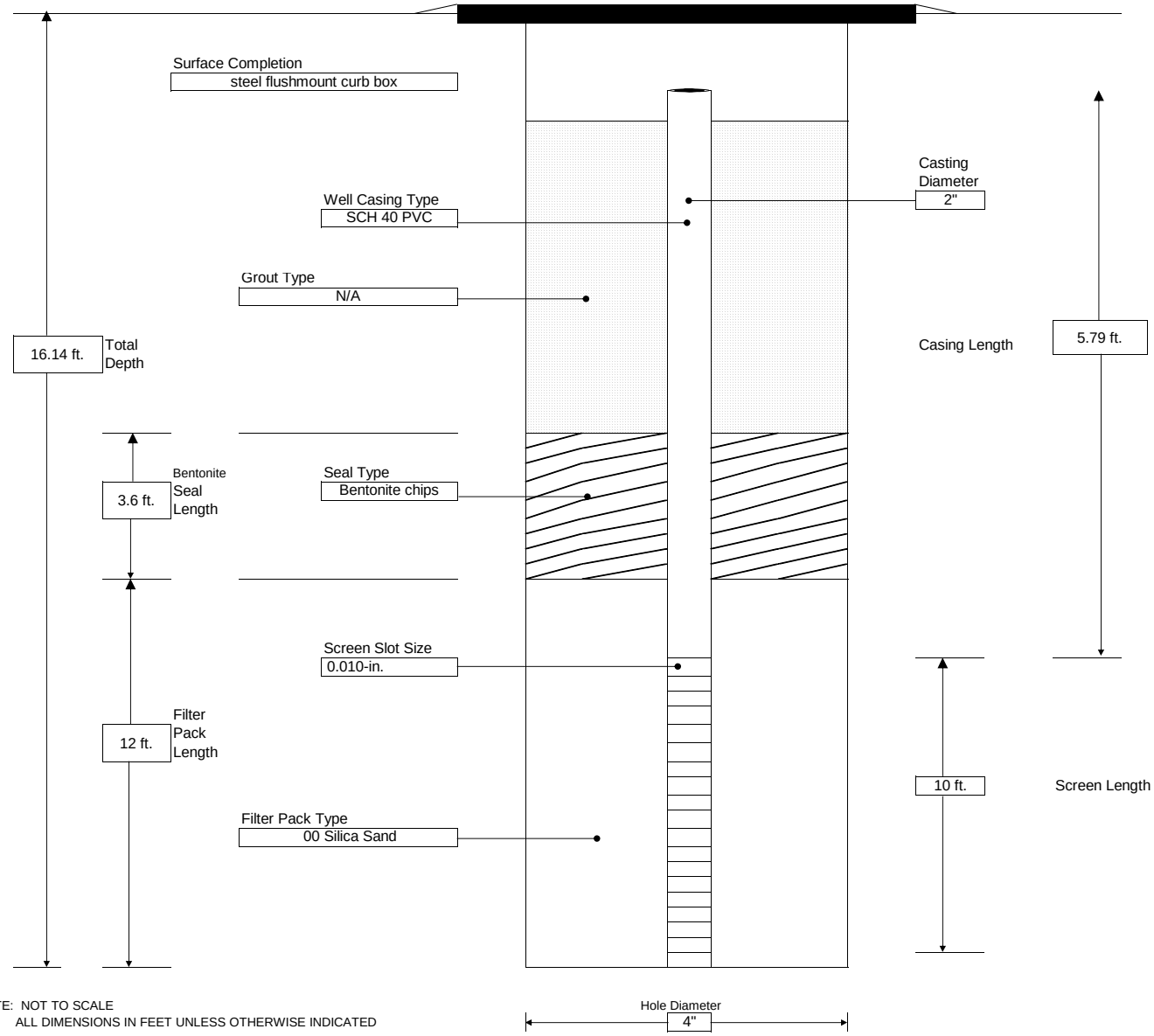
GENERAL NOTES:

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 MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

