FORMER STOW MANUFACTURING

BROOME COUNTY

BINGHAMTON, NEW YORK

SITE MANAGEMENT PLAN

NYSDEC Site Number: C704058

Prepared for:

Binghamton Northside Limited Partnership

3D Development Group, LLC

Community Potential, Inc.

4549 Main Street, Suite 201, Amherst, New York 14226

Prepared by:

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585-454-6110

Revisions to Final Approved Site Management Plan:

Revision No.	Date Submitted	Summary of Revision	NYSDEC Approval Date

NOVEMBER 2019

CERTIFICATIONS

I DANIEL NOLL certify that I am currently a NYS registered professional engineer as in defined in 6 NYCRR Part 375 and that this 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.

11/5/19 DATE

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List of Acronyms

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

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

ES EXECUTIVE SUMMARY

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

Site Identification:	C704058: Former Stow Manufacturing, 435 State Street, Binghamton, New York 13901

Institutional Controls:	1. The property may be used for restricted residential, commercial and industrial uses.
	2. All ECs must be inspected and maintained at a frequency and in a manner defined in the SMP.
	3. The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Broome County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
	4. Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP.
	5. All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP.
	6. Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP.

Site Identification: C704058: Former Stow Manufacturing, 435 State Street, Binghamton, New York 13901

	7. Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP.
	8. 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 the Environmental Easement.
	9. The potential for vapor intrusion must be evaluated for any buildings developed in the area within the site boundaries and any potential impacts that are identified must be monitored or mitigated.
	10. Vegetable gardens and farming on the site are prohibited.
Engineering Controls:	1. Constructed Soil Cover System
	2. LNAPL removal system for AOC #2

Inspections:	Frequency
1. Constructed Soil Cover System	Annually
2. LNAPL removal system (AOC #2)	Quarterly
Monitoring:	
1. Wells RW-1 and MW-08R	Quarterly

Site Identification: C704058: Former Stow Manufacturing, 435 State Street, Binghamton, New York 13901

Maintenance:	
1. Constructed Soil Cover System	As needed
Reporting:	
1. Periodic Review Report	Annually

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

1.0 INTRODUCTION

1.1 General

This Site Management Plan (SMP) is a required element of the remedial program for the Former Stow Manufacturing Site located in Binghamton, 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. C704058 which is administered by New York State Department of Environmental Conservation (NYSDEC).

Community Potential, Inc. entered into a Brownfield Cleanup Agreement (BCA) on April 18, 2017 with the NYSDEC to remediate the site. An amendment to the BCA was submitted to the NYSDEC requesting that Binghamton Northside Limited Partnership, Community Potential, Inc., and 3D Development, LLC be listed as a volunteer. A figure showing the site location and boundaries of this site is provided in Figure 2. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Environmental Easement. Please note the Environmental Easement has been submitted, but not signed or recorded with Broome County as the date of the SMP submission. The application for the Environmental Easement is included in Appendix 1.

After completion of the remedial work, some contamination was left at this site, which is hereafter referred to as "remaining contamination". Institutional and Engineering Controls (ICs and ECs) have been incorporated into the site remedy to control exposure to remaining contamination to ensure protection of public health and the environment. An Environmental Easement granted to the NYSDEC, and recorded with the Broome County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site.

This SMP was prepared to manage remaining contamination at the site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the Environmental Easement, which is grounds for revocation of the Certificate of Completion (COC);
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the BCA (Index #C704058-02-17; Site #C704058) 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 2 of this SMP.

This SMP was prepared by LaBella Associates, D.P.C, on behalf of Binghamton Northside Limited Partnership, Community Potential, Inc., and 3D Development, 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 SMP addresses the means for implementing the ICs and/or ECs that are required by the Environmental Easement for the site.

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. In accordance with the Environmental Easement for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.3 Notifications

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

- 60-day advance notice of any proposed changes in site use that are required under the terms of the BCA, 6NYCRR Part 375 and/or Environmental Conservation Law.
- 7-day advance notice of any field activity associated with the remedial program.
- 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundation, structures or EC that reduces or has the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days describing and documenting actions taken to restore the effectiveness of the ECs.

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

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

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

Table 1.3 on the following page includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix 2.

Table 3.1: Notifications*

Name	Contact Information
NYSDEC Project Manager Gary Priscott, P.G.	607-775-2545, gary.priscott@dec.ny.gov
NYSDEC Regional HW Engineer Harry Warner, P.E.	315-426-7551, harry.warner@dec.ny.gov
NYSDEC Site Control Kelly A. Lewandowski, P.E.	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 Binghamton, Broome County, New York and is identified as Section 144.82 Block 1 and Lot 9.1 on the Broome County Tax Map (see Figure 2). The site is an approximately 2.86-acre area and is bounded by a gas station and commercial properties to the north, State Street and commercial properties to the south, vacant commercial parcel to the east, and North Way Street and commercial properties to the west (see Figure 2 – Site Layout Map). The boundaries of the site are more fully described in Appendix 1 –Environmental Easement. Please note the Environmental Easement has been submitted, but not signed or recorded with Broome County as the date of the submission of the SMP. The application for the Environmental Easement is included in Appendix 1. The owner of the site parcel at the time of issuance of this SMP is:

- Binghamton Northside Housing Development Fund Company, Inc., as nominee for Binghamton Northside Limited Partnership

2.2 Physical Setting

2.2.1 Land Use

The Site consists of the following at the time of the issuance of this SMP: one parcel that is the process of being developed with a mixed use commercial and residential apartment building. Whereas the first (ground) floor will consist of commercial space and residential apartments on the upper floors. The Site is zoned C-1 Service Commercial.

The properties adjoining the Site and in the neighborhood surrounding the site primarily include commercial properties to the north, south, east, and west of the site.

2.2.2 Geology

The Allegheny Plateau is the primary geologic province for Broome County and is cross-cut by stream and deep river valleys. The area has been shaped by glaciation events that eroded and deposited material. The present Susquehanna River is underlain by the Sonyea group. The Sonyea Group that consists of black shales and mudstones and fine grain sedimentary rock. During the latter stages of glaciation, meltwaters heavily laden with silt, sand, and gravel deposited this material as stratified outwash plains above the bedrock and till. Glacial drift deposits now exceed two-hundred feet (200 feet (ft)) in thickness along the river valley axis, tapering to negligible thicknesses towards the valley walls.

Subsurface conditions typically encountered at the site consist of historic fill materials from depths of 2 to 20 ft below the ground surface (bgs) followed by outwash sand and gravel. The historic fill materials contained concrete, brick, ash, wood, scrap metal pieces, cinders, and asphalt. Depths of fill material varied throughout the Site with total depths of fill material ranging in depth from 10 to 22 ft bgs at the southeastern area of Site and total depths of fill material ranging in depths from approximately 11 to 20 ft bgs at the northeastern portion of the Site. Borings have been advanced to a maximum depth of approximately 62 ft bgs during previous geotechnical investigations without encountering bedrock.

Site specific boring logs are provided in Appendix 3.

2.2.3 Hydrogeology

Depth to groundwater at the BCP Site based on RI monitoring wells indicates the shallow overburden water table is between approximately 9 and 18 feet (ft) below ground surface (bgs), varying by location. Groundwater flow at the BCP Site was evaluated during the RI September 2018 groundwater sampling event and indicated groundwater flow to the southwest direction.

A groundwater contour map is shown in Figure 3 with groundwater elevation data. Groundwater monitoring well construction logs are provided in Appendix 3.

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.

- *Phase I Environmental Site Assessment Report, 435 State Street, City of Binghamton, Broome County, New York* by Delta Engineers dated April 2015
- *Phase II Environmental Site Assessment, 435 State Street, Binghamton, New York* by LaBella Associates, D.P.C, dated November 2016
- *Supplemental Phase II Environmental Site Assessment, 435 State Street, Binghamton, New York* by LaBella Associates, D.P.C, dated November 22, 2016
- *Remedial Investigation Report, Former Stow Manufacturing, 435 State Street, Binghamton, New York* by LaBella Associates, D.P.C, dated January 16, 2019
- *Remedial Action Work Plan, Former Stow Manufacturing, 435 State Street, Binghamton, New York* by LaBella Associates, D.P.C, dated February 8, 2019

These aforementioned reports are on file with the NYSDEC.

2.3.1 Delta Engineers April 2015 Phase I ESA

The findings of the Delta Engineers Phase I ESA are summarized below:

- *"Delta Engineers, Architects & Land Surveyors, P.C. (Delta) was retained by the Broome County Land Bank Corporation / Broome County Industrial Development Agency (BCIDA) to complete a Phase I Environmental Site Assessment (ESA) for an approximately 4.5 acre property located at 435 State Street in the City of Binghamton, Broome County, New York. The County of Broome currently owns the subject property".*
- *"Recognized environmental conditions* (i.e., RECs) *were observed by Delta in conducting the records review. No recognized environmental conditions, or information, were observed conducting interviews associated with the ESA. No recognized environmental conditions were observed by Delta in conducting the site reconnaissance associated with the ESA".*
- RECs identified associated with the Site are as follows:

    - *"REC 1 - The majority of the subject property was occupied by Stow Manufacturing Co., Inc. (Stow) and used for industrial purposes from approximately 1898 to the early 1970's. This use included up to three machine shops, a foundry and other activities that are not precisely known. We note that during most of this time period there was no environmental legislation to protect the environment (Clean Air Act 1970, Clean Water Act 1972). Pollutants associated with machine shops include oils, metals, solvents, and metal coatings generated through machining, surface treatment and plating operations, metal cleaning and stripping operations and paint applications. Pollutants enter the waste stream when spent process solutions, filter sludges, rinse water and used oil are disposed. It is likely that other unknown industrial processes that occurred on the subject property also produced pollutants and that 55 gallon drums of chemicals were stored/used on the subject property".*
    - *"REC 2 – Historical topographic maps from 1942 and 1947 show an elongated body of water directly to the north of Stow. The appearance of this water coincides with Stow tripling their personnel level and greatly increasing production to keep up with the demands of the war effort (see Appendix 15.7.3). The water shown could likely have been a lagoon used for the disposal of wastes, as was common during this time period. This body of water was no longer present on the 1961 historical topographic map".*
    - *"REC 3 – The adjoining property to the east has documented use as a motor repair facility from at least 1930 to 1970. The adjoining properties to the south are shown to have been used on the 1970 Sanborn Map as a bus repair shop and a used auto sales & service business. Potential pollution from motor repair facilities includes:*

- *Shop solvents – These are organic solvents used in degreasing / cleaning operations. These are volatile compounds (they transition from liquid into gaseous phase under normal temperature and pressure). Examples include chlorinated solvents (trichloroethylene, aka TCE, carbon tetrachloride, methylene chloride and perchloroethylene, aka PCE), petroleum hydrocarbons (toluene, xylene) and other organic solvents (methyl ethyl ketone, aka MEK).*
- *Shop fluids – These include used engine oil, transmission and brake fluids. These fluids are oil based and may contain a series of toxic heavy metals. The heavy metals usually leach in the auto fluids from a series of parts (welds, radiator or other engine components) during normal operation.*
- *Auto antifreeze – Contains ethylene glycol (poisonous to animals and humans) and lead (may leach and contaminate coolant fluid)*
- *Shop spills – Spills and leaks may occur during the repair work or normal storage of cleaning solvents, paints, engine fluids, etc.*
- *Shop USTs / ASTs – Automotive repair facilities during this time period almost always had their own source of gasoline. Historic USTs / ASTs were prone to spills and leaks".*

- *"REC 4 – As stated in section 7.3 of this report, there are no reasonably ascertainable records regarding the demolition of the former Stow facility or construction of the existing building. If some of the demolition debris were buried on-site, the subject property could be contaminated with lead, asbestos and / or PCBs which were commonly used in building materials and equipment during the time period when the Stow buildings were constructed.*
- *Business Environmental Risk – Excavation on the subject property may reveal contamination and remediation would be the responsibility of the current Owner. The NYSDEC and an attorney specializing in environmental law should be consulted regarding liability issues".*

2.3.2 LaBella September 2016 Phase II ESA

The September 2016 LaBella Phase II ESA consisted of the advancement of eleven (11) soil borings, four (4) geotechnical borings, installation of five (5) temporary groundwater monitoring wells and laboratory analysis of soil and groundwater samples. Figure 4B illustrates the Phase II ESA testing locations. The findings of the LaBella September 2016 Phase II ESA are summarized below:

Fill Materials:

General Construction & Demolition Debris (C&D)

C&D debris was generally observed in borings located within the footprints of former on-site structures. Although this is generally hard to fully characterize through soil borings based on the limited recovery of these types of materials in spit spoon/macro-core samplers, evidence of traditional building materials appeared to be present.

Regulated Solid Waste

The BCP Site has been used for industrial purposes from approximately 1898 to the early 1970's. In addition, several former structures were located within the footprint of the BCP Site. Based on the site history it is not surprising that the fills present across the BCP Site can be variable. Much of the soil-based fills also contain industrial remnants such as slag, fly ash, cinders, etc. Concentrations of heavy metals and some polyaromatic hydrocarbons (PAHs) were identified in the industrial fill materials at concentrations exceeding the restricted residential soil cleanup objectives and require remediation.

Groundwater

Groundwater samples collected and analyzed from the Site encountered low-level concentrations of volatile organic compounds (VOCs). Specifically, several constituents of concern were detected from LBA-MW-01 and LBA-MW-02 installed along the northern portion of the BCP Site. However, exceedances do not indicate a source area for groundwater impacts in the locations evaluated.

2.3.3 LaBella November 2016 Supplemental Phase II ESA

LaBella conducted a Supplemental Phase II ESA in November 2016. LaBella collected additional analytical data in order to further assess subsurface conditions which may complicate development of the parcel.

The supplemental Phase II ESA included advancing eight (8) soil borings, installing one (1) groundwater monitoring well, observing for impacts in the field, screening with a photoionization detector (PID), X-Ray Fluorescence (XRF) and methane gas meters and collecting and analyzing samples of soil and fill materials at a laboratory. Figure 4 illustrates the Phase II ESA testing locations. Based on the cumulative testing completed at the BCP Site to date, LaBella identified the following areas of concern:

Significant fill materials have been observed at the BCP Site. The fill materials consist of man-made industrial waste (e.g., ash, cinders, slag), putrescible waste (e.g., wood) and other waste materials (glass, metal, plastic, rubber tires, etc.). The waste material is not homogenous and materials significantly vary based on location and depth.

The waste material contain high concentrations of heavy metals and these materials require special handling, transport and disposal should they be encountered during redevelopment. It is possible some of the waste may be considered hazardous waste.

Petroleum odors have been identified in numerous locations at the BCP Site and there is likely a source of petroleum on-site (as opposed to an off-site source). This is based on petroleum odors and PID readings present in the soil/fill materials above the saturated zone. Some of the petroleum impacts observed are consistent with a 'nuisance condition' as defined in NYSDEC Commissioner Policy 51 (CP-51).

The chlorinated solvent trichloroethene TCE was identified within the existing building at levels that exceed the NYSDOH Air Guideline. LaBella understands that currently the building is vacant and is being planned for demolition in the future. These results indicate that TCE is present at the Site and future structures should evaluate for and/or mitigate for soil vapor intrusion.

Based on the TCE detections in the soil vapor and indoor air there may be a source present beneath or in proximity to the current building or in historic industrial areas. While groundwater sampling to date has not identified a groundwater plume of TCE; significant portions of the BCP Site soil and groundwater have not yet been investigated (e.g., beneath the existing building).

2.3.4 LaBella Associates, D.P.C. Remedial Investigation Report January 19, 2019

The RI was designed to define the nature and extent of the contamination at the Site and based on the RI work, two (2) AOCs were identified. RI sample locations are summarized on Figures 4A-4D. The RI conducted at the site included:

- Surface soil sampling at eleven (11) locations and laboratory analysis of thirty-six (36) surface soil samples
- Subsurface investigation at twenty-five (25) boring locations and laboratory analysis of thirty (33) soil samples
- Groundwater monitoring well installation at nine (9) locations and two rounds of groundwater samples from seven (7) wells
- Soil gas point installation and sampling at five (5) locations
- Evaluating the recoverability/recharge of LNAPL in well LBA-MW-02R

Based on the cumulative results of the RI, two remedial AOCs are present at the Site that relate to the following:

- **AOC #1** - Landfilling/Historic Fill Materials for the sample collected from boring RISB-10 3'-5' that detected at a concentration of 6.5 mg/l that is above the Hazardous Waste Regulatory Limit of 5 mg/l.
- **AOC #2** – Petroleum Impacts related to the LNAPL detected in well LBA-MW-02R.

2.3.5 LaBella Associates, D.P.C. Remedial Action Work Plan dated February 8, 2019

The Remedial Action Work Plan (RAWP) was designed to remediate the following Areas of Concern:

- **AOC #1** - Removal of Hazardous Waste Levels of Soil in the area of RI boring RISB-10.
- **AOC #2** – Removal of LNAPL from the area of RI well LBA-MW-02R.