LaBella Associates, Professional Engineering, Surveying, Landscape Architecture, Geology 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Remedial Investigation Ellicott Station BCP Site 40-52 Ellicott St., Batavia, NY	BORING: RI-MW6 SHEET 1 OF 1 JOB # 2172238 CHKD. BY:

CONTRACTOR: Labella Env, LLC	BORING LOCATION: RI-GP8
DRILLER: Mike Windrel Jr.	GROUND SURFACE ELEVATION: DATUM:
LABELLA REPRESENTATIVE: E. Detweiler	START DATE: 10/10/17 END DATE: 10/10/17

	WATER LEVEL DATA			
TYPE OF DRILL RIG: 6620 DT	DATE	TIME	WATER	CASING	REMARKS
AUGER SIZE AND TYPE: N/A - 4" dual tube					
OVERBURDEN SAMPLING METHOD: Direct-Push, 5' macrocore					
ROCK DRILLING METHOD: N/A					



NOTE: NOT TO SCALE
ALL DIMENSIONS IN FEET UNLESS OTHERWISE INDICATED

GENERAL NOTES:
1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL
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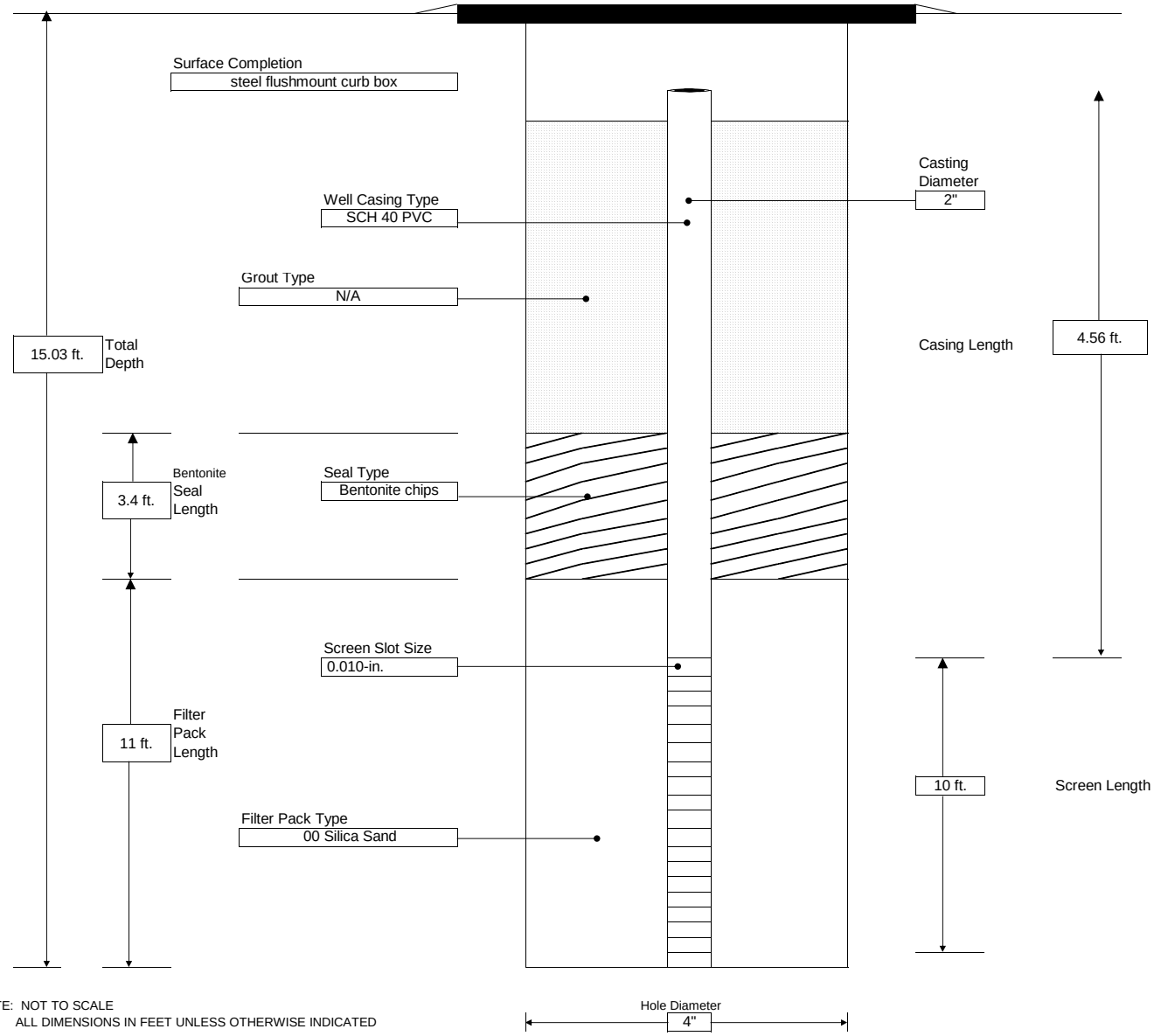
LaBella Associates, P.C. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Remedial Investigation Ellicott Station BCP Site 40-52 Ellicott St., Batavia, NY	BORING: RI-TPMW1R SHEET 1 OF 1 JOB # 2172238 CHKD. BY:

CONTRACTOR: Labella Env, LLC
DRILLER: Mike Windrel Jr.
LABELLA REPRESENTATIVE: E. Detweiler
BORING LOCATION: RI-GP3
GROUND SURFACE ELEVATION: DATUM:
START DATE: 10/10/17 END DATE: 10/10/17

TYPE OF DRILL RIG: 6620 DT
AUGER SIZE AND TYPE: N/A - 4" dual tube
OVERBURDEN SAMPLING METHOD: Direct-Push, 5' macrocore
ROCK DRILLING METHOD: N/A

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS



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GENERAL NOTES:
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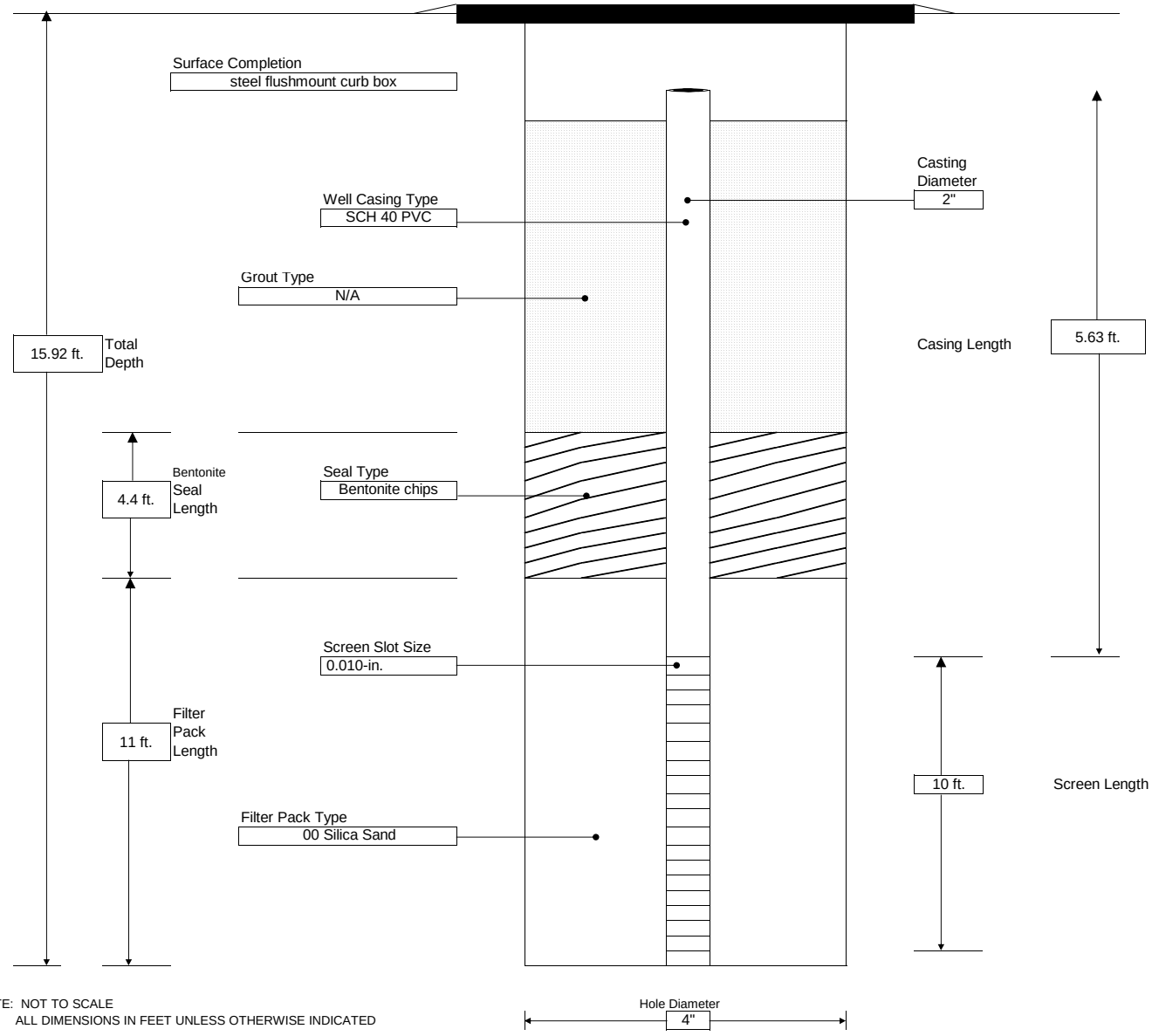
LaBella Powered by partnership 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Remedial Investigation Ellicott Station BCP Site 40-52 Ellicott St., Batavia, NY	BORING: RI-TPMW3R SHEET 1 OF 1 JOB # 2172238 CHKD. BY:

CONTRACTOR: Labella Env, LLC	BORING LOCATION: see map
DRILLER: Mike Windrel Jr.	GROUND SURFACE ELEVATION: DATUM:
LABELLA REPRESENTATIVE: E. Detweiler	START DATE: 10/10/17 END DATE: 10/10/17

TYPE OF DRILL RIG: 6620 DT
AUGER SIZE AND TYPE: N/A - 4" dual tube
OVERBURDEN SAMPLING METHOD: Direct-Push, 5' macrocore
ROCK DRILLING METHOD: N/A

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS



NOTE: NOT TO SCALE
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GENERAL NOTES:
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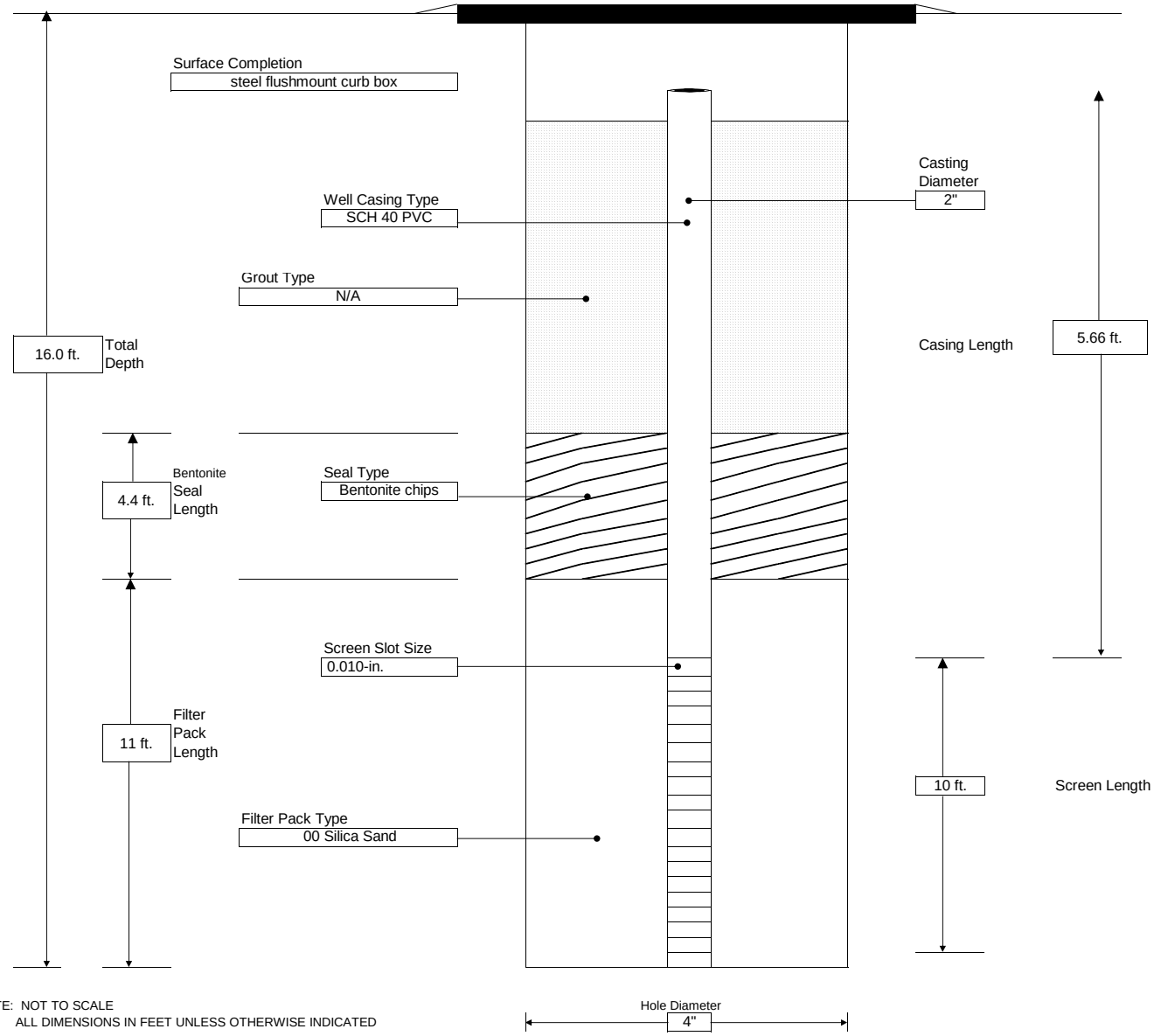
LaBella 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	PROJECT Remedial Investigation Ellicott Station BCP Site 40-52 Ellicott St., Batavia, NY	BORING: RI-TPMW4R SHEET 1 OF 1 JOB # 2172238 CHKD. BY:

CONTRACTOR: Labella Env, LLC	BORING LOCATION: see map	
DRILLER: Mike Windrel Jr.	GROUND SURFACE ELEVATION:	DATUM:
LABELLA REPRESENTATIVE: E. Detweiler	START DATE: 10/10/17	END DATE: 10/10/17

	WATER LEVEL DATA				
TYPE OF DRILL RIG: 6620 DT	DATE	TIME	WATER	CASING	REMARKS
AUGER SIZE AND TYPE: N/A - 4" dual tube					
OVERBURDEN SAMPLING METHOD: Direct-Push, 5' macrocore					
ROCK DRILLING METHOD: N/A					



NOTE: NOT TO SCALE
ALL DIMENSIONS IN FEET UNLESS OTHERWISE INDICATED

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 MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.

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 any potentially contaminated material, the site owner or their representative will notify the NYSDEC. Table 3-1 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.

Table 3-1: Notifications*

NYSDEC Project Manager; Mr. Todd Caffoe	585-226-5350, todd.caffoe@dec.ny.gov
NYSDEC Regional HW Engineer; Mr. David Pratt, PE	585-226-5315, david.pratt@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 4 of this SMP;
- 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.