Remedial efforts were conducted at the Site in June and July 2019 that included the removal or approximately 10 CY of lead impacted soil from AOC #1 and approximately 10 CY of petroleum impacted soil from AOC #2. In addition to the soil removal from AOC #2, a recovery well (i.e. RW-1) was installed within the AOC #2 remedial excavation to extract LNAPL and groundwater to remove the source of impacts. Approximately 20,000 gallons of water and LNAPL mixture were removed as part of the remedial work. Of the 20,000 gallons of water and LNAPL mixture that were removed, an estimated 38 gallons of the mixture is LNAPL. In addition to the 38 gallons of LNAPL removed, approximately 5 gallons were removed from well MW-02R prior to the AOC #2 remedial work via a bailer.

The soil, groundwater and LNAPL remain on-site pending disposal as of the date of the SMP submission.

2.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site as listed in the Decision Document dated March 2018 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.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

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

Remaining contamination at the site is described below and refers to soil impacts above Unrestricted Use SCOs and groundwater impacts above Part 703 Groundwater Standards or NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 values (or groundwater standards). The entire site subsurface contains fill materials to varying depths and is assumed to contain elevated concentrations of chemicals of concern above the Unrestricted Use SCOs.

2.5.1 Soil

The site surface soil within the top 2 ft tested below the Restricted Residential Use SCOs. Residual contamination remains at the site at levels in the soil exceeding the Unrestricted Use SCOs after the completion of the remedial actions. Table 2.5.1A (VOCs), Table 2.5.1B (SVOCs), Table 2.5.1C (Metals), Table 2.5.1D (PCBs), and Table 2.5.1E (Pesticides) summarize the results above the Unrestricted Use SCOs and Figure 4A shows those locations within surface soil at the site after the completion of remedial action.

Table 2.5.1F (VOCs), Table 2.5.1G (SVOCs), Table 2.5.1H (Metals), Table 2.5.1I (PCBs), Table 2.5.1J (Pesticides), and Table 2.5.1K (TCLP RCRA Metals) summarize the results above the Unrestricted Use SCOs and Figures 4B and 4C shows those locations within subsurface soil at the site after the completion of remedial action.

2.5.2 Groundwater

The overburden groundwater table testing at the site indicate contamination remains at levels slightly exceeding the groundwater standards. Table 2.5.2A (VOCs), Table 2.5.2B (SVOCs), Table 2.5.2C (Metals), Table 2.5.2D (PCBs), and Table 2.5.2E (Pesticides) summarize the results above the groundwater standards and Figure 4D shows those locations at the site.

2.5.3 Soil Vapor

A total of five (5) exterior soil gas samples were collected during the RI. In addition, an ambient outdoor air sample was collected at the upwind periphery of the site.

The results of the Exterior Ambient Air and Soil Gas Vapor Results are summarized on Table 2.5.3. Several petroleum and chemical related VOCs were detected in each soil vapor sample as well as the ambient air sample. The NYSDOH and NYSDEC currently do not have guidance values or standards established for the VOCs detected in the soil gas samples. Soil gas sample locations are shown on Figure 4A.

3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

3.1 General

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

This plan provides:

- A description of all IC/ECs on the site;
- The basic implementation and intended role of each IC/EC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the controls to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of IC/ECs, such as the implementation of the Excavation Work Plan (EWP) (as provided in Appendix 4) for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the IC/ECs required by the site remedy, as determined by the NYSDEC.

3.2 Institutional Controls

A series of ICs is required by the Decision Document 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, commercial and industrial uses only. Adherence to these ICs on the site is required by the Environmental Easement and will be implemented under this SMP. ICs 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 2. These ICs are:

- The property may be used for : restricted residential, commercial, and industrial uses;
- All ECs must be operated and maintained as specified in this SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Broome County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in this SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in this SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in this SMP;

- 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 the Environmental Easement;

- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries noted on Figure 2, and any potential impacts that are identified must be monitored or mitigated; and

- Vegetable gardens and farming on the site are prohibited.

3.3 Engineering Controls

3.3.1 Constructed Soil Cover System

The constructed soil cover system consists of a minimum 2 ft thick layer of a vegetated clean soil layer that meets the Restricted Residential Use SCOs that was placed in a berm at the north end of the site. The constructed soil cover was placed over material that was generated from site development excavations related to the building foundations and underground utilities from depths greater than 2 ft bgs. The location of the berm is shown on Figure 5.

Exposure to remaining contamination at the site is prevented by the existing soil cover. This existing soil cover is comprised of a minimum of 24 inches of clean soil located at the site surface that was tested during the RI that meets the Restricted Residential Use SCOs. During the recent development of the site, additional fill material that includes imported gravel (approved by the NYSDEC for importation) has been placed over most of the site surface and the existing soil cover. In addition, the new development will include a concrete slab on grade building, asphalt pavement, and concrete-covered sidewalks covering the majority of the site surface.

The Excavation Work Plan (EWP) provided in Appendix 4 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 constructed soil cover system are provided in the Monitoring and Sampling Plan included in Section 4.0 of this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and associated Community Air Monitoring Plan (CAMP) prepared for the site and provided in Appendix 5.

3.3.2 LNAPL Removal System

The goal of this EC is to remove recoverable product from recovery well RW-1, if encountered. Extraction events from RI well MW-02R (well MW-02R was removed during the remedial work) and recovery well RW-1 have removed approximately 43 gallons of LNAPL. LNAPL was initially measured in well MW-02R at approximately 1.5 ft thick and in recovery well RW-1 at approximately 1/8 inches thick in July 2019.

The LNAPL recovery system consists of monitoring a network of two (2) groundwater monitoring wells for the presence of LNAPL. To date LNAPL has only been identified in well MW-02R and RW-1. The presence of LNAPL will be monitored with a bailer and/or oil-water interface meter, combined with the installation of absorbent well sock (*PIG® Monitoring Well Skimming Sock*, or similar) as needed to recover any identified LNAPL present in the wells. The two (2) wells monitored are shown on Figure 5 and Site Management Forms to monitor for LNAPL in AOC #2 is included in Appendix 6. Procedures for operating and maintaining the LNAPL removal system are documented in the Operation and Maintenance Plan (Section 5.0 of this 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.

3.3.3.1 Constructed Soil Cover System

The constructed soil cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in accordance with this SMP in perpetuity.

3.3.3.2 LNAPL Recovery System

The LNAPL recovery system will not be discontinued unless prior written approval is granted by the NYSDEC and the NYSDOH. In the event that monitoring data indicates that the LNAPL recovery system may no longer be required, a proposal to discontinue the system will be submitted by the remedial party to the NYSDEC and NYSDOH.

4.0 MONITORING AND SAMPLING PLAN

4.1 General

This Monitoring and Sampling Plan describes the measures for evaluating the overall performance and effectiveness of the remedy. This Monitoring and Sampling Plan may only be revised with the approval of the NYSDEC. Details regarding the sampling procedures, data quality usability objectives, analytical methods, etc. for all samples collected as part of site management for the site are included in the Quality Control Plan provided in Appendix 7.

This Monitoring and Sampling Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance (SCGs), particularly groundwater standards and Part 375 SCOs for soil; and
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment;

To adequately address these issues, this Monitoring and Sampling Plan provides information on:

- Sampling locations, protocol and frequency;
- Information on all designed monitoring systems;
- Analytical sampling program requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and

- Annual inspection and periodic certification.

Reporting requirements are provided in Section 7.0 of this SMP.

4.2 Site-wide Inspection

Site-wide inspections will be performed at a minimum of once per year. Modification to the frequency or duration of the inspections will require approval from the NYSDEC. Site-wide inspections will also be performed after all severe weather conditions that may affect ECs or monitoring devices. During these inspections, an inspection form will be completed as provided in Appendix 6 – Site Management Forms. The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that site records are up to date.

Inspections of all remedial components installed at the site will be conducted. A comprehensive site-wide inspection will be conducted and documented according to the SMP schedule, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether ECs continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria; and

- If site records are complete and up to date; and

Reporting requirements are outlined in Section 7.0 of this plan.

Inspections will also be performed in the event of an emergency. If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs that reduces or has the potential to reduce the effectiveness of ECs in place at the site, verbal notice to the NYSDEC must be given by noon of the following day. In addition, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the IC/ECs implemented at the site by a qualified environmental professional, as determined by the NYSDEC. Written confirmation must be provided to the NYSDEC within 7 days of the event that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.

4.3 Treatment System Monitoring and Sampling

4.3.1 Remedial System Monitoring

Monitoring of the constructed soil cover system and LNAPL recovery system will be performed on a routine basis, as identified in Table 4.3.1 Remedial System Monitoring Requirements and Schedule (see below). Modification to the frequency or sampling requirements will require approval from the NYSDEC. A visual inspection of the complete system will be conducted during each monitoring event. Unscheduled inspections and/or sampling may take place when a suspected failure of the remedial system has been reported or an emergency occurs that is deemed likely to affect the operation of the system. Remedial system components to be monitored include, but are not limited to, the components included in Table 4.3.1 below.

Table 4.3.1 – Remedial System Monitoring Requirements and Schedule

Remedial System Component	Monitoring Parameter	Operating Range	Monitoring Schedule
AOC #2 LNAPL Recovery System: Wells RW-1 and MW-08R	Presence of LNAPL	Not Applicable	Quarterly
Soil Cover System	Condition of Cover	Not Applicable	Annually

A complete list of components to be inspected is provided in the Inspection Checklist, provided in Appendix 6 - Site Management Forms. If any equipment readings are not within their specified operation range, any equipment is observed to be malfunctioning or the system is not performing within specifications; maintenance and repair, as per the Operation and Maintenance Plan, is required immediately.

5.0 OPERATION AND MAINTENANCE PLAN

5.1 General

This Operation and Maintenance Plan provides a brief description of the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the site. This Operation and Maintenance Plan:

- Includes the procedures necessary to allow individuals unfamiliar with the site to operate and maintain the soil cap and LNAPL recover systems;
- Will be updated periodically to reflect changes in site conditions or the manner in which the soil cap and LNAPL recovery systems are operated and maintained.

Further detail regarding the Operation and Maintenance of the cover system and LNAPL recovery system is provided in Appendix 8 - Operation and Maintenance Manual. A copy of this Operation and Maintenance Manual, along with the complete SMP, is to be maintained at the site. This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of this SMP.

5.2 Remedial System (or other Engineering Control) Performance Criteria

The following operating requirements for each remedial system area summarized in Table 5.2.

Table 5.2 - Remedial System Operating Requirements

Remedial System	Operating Requirements	Permit Requirements
Soil Cover System	Annual inspection for cover condition	None
LNAPL Recovery System (AOC #2)	Quarterly inspection for wells in AOC #2 for LNAPL. If LNAPL identified, deploy absorbent sock.	None

5.3 Operation and Maintenance of Engineering Controls

The following sections provide a description of the operations and maintenance of remedial systems. Cut-sheets and as-built drawings are provided in Appendix 8 - Operations and Maintenance Manual.

5.3.1 Constructed Soil Cover System

The soil cap over the berm located at the north end of the site includes a vegetative cover that consist of a 2 ft thick layer of clean soil over fill material that was excavated during construction of the site building as shown in the area on Figure 5. This cap will be monitored for overall conditions to determine if weathering and deterioration has occurred that would require maintenance. The vegetated soil cap should maintain a grass layer or landscaped cover, with no bare spots or erosion. The top layer of the soil cap should be maintained to minimize deterioration by promptly replacing the material when those problems are noted. The soil cap should be inspected at least annually in the spring or summer. Photographs and notes of the condition, and whether preventative maintenance is required of the soil cap shall be recorded in the annual site inspection form included in Appendix 6.

5.3.2 LNAPL Recovery System

The LNAPL recovery system consists of quarterly monitoring a network of two (2) groundwater monitoring wells (i.e. RW-1 and MW-08R, for the presence of LNAPL that are shown on Figure 5. The presence of LNAPL is monitored with a bailer and oil-water interface meter, combined with the installation of an absorbent well sock (PIG® Monitoring Well Skimming Sock, or similar) as needed to recover any identified LNAPL present in the wells.

Preventive maintenance of the LNAPL recovery system includes storing the absorbent socks in a dry place away from UV rays to limit wear of the absorbent socks. Once the absorbent sock is installed no maintenance, only monitoring will be required.

6.0 PERIODIC ASSESSMENT/EVALUATIONS

6.1 Climate Change Vulnerability Assessment

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

Given the urban nature of the Site and surrounding area, the elevation change from the nearby water body (i.e. Chenango River), and the presence of sufficient municipal storm water collection infrastructure, vulnerability assessments related to flooding do not appear to be warranted. In addition, the active remedial systems at the Site are located within the Site buildings and are equipped with alarms to identify if a system has been damaged.

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. This section of the SMP provides 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).

6.2.1 Timing of Green Remediation Evaluation

For major remedial system components, green remediation evaluations and corresponding modifications will be undertaken as part of a formal Remedial System Optimization (RSO), or at any time that the Project Manager feels appropriate, e.g. during significant maintenance events or in conjunction with storm recovery activities.

Modifications resulting from green remediation evaluations will be routinely implemented and scheduled to occur during planned/routine operation and maintenance activities. Reporting of these modifications will be presented in the PRR.

6.2.2 Remedial Systems

Remedial systems will be operated properly considering the current site conditions to conserve materials and resources to the greatest extent possible. Consideration will be given to operating rates and use of reagents and consumables. Spent materials will be sent for recycling, as appropriate.

6.2.3 Building Operations

Structures including buildings and sheds will be operated and maintained to provide for the most efficient operation of the remedy, while minimizing energy, waste generation and water consumption.

6.2.4 Frequency of System Checks, Sampling and Other Periodic Activities

Transportation to and from the Site and use of consumables in relation to visiting the Site in order to conduct system checks and or collect samples and shipping samples to a laboratory for analyses have direct and/or inherent energy costs. The schedule and/or means of these periodic activities have been prepared so that these tasks can be accomplished in a manner that does not impact remedy protectiveness but reduces expenditure of energy or resources.

6.2.5 Metrics and Reporting

As discussed in Section 7.0 and as shown in Appendix 6 – Site Management Forms, information on energy usage, solid waste generation, transportation and shipping, water usage and land use and ecosystems will be recorded to facilitate and document consistent implementation of green remediation during site management and to identify corresponding benefits; a set of metrics has been developed.

6.3 Remedial System Optimization

A Remedial Site Optimization (RSO) study will be conducted any time that the NYSDEC or the remedial party requests in writing that an in-depth evaluation of the remedy is needed. An RSO may be appropriate if any of the following occur:

- The remedial actions have not met or are not expected to meet RAOs in the time frame estimated in the Decision Document;
- The management and operation of the remedial system is exceeding the estimated costs;
- The remedial system is not performing as expected or as designed;
- Previously unidentified source material may be suspected;
- Plume shift has potentially occurred;
- Site conditions change due to development, change of use, change in groundwater use, etc.;
- There is an anticipated transfer of the site management to another remedial party or agency; and
- A new and applicable remedial technology becomes available.

An RSO will provide a critique of a site's conceptual model, give a summary of past performance, document current cleanup practices, summarize progress made toward the site's cleanup goals, gather additional performance or media specific data and information and provide recommendations for improvements to enhance the ability of the present system to reach RAOs or to provide a basis for changing the remedial strategy.

The RSO study will focuses on overall site cleanup strategy, process optimization and management with the intent of identifying impediments to cleanup and improvements to site operations to increase efficiency, cost effectiveness and remedial time frames. Green remediation technology and principals are to be considered when performing the RSO.

7.0 REPORTING REQUIREMENTS

7.1 Site Management Reports

All site management inspection, maintenance and monitoring events will be recorded on the appropriate site management forms provided in Appendix 6. These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including media sampling data and system maintenance reports, generated for the site during the reporting period will be provided in electronic format to the NYSDEC in accordance with the requirements of Table 7.1 and summarized in the Periodic Review Report.

Table 7.1: Schedule of Interim Monitoring/Inspection Reports

Task/Report	Reporting Frequency*
LNAPL Monitoring Data	Data collected will be provided in the Periodic Review Report
Periodic Review Report	Annually, or as otherwise determined by the Department

* The frequency of events will be conducted as specified until otherwise approved by the NYSDEC.

All interim monitoring/inspections reports will include, at a minimum:

- Date of event or reporting period;
- Name, company, and position of person(s) conducting monitoring/inspection activities;
- Description of the activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet);

- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (to be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether contaminant conditions have changed since the last reporting event.

Routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting maintenance activities;
- Description of maintenance activities performed;
- Any modifications to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents noted (included either on the checklist/form or on an attached sheet); and,
- Other documentation such as copies of invoices for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form).