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

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 subsurface work and the excavation and load-out of all excavated subsurface 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 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 (not including portions of the Site buildings) 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. 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. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-15 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.

Any demolition material proposed for reuse on-site will be sampled for 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 this ISMP and will comply with the final SMP. The existing cover system is primarily comprised of a concrete building pads and asphalt pavement. Following demolition of the Garage Building and a portion of the Main Building (refer to Figure 7 of ISMP), a new cover system will be constructed and comprised of a combination of new building pads, a patio, asphalt pavement and minimum of 24 inches of clean soil, recycled masonry or similar acceptable material. The final SMP will have a comprehensive description of the final cover system.

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.

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 polychlorinated 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 70 parts per trillion (ppt) combined PFOA/S, then the source of backfill shall be rejected. Category B deliverables are required for PFAS analysis.

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

A Stormwater Pollution Prevention Plan (SWPPP) is planned to be prepared as part of Site redevelopment. A copy of the SWPPP will be provided in the Change of Use or 15 day activity notice. Typical SWPPP procedures generally include the following:

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 SMP 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 Final Engineering Report and final SMP.

3-13 COMMUNITY AIR MONITORING PLAN

Air sampling stations are to be determined. A figure showing the location of air sampling stations based on generally prevailing wind conditions is shown in Figure 3 of the ISMP. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two 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. There are currently no Site tenants. Use of specific odor control methods 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 Engineering Report.

All necessary means will be employed to prevent on- and off-site nuisances if nuisance odors are noted. 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 as needed; and (c) using foams to cover exposed odorous soils as needed. 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.
- Gravel will be used on roadways to provide a clean and dust-free road surface, as needed.

On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

APPENDIX 4

Health and Safety Plan 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
40-52 Ellicott Street
Batavia, New York 14020

Prepared For:

Ellicott Station, LLC
c/o Batavia Development Corporation
One City Centre
Batavia, New York 14020

LaBella Project No. 2151319

October 2015

Site Health and Safety Plan

Location:

Ellicott Station
40-52 Ellicott Street
Batavia, New York 14020

Prepared For:

Ellicott Station, LLC
c/o Batavia Development Corporation
One City Centre
Batavia, New York 14020

LaBella Project No. 2151319

October 2015

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SITE HEALTH AND SAFETY PLAN

Project Title:	Ellicott Station - Brownfield Cleanup Program
Project Number:	2151319
Project Location (Site):	40-52 Ellicott Street, Batavia, New York 14020
Environmental Director:	To Be Determined
Project Manager:	To Be Determined
Plan Review Date:	October 5, 2015
Plan Approval Date:	October 12, 2015
Plan Approved By:	Mr. Richard Rote, CIH
Site Safety Supervisor:	To Be Determined
Site Contact:	Kevin Hayes
Safety Director:	To Be Determined
Proposed Date(s) of Field Activities:	To Be Determined
Site Conditions:	1.132 acres; Current Site features include a primary brick building of approximately 19,142 square feet and a garage outbuilding of 4,250 square feet. The balance of the one-acre property is covered by asphalt and bordered by chain link fencing.
Site Environmental Information Provided By:	❑ Phase I Environmental Site Assessment, 40-52 Ellicott Street, Rochester, New York, prepared by LaBella Associates, D.P.C. dated October 2012 ❑ Phase II Environmental Site Assessment, 40-52 Ellicott Street, Rochester, New York, prepared by LaBella Associates, D.P.C. dated July 2013
Air Monitoring Provided By:	To Be Determined
Site Control Provided By:	Contractor(s)