Non-routine maintenance event reporting forms will include, at a minimum:

- Date of event;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Description of non-routine activities performed;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and

- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

Data will be reported in digital format as determined by the NYSDEC. Currently, data is to be supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link:
http://www.dec.ny.gov/chemical/62440.html

7.2 Periodic Review Report

A Periodic Review Report (PRR) will be submitted to the Department beginning sixteen (16) months after the Certificate of Completion is issued. After submittal of the initial Periodic Review Report, the next PRR shall be submitted annually or as appropriate to the Department or at another frequency as may be required by the Department. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in Appendix 1 - Environmental Easement. The report will be prepared in accordance with NYSDEC's DER-10 and submitted within 30 days of the end of each certification period. Media sampling results will also be incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site.
- Results of the required annual site inspections and severe condition inspections, if applicable.
- All applicable site management forms and other records generated for the site during the reporting period in the NYSDEC-approved electronic format, if not previously submitted.
- A summary of any discharge monitoring data and/or information generated during the reporting period, with comments and conclusions.

- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor, etc.), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends.

- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted in digital format as determined by the NYSDEC. Currently, data is supplied electronically and submitted to the NYSDEC EQuIS™ database in accordance with the requirements found at this link: http://www.dec.ny.gov/chemical/62440.html.

- A site evaluation, which includes the following:

  - The compliance of the remedy with the requirements of the site-specific RAWP, ROD or Decision Document;

  - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;

  - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring and Sampling Plan for the media being monitored;

  - Recommendations regarding any necessary changes to the remedy and/or Monitoring and Sampling Plan; and

  - Trends in contaminant levels in the affected media will be evaluated to determine if the remedy continues to be effective in achieving remedial goals as specified by the Decision Document.

  - The overall performance and effectiveness of the remedy.

7.2.1 Certification of Institutional and Engineering Controls

Following the last inspection of the reporting period, a qualified environmental professional or Professional Engineer licensed to practice in New York State will prepare, and include in the Periodic Review Report, the following certification as per the requirements of NYSDEC DER-10:

"*For each institutional or engineering control identified for the site, I certify that all of the following statements are true:*

- *The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;*

- *The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*

- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*

- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*

- *Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*

- *If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;*

- *Use of the site is compliant with the environmental easement;*

- *The engineering control systems are performing as designed and are effective;*

- *To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices; and*

- *The information presented in this report is accurate and complete.*

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner/Remedial Party or Owner's/Remedial Party's Designated Site Representative] [I have been authorized and designated by all site owners/remedial parties to sign this certification] for the site."

At the end of each certifying period, as determined by the NYSDEC, the following certification will be provided to the Department:

"For each institutional identified for the site, I certify that all of the following statements are true:

- *The institutional control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;*
- *Nothing has occurred that would impair the ability of the control to protect the public health and environment;*
- *Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;*
- *Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;*
- *If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;*
- *Use of the site is compliant with the environmental easement.*
- *The information presented in this report is accurate and complete.*

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner or Owner's Designated Site Representative [and I have been authorized and designated by all site owners to sign this certification] for the site."

- *The assumptions made in the qualitative exposure assessment remain valid.*

The signed certification will be included in the Periodic Review Report.

The Periodic Review Report will be submitted, in electronic format, to the NYSDEC Central Office, Regional Office in which the site is located and the NYSDOH Bureau of Environmental Exposure Investigation. The Periodic Review Report may need to be submitted in hard-copy format, as requested by the NYSDEC project manager.

7.3 Corrective Measures Work Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, 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.

7.4 Remedial Site Optimization Report

In the event that an RSO is to be performed (see Section 6.3, upon completion of an RSO, an RSO report must be submitted to the Department for approval. A general outline for the RSO report is provided in Appendix 9. The RSO report will document the research/ investigation and data gathering that was conducted, evaluate the results and facts obtained, present a revised conceptual site model and present recommendations. RSO recommendations are to be implemented upon approval from the NYSDEC. Additional work plans, design documents, HASPs etc., may still be required to implement the recommendations, based upon the actions that need to be taken. A final engineering report and update to the SMP may also be required.

The RSO report will be submitted, in electronic format, to the NYSDEC Central Office, Regional Office in which the site is located, Site Control and the NYSDOH Bureau of Environmental Exposure Investigation.

8.0 REFERENCES

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

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

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

Phase I Environmental Site Assessment Report, 435 State Street, City of Binghamton, Broome County, New York by Delta Engineers dated April 2015

Phase II Environmental Site Assessment, 435 State Street, Binghamton, New York by LaBella Associates, D.P.C, dated November 2016

Supplemental Phase II Environmental Site Assessment, 435 State Street, Binghamton, New York by LaBella Associates, D.P.C, dated November 22, 2016

Remedial Investigation Report, Former Stow Manufacturing, 435 State Street, Binghamton, New York by LaBella Associates, D.P.C, dated January 16, 2019

Remedial Action Work Plan, Former Stow Manufacturing, 435 State Street, Binghamton, New York by LaBella Associates, D.P.C, dated February 8, 2019

TABLES

TABLE 2.5.1A
Surface Soil Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Volatile Organic Compounds

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	SS-01-0-6	SS-01-6-12	SS-01-12-24	SS-02-0-6	SS-02-6-12	SS-02-12-24	SS-03-0-6	SS-03-6-12	SS-03-12-24	SS-04-0-6	SS-04-6-12	SS-04-12-24
Sample Depth						0"-6"	6"-12"	12"-24"	0"-6"	6"-12"	12"-24"	0"-6"	6"-12"	12"-24"	0"-6"	6"-12"	12"-24"
Lab Sample						460-164840-1	460-164840-2	460-164840-3	460-164840-4	460-164840-5	460-164840-6	460-164840-7	460-164840-8	460-164840-9	460-164840-10	460-164840-11	460-164840-12
Date Sampled						09/14/2018	09/14/2018	09/14/2018	09/14/2018	09/14/2018	09/14/2018	09/14/2018	09/14/2018	09/14/2018	09/14/2018	09/14/2018	09/14/2018
1,1,1-Trichloroethane	71-55-6	ug/Kg	680	100000	680	0.25 U	0.28 U	0.25 U	0.24 U	0.29 U	0.25 U	0.24 U	0.24 U	0.22 U	0.26 U	0.24 U	0.26 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/Kg	NL	NL	NL	0.23 U	0.25 U	0.23 U	0.22 U	0.27 U	0.23 U	0.22 U	0.22 U	0.20 U	0.24 U	0.22 U	0.24 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ug/Kg	NL	NL	NL	0.32 U	0.36 U	0.32 U	0.31 U	0.37 U	0.32 U	0.31 U	0.31 U	0.28 U	0.34 U	0.31 U	0.34 U
1,1,2-Trichloroethane	79-00-5	ug/Kg	NL	NL	NL	0.19 U	0.21 U	0.19 U	0.18 U	0.22 U	0.19 U	0.18 U	0.19 U	0.16 U	0.20 U	0.18 U	0.20 U
1,1-Dichloroethane	75-34-3	ug/Kg	270	26000	270	0.22 U	0.24 U	0.22 U	0.21 U	0.26 U	0.22 U	0.21 U	0.21 U	0.19 U	0.23 U	0.21 U	0.23 U
1,1-Dichloroethene	75-35-4	ug/Kg	330	100000	330	0.24 U	0.27 U	0.24 U	0.23 U	0.28 U	0.24 U	0.23 U	0.23 U	0.21 U	0.25 U	0.23 U	0.25 U
1,2,4-Trichlorobenzene	120-82-1	ug/Kg	NL	NL	NL	0.097 U	0.11 U	0.099 U	0.094 U	0.11 U	0.097 U	0.095 U	0.096 U	0.085 U	0.10 U	0.095 U	0.10 U
1,2,4-Trimethylbenzene	95-63-6	ug/Kg	3600	52000	3600	0.099 U	0.11 U	0.10 U	0.096 U	0.12 U	0.10 U	0.097 U	0.098 U	0.087 U	0.11 U	0.097 U	0.11 U
1,2-Dibromo-3-Chloropropane	96-12-8	ug/Kg	NL	NL	NL	0.49 U	0.54 U	0.49 U	0.47 U	0.57 U	0.49 U	0.47 U	0.48 U	0.42 U	0.52 U	0.48 U	0.52 U
1,2-Dibromoethane	106-93-4	ug/Kg	NL	NL	NL	0.19 U	0.21 U	0.19 U	0.18 U	0.22 U	0.19 U	0.19 U	0.19 U	0.17 U	0.20 U	0.19 U	0.20 U
1,2-Dichlorobenzene	95-50-1	ug/Kg	1100	100000	1100	0.15 U	0.17 U	0.15 U	0.15 U	0.18 U	0.15 U	0.15 U	0.15 U	0.13 U	0.16 U	0.15 U	0.16 U
1,2-Dichloroethane	107-06-2	ug/Kg	20	3100	20	0.31 U	0.35 UJ	0.32 UJ	0.30 U	0.37 UJ	0.31 U	0.30 U	0.31 U	0.27 U	0.33 UJ	0.31 U	0.33 U
1,2-Dichloropropane	78-87-5	ug/Kg	NL	NL	NL	0.45 U	0.50 U	0.45 U	0.43 U	0.53 U	0.45 U	0.44 U	0.44 U	0.39 U	0.48 U	0.44 U	0.48 U
1,3,5-Trimethylbenzene	108-67-8	ug/Kg	8400	52000	8400	0.12 U	0.14 U	0.12 U	0.12 U	0.14 U	0.12 U	0.12 U	0.12 U	0.11 U	0.13 U	0.12 U	0.13 U
1,3-Dichlorobenzene	541-73-1	ug/Kg	2400	49000	2400	0.17 U	0.19 U	0.17 U	0.16 U	0.20 U	0.17 U	0.16 U	0.17 U	0.15 U	0.18 U	0.16 U	0.18 U
1,4-Dichlorobenzene	106-46-7	ug/Kg	1800	13000	1800	0.11 U	0.12 U	0.11 U	0.10 U	0.12 U	0.11 U	0.10 U	0.10 U	0.092 U	0.11 U	0.10 U	0.11 U
2-Butanone (MEK)	78-93-3	ug/Kg	120	100000	120	1.2 U	1.3 UJ *	1.2 UJ *	1.1 U	1.4 U	1.2 U	1.1 U	1.2 U	1.0 U	1.3 U	1.1 U	1.3 U
2-Hexanone	591-78-6	ug/Kg	NL	NL	NL	0.82 U	0.92 UJ *	0.84 UJ *	0.80 U	0.97 U	0.83 U	0.80 U	0.81 U	0.72 U	0.88 U	0.81 U	0.88 U
4-Isopropyltoluene	99-87-6	ug/Kg	NL	NL	NL	0.10 U	0.12 U	0.11 U	0.10 U	0.12 U	0.10 U	0.10 U	0.10 U	0.091 U	0.11 U	0.10 U	0.11 U
4-Methyl-2-pentanone (MIBK)	108-10-1	ug/Kg	NL	NL	NL	0.70 U	0.78 UJ *	0.71 UJ *	0.68 U	0.83 U	0.70 U	0.68 U	0.69 U	0.61 U	0.75 U	0.69 U	0.75 U
Acetone	67-64-1	ug/Kg	50	100000	50	4.0 U	4.5 UJ *	4.1 UJ *	3.9 U	4.7 UJ	4.0 U	3.9 U	3.9 U	3.5 U	4.3 UJ	32	4.3 U
Benzene	71-43-2	ug/Kg	60	4800	60	0.27 U	0.30 U	0.28 U	0.26 U	0.32 U	0.27 U	0.27 U	0.27 U	0.24 U	0.29 U	0.27 U	0.29 U
Bromodichloromethane	75-27-4	ug/Kg	NL	NL	NL	0.27 U	0.30 U	0.28 U	0.26 U	0.32 U	0.27 U	0.26 U	0.27 U	0.24 U	0.29 U	0.27 U	0.29 U
Bromoform	75-25-2	ug/Kg	NL	NL	NL	0.45 U	0.50 U	0.46 U	0.44 U	0.53 U	0.45 U	0.44 U	0.44 U	0.39 U	0.48 U	0.44 U	0.48 U
Bromomethane	74-83-9	ug/Kg	NL	NL	NL	0.50 U	0.56 U	0.51 U	0.49 U	0.59 U	0.50 U	0.49 U	0.49 U	0.44 U	0.54 U	0.49 U	0.54 U
Carbon disulfide	75-15-0	ug/Kg	NL	NL	NL	0.28 U	0.31 U	0.29 U	0.27 U	0.33 U	0.28 U	0.27 U	0.28 U	0.25 U	0.30 U	0.28 U	0.30 U