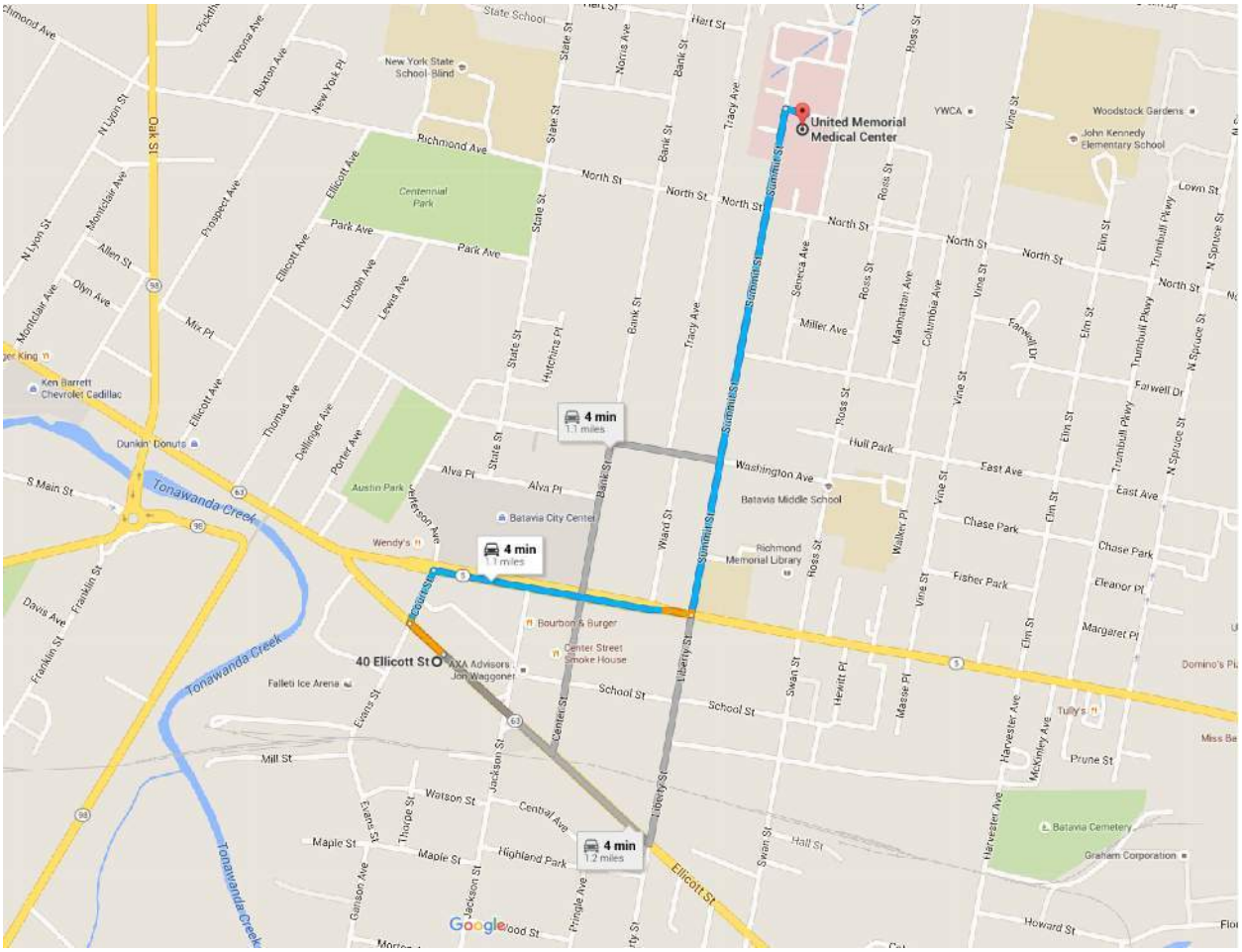
EMERGENCY CONTACTS

	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:	Kevin Hayes	716-332-5959
Agency Contact:	NYSDEC – Todd Caffoe NYSDOH – To Be Determined	585-226-5350 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 40-52 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 (QC) Program

Location:

Ellicott Station
40-52 Ellicott Street
Batavia, New York

Prepared For:

Ellicott Station, LLC
c/o Batavia Development Corporation
One City Centre
Batavia, New York 14020

LaBella Project No. 2151319

October 2015

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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.

<u>Hollow-Stem Auger Advanced Borings:</u>

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.