Carbon tetrachloride	56-23-5	ug/Kg	760	2400	760	0.19 U	0.21 UJ	0.19 UJ	0.19 U	0.23 UJ	0.19 U	0.19 U	0.19 U	0.17 U	0.20 UJ	0.19 U	0.20 U
Chlorobenzene	108-90-7	ug/Kg	1100	100000	1100	0.19 U	0.21 U	0.19 U	0.18 U	0.22 U	0.19 U	0.18 U	0.18 U	0.16 U	0.20 U	0.18 U	0.20 U
Chloroethane	75-00-3	ug/Kg	NL	NL	NL	0.55 U	0.62 U	0.56 U	0.53 U	0.65 U	0.55 U	0.54 U	0.54 U	0.48 U	0.59 U	0.54 U	0.59 U
Chloroform	67-66-3	ug/Kg	370	49000	370	0.34 U	0.38 U	0.34 U	0.33 U	0.40 U	0.34 U	0.33 U	0.33 U	0.29 U	0.36 U	0.33 U	0.36 U
Chloromethane	74-87-3	ug/Kg	NL	NL	NL	0.46 U	0.51 U	0.47 U	0.45 U	0.54 U	0.46 U	0.45 U	0.45 U	0.40 U	0.49 U	0.45 U	0.49 U
cis-1,2-Dichloroethene	156-59-2	ug/Kg	250	100000	250	0.16 U	0.18 U	0.16 U	0.16 U	0.19 U	0.16 U	0.16 U	0.16 U	0.14 U	0.17 U	0.16 U	0.17 U
cis-1,3-Dichloropropene	10061-01-5	ug/Kg	NL	NL	NL	0.29 U	0.32 U	0.29 U	0.28 U	0.34 U	0.29 U	0.28 U	0.28 U	0.25 U	0.31 U	0.28 U	0.31 U
Cyclohexane	110-82-7	ug/Kg	NL	NL	NL	0.23 U	0.26 U	0.24 U	0.23 U	0.28 U	0.23 U	0.23 U	0.23 U	0.20 U	0.25 U	0.23 U	0.25 U
Dibromochloromethane	124-48-1	ug/Kg	NL	NL	NL	0.21 U	0.23 U	0.21 U	0.20 U	0.24 U	0.21 U	0.20 U	0.20 U	0.18 U	0.22 U	0.20 U	0.22 U
Dichlorodifluoromethane	75-71-8	ug/Kg	NL	NL	NL	0.36 U	0.40 U	0.36 U	0.35 U	0.42 U	0.36 U	0.35 U	0.35 U	0.31 U	0.38 U	0.35 U	0.38 U
Ethylbenzene	100-41-4	ug/Kg	1000	41000	1000	0.21 U	0.24 U	0.21 U	0.20 U	0.25 U	0.21 U	0.20 U	0.21 U	0.18 U	0.22 U	0.21 U	0.22 U
Isopropylbenzene	98-82-8	ug/Kg	2300*	NL	NL	0.13 U	0.15 U	0.14 U	0.13 U	0.16 U	0.13 U	0.13 U	0.13 U	0.12 U	0.14 U	0.13 U	0.14 U
m,p-Xylene	179601-23-1	ug/Kg	260	100000	1600	4.5 U	5.1 U *	4.6 U *	4.4 U	5.4 U	4.6 U	4.4 U	4.5 U	4.0 U	4.9 U	4.5 U	4.9 U
Methyl acetate	79-20-9	ug/Kg	NL	NL	NL	0.13 U	0.15 U	0.13 U	0.13 U	0.16 U	0.13 U	0.13 U	0.13 U	0.12 U	0.14 U	0.13 U	0.14 U
Methyl tert-butyl ether	1634-04-4	ug/Kg	930	100000	930	0.17 U	0.19 U	0.17 U	0.16 U	0.20 U	0.17 U	0.16 U	0.17 U	0.15 U	0.18 U	0.17 U	0.18 U
Methylcyclohexane	108-87-2	ug/Kg	NL	NL	NL	0.50 J	0.31 J B	3.4 B	0.60 J	3.2 B	4.6	1.3	1.5	1.2	1.1 B	9.3	14
Methylene Chloride	75-09-2	ug/Kg	50	100000	50	0.18 U	0.21 U	0.19 U	0.18 U	0.22 U	0.18 U	0.18 U	0.18 U	0.16 U	0.20 U	0.18 U	0.20 U
Naphthalene	91-20-3	ug/Kg	12000	NL	NL	0.20 U	0.22 U	0.31 J	0.19 U	0.24 U	0.20 U	0.20 U	0.20 U	0.18 U	0.21 U	0.20 U	0.21 U
n-Butylbenzene	104-51-8	ug/Kg	12000	100000	12000	0.15 U	0.17 U	0.15 U	0.15 U	0.18 U	0.15 U	0.15 U	0.15 U	0.13 U	0.16 U	0.15 U	0.16 U
N-Propylbenzene	103-65-1	ug/Kg	3900	100000	3900	0.19 U	0.21 U	0.19 U	0.18 U	0.22 U	0.19 U	0.18 U	0.18 U	0.16 U	0.20 U	0.18 U	0.20 U
o-Xylene	95-47-6	ug/Kg	260	100000	1600	0.10 U	0.11 U	0.10 U	0.097 U	0.12 U	0.10 U	0.098 U	0.099 U	0.088 U	0.11 U	0.098 U	0.11 U
sec-Butylbenzene	135-98-8	ug/Kg	11000	100000	11000	0.093 U	0.10 U	0.094 U	0.090 U	0.11 U	0.093 U	0.091 U	0.092 U	0.081 U	0.099 U	0.091 U	0.099 U
Styrene	100-42-5	ug/Kg	NL	NL	NL	0.13 U	0.15 U	0.13 U	0.13 U	0.15 U	0.13 U	0.13 U	0.13 U	0.11 U	0.14 U	0.13 U	0.14 U
tert-Butylbenzene	98-06-6	ug/Kg	5900	100000	5900	0.13 U	0.15 U	0.13 U	0.13 U	0.15 U	0.13 U	0.13 U	0.13 U	0.11 U	0.14 U	0.13 U	0.14 U
Tetrachloroethene	127-18-4	ug/Kg	1300	19000	1300	0.15 U	0.17 U	0.15 U	0.15 U	0.18 U	0.15 U	0.15 U	0.15 U	0.13 U	0.16 U	0.15 U	0.16 U
Toluene	108-88-3	ug/Kg	700	100000	700	0.66 U	0.74 U	0.67 U	0.64 U	0.78 U	0.66 U	0.64 U	0.65 U	0.58 U	0.71 U	0.65 U	0.71 U
trans-1,2-Dichloroethene	156-60-5	ug/Kg	190	100000	190	0.26 U	0.29 U	0.26 U	0.25 U	0.31 U	0.26 U	0.25 U	0.26 U	0.23 U	0.28 U	0.25 U	0.28 U
trans-1,3-Dichloropropene	10061-02-6	ug/Kg	NL	NL	NL	0.28 U	0.31 U	0.29 U	0.27 U	0.33 U	0.28 U	0.27 U	0.28 U	0.25 U	0.30 U	0.28 U	0.30 U
Trichloroethene	79-01-6	ug/Kg	470	21000	470	0.48 J B	0.31 J B	0.19 J B	0.34 J B	0.39 J B	0.45 J B	0.22 J B	0.15 U	0.33 J B	0.22 J B	0.15 U	0.42 J B
Trichlorofluoromethane	75-69-4	ug/Kg	NL	NL	NL	0.43 U	0.48 U	0.44 U	0.42 U	0.51 U	0.43 U	0.42 U	0.42 U	0.38 U	0.46 U	0.42 U	0.46 U
Vinyl chloride	75-01-4	ug/Kg	20	900	20	0.58 U	0.65 U	0.59 U	0.56 U	0.68 U	0.58 U	0.56 U	0.57 U	0.50 U	0.62 U	0.57 U	0.62 U
Xylenes, Total	1330-20-7	ug/Kg	260	100000	1600	0.27 U	0.30 U	0.27 U	0.26 U	0.32 U	0.27 U	0.26 U	0.26 U	0.23 U	0.29 U	0.26 U	0.29 U

TABLE 2.5.1A
Surface Soil Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Volatile Organic Compounds

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	SS-05-0-6	SS-05-6-12	SS-05-12-24	Duplicate (SS-05-0-6)	SS-06 2-6	SS-06 6-12	SS-06 12-24	SS-07 2-6	DUPE 8/10/2018 (SS-07 2-6)	SS-07 6-12	SS-07 12-24
Sample Depth						0"-6"	6"-12"	12"-24"	12"-24"	2"-6"	6"-12"	12"-24"	2"-6"	2"-6"	6"-12"	12"-24"
Lab Sample						460-164840-13	460-164840-14	460-164840-15	460-164840-16	480-140292-1	480-140292-2	480-140292-3	480-140292-4	480-140292-5	480-140292-6	480-140292-7
Date Sampled						09/14/2018	09/14/2018	09/14/2018	09/14/2018	08/10/2018	08/10/2018	08/10/2018	08/10/2018	08/10/2018	08/10/2018	08/10/2018
1,1,1-Trichloroethane	71-55-6	ug/Kg	680	100000	680	0.24 U	0.26 U	0.24 U	0.25 U	0.36 U	0.38 U	0.39 U	0.53 U	0.36 U	0.45 U	0.38 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/Kg	NL	NL	NL	0.22 U	0.24 U	0.22 U	0.23 U	0.8 U F1	0.84 U	0.88 U	1.2 U	0.8 U	1 U	0.84 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ug/Kg	NL	NL	NL	0.31 U	0.33 U	0.31 U	0.33 U	1.1 U	1.2 U	1.2 U	1.7 U	1.1 U	1.4 U	1.2 U
1,1,2-Trichloroethane	79-00-5	ug/Kg	NL	NL	NL	0.19 U	0.20 U	0.18 U	0.19 U	0.65 U	0.67 U	0.7 U	0.96 U	0.64 U	0.81 U	0.68 U
1,1-Dichloroethane	75-34-3	ug/Kg	270	26000	270	0.22 U	0.23 U	0.21 U	0.22 U	0.61 U	0.63 U	0.66 U	0.9 U	0.6 U	0.76 U	0.64 U
1,1-Dichloroethene	75-35-4	ug/Kg	330	100000	330	0.24 U	0.25 U	0.23 U	0.25 U	0.61 U	0.64 U	0.66 U	0.9 U	0.61 U	0.76 U	0.64 U
1,2,4-Trichlorobenzene	120-82-1	ug/Kg	NL	NL	NL	0.096 U F1	0.10 U	0.094 U	0.10 U	0.3 U F1J	0.32 U	0.33 U	0.45 U	0.3 U	0.38 U	0.32 U
1,2,4-Trimethylbenzene	95-63-6	ug/Kg	3600	52000	3600	0.098 U	0.10 U	0.096 U	0.10 U	0.95 U	1 U	1 U	1.4 U	0.95 U	1.2 U	1 U
1,2-Dibromo-3-Chloropropane	96-12-8	ug/Kg	NL	NL	NL	0.48 U	0.51 U	0.47 U	0.50 U	2.5 U F1J	2.6 U	2.7 U	3.7 U	2.5 U	3.1 U	2.6 U
1,2-Dibromoethane	106-93-4	ug/Kg	NL	NL	NL	0.19 U	0.20 U	0.18 U	0.20 U	0.64 U	0.67 U	0.7 U	0.95 U	0.64 U	0.8 U	0.67 U
1,2-Dichlorobenzene	95-50-1	ug/Kg	1100	100000	1100	0.15 U	0.16 U	0.15 U	0.16 U	0.39 U	0.41 U	0.42 U	0.58 U	0.39 U	0.49 U	0.41 U
1,2-Dichloroethane	107-06-2	ug/Kg	20	3100	20	0.31 U	0.33 U	0.30 U	0.32 U	0.25 U	0.26 U	0.27 U	0.37 U	0.25 U	0.31 U	0.26 U
1,2-Dichloropropane	78-87-5	ug/Kg	NL	NL	NL	0.44 U	0.46 U	0.43 U	0.46 U	2.5 U	2.6 U	2.7 U	3.7 U	2.5 U	3.1 U	2.6 U
1,3,5-Trimethylbenzene	108-67-8	ug/Kg	8400	52000	8400	0.12 U	0.13 U	0.12 U	0.13 U	0.32 U	0.33 U	0.35 U	0.47 U	0.32 U	0.4 U	0.34 U
1,3-Dichlorobenzene	541-73-1	ug/Kg	2400	49000	2400	0.17 U	0.17 U	0.16 U	0.17 U	0.26 U	0.27 U	0.28 U	0.38 U	0.25 U	0.32 U	0.27 U
1,4-Dichlorobenzene	106-46-7	ug/Kg	1800	13000	1800	0.10 U	0.11 U	0.10 U	0.11 U	0.69 U	0.73 U	0.76 U	1 U	0.69 U	0.87 U	0.73 U
2-Butanone (MEK)	78-93-3	ug/Kg	120	100000	120	1.2 U	1.2 U	1.1 U	1.2 U	1.8 U *	5.1 J *	2 U *	2.7 U *	1.8 U *	2.3 U *	1.9 U *
2-Hexanone	591-78-6	ug/Kg	NL	NL	NL	0.82 U	0.86 U	0.80 U	0.85 U	2.5 U	2.6 U	2.7 U	3.7 U	2.5 U	3.1 U	2.6 U
4-Isopropyltoluene	99-87-6	ug/Kg	NL	NL	NL	0.10 U	0.11 U	0.10 U	0.11 U	0.4 U	0.42 U	0.43 U	0.59 U	0.4 U	0.5 U	0.42 U
4-Methyl-2-pentanone (MIBK)	108-10-1	ug/Kg	NL	NL	NL	0.69 U	0.73 U	0.68 U	0.72 U	1.6 U	1.7 U	1.8 U	2.4 U	1.6 U	2 U	1.7 U
Acetone	67-64-1	ug/Kg	50	100000	50	130 F1	4.2 U	3.9 U	4.1 U	110 F1J	**150**	30	45	**61**	**120**	**95**
Benzene	71-43-2	ug/Kg	60	4800	60	0.27 U	0.28 U	0.26 U	0.28 U	0.24 U	0.25 U	0.27 U	0.36 U	0.24 U	0.31 U	0.26 U
Bromodichloromethane	75-27-4	ug/Kg	NL	NL	NL	0.27 U	0.28 U	0.26 U	0.28 U	0.66 U	0.7 U	0.73 U	0.99 U	0.66 U	0.83 U	0.7 U
Bromoform	75-25-2	ug/Kg	NL	NL	NL	0.44 U	0.47 U	0.44 U	0.46 U	2.5 U	2.6 U	2.7 U	3.7 U	2.5 U	3.1 U	2.6 U
Bromomethane	74-83-9	ug/Kg	NL	NL	NL	0.50 U	0.52 U	0.49 U	0.52 U	0.45 U	0.47 U	0.49 U	0.66 U	0.45 U	0.56 U	0.47 U
Carbon disulfide	75-15-0	ug/Kg	NL	NL	NL	0.28 U	0.29 U	0.27 U	0.29 U	2.5 U	2.6 U	2.7 U	3.7 U	2.5 U	3.1 U	2.6 U
Carbon tetrachloride	56-23-5	ug/Kg	760	2400	760	0.19 U	0.20 U	0.19 U	0.20 U	0.48 U	0.5 U	0.52 U	0.71 U	0.48 U	0.6 U	0.5 U
Chlorobenzene	108-90-7	ug/Kg	1100	100000	1100	0.19 U	0.19 U	0.18 U	0.19 U	0.66 U	0.68 U	0.72 U	0.97 U	0.65 U	0.82 U	0.69 U
Chloroethane	75-00-3	ug/Kg	NL	NL	NL	0.55 U	0.57 U	0.54 U	0.57 U	1.1 U	1.2 U	1.2 U	1.7 U	1.1 U	1.4 U	1.2 U
Chloroform	67-66-3	ug/Kg	370	49000	370	0.33 U	0.35 U	0.33 U	0.35 U	0.31 U	0.32 U	0.34 U	0.46 U	0.31 U	0.38 U	0.32 U
Chloromethane	74-87-3	ug/Kg	NL	NL	NL	0.45 U	0.48 U	0.45 U	0.47 U	0.3 U	0.31 U	0.33 U	0.44 U	0.3 U	0.38 U	0.31 U
cis-1,2-Dichloroethene	156-59-2	ug/Kg	250	100000	250	0.16 U	0.17 U	0.16 U	0.17 U	0.64 U	0.66 U	0.69 U	0.94 U	0.63 U	0.8 U	0.67 U
cis-1,3-Dichloropropene	10061-01-5	ug/Kg	NL	NL	NL	0.29 U	0.30 U	0.28 U	0.30 U	0.71 U	0.75 U	0.78 U	1.1 U	0.71 U	0.9 U	0.75 U
Cyclohexane	110-82-7	ug/Kg	NL	NL	NL	0.23 U	0.24 U	0.23 U	0.24 U	0.69 U	0.73 U	0.76 U	1 U	0.69 U	0.87 U	0.73 U
Dibromochloromethane	124-48-1	ug/Kg	NL	NL	NL	0.20 U	0.21 U	0.20 U	0.21 U	0.64 U	0.66 U	0.69 U	0.94 U	0.63 U	0.8 U	0.67 U
Dichlorodifluoromethane	75-71-8	ug/Kg	NL	NL	NL	0.35 U	0.37 U	0.35 U	0.37 U	0.41 U	0.43 U	0.45 U	0.61 U	0.41 U	0.51 U	0.43 U
Ethylbenzene	100-41-4	ug/Kg	1000	41000	1000	0.21 U	0.22 U	0.20 U	0.22 U	0.34 U	0.36 U	0.37 U	0.51 U	0.34 U	0.43 U	0.36 U
Isopropylbenzene	98-82-8	ug/Kg	2300*	NL	NL	0.13 U	0.14 U	0.13 U	0.14 U	0.75 U	0.78 U	0.82 U	1.1 U	0.75 U	0.94 U	0.79 U
m,p-Xylene	179601-23-1	ug/Kg	260	100000	1600	4.5 J F1 F	4.7 U	4.4 U	4.7 U	0.83 U	0.87 U	0.91 U	1.2 U	0.83 U	1 U	0.87 U
Methyl acetate	79-20-9	ug/Kg	NL	NL	NL	0.13 U	0.14 U	0.13 U	0.14 U	3 U	3.1 U	3.3 U	4.4 U	3 U	3.8 U	3.1 U
Methyl tert-butyl ether	1634-04-4	ug/Kg	930	100000	930	0.17 U	0.18 U	0.16 U	0.17 U	0.49 U	0.51 U	0.53 U	0.72 U	0.49 U	0.61 U	0.51 U
Methylcyclohexane	108-87-2	ug/Kg	NL	NL	NL	0.90 J	6.6	8.4	0.55 J	0.75 U	0.79 U	0.82 U	1.1 U	0.75 U	0.95 U	0.79 U
Methylene Chloride	75-09-2	ug/Kg	50	100000	50	0.18 U	0.19 U	0.18 U	0.19 U	2.3 U	2.4 U	3.2 J	3.4 U	2.3 U	2.9 U	2.4 U
Naphthalene	91-20-3	ug/Kg	12000	NL	NL	0.20 U F1	0.21 U	0.19 U	0.21 U	0.66 U	0.7 U	0.73 U	0.99 U	0.66 U	0.83 U	0.7 U
n-Butylbenzene	104-51-8	ug/Kg	12000	100000	12000	0.15 U	0.16 U	0.15 U	0.15 U	0.43 U F1J	0.45 U	0.47 U	0.64 U	0.43 U	0.54 U	0.45 U
N-Propylbenzene	103-65-1	ug/Kg	3900	100000	3900	0.18 U	0.19 U	0.18 U	0.19 U	0.4 U	0.42 U	0.43 U	0.59 U	0.4 U	0.5 U	0.42 U
o-Xylene	95-47-6	ug/Kg	260	100000	1600	0.099 U	0.10 U	0.097 U	0.10 U	0.65 U	0.68 U	0.71 U	0.96 U	0.65 U	0.81 U	0.68 U
sec-Butylbenzene	135-98-8	ug/Kg	11000	100000	11000	0.092 U	0.097 U	0.090 U	0.096 U	0.43 U	0.45 U	0.47 U	0.64 U	0.43 U	0.54 U	0.45 U
Styrene	100-42-5	ug/Kg	NL	NL	NL	0.13 U	0.14 U	0.13 U	0.13 U	0.25 U	0.26 U	0.27 U	0.37 U	0.25 U	0.31 U	0.26 U
tert-Butylbenzene	98-06-6	ug/Kg	5900	100000	5900	0.13 U	0.14 U	0.13 U	0.14 U	0.52 U	0.54 U	0.56 U	0.77 U	0.52 U	0.65 U	0.54 U
Tetrachloroethene	127-18-4	ug/Kg	1300	19000	1300	0.15 U	0.16 U	0.15 U	0.16 U	0.67 U	0.7 U	0.73 U	0.99 U	0.67 U	0.84 U	0.7 U
Toluene	108-88-3	ug/Kg	700	100000	700	0.65 U	0.69 U	0.64 U	0.68 U	0.48 J	0.39 U	0.97 J	0.56 U	0.37 U	0.47 U	0.41 J
trans-1,2-Dichloroethene	156-60-5	ug/Kg	190	100000	190	0.26 U	0.27 U	0.25 U	0.27 U	0.51 U	0.54 U	0.56 U	0.76 U	0.51 U	0.64 U	0.54 U
trans-1,3-Dichloropropene	10061-02-6	ug/Kg	NL	NL	NL	0.28 U	0.29 U	0.27 U	0.29 U	2.2 U	2.3 U	2.4 U	3.2 U	2.2 U	2.7 U	2.3 U
Trichloroethene	79-01-6	ug/Kg	470	21000	470	0.44 J B	0.16 U	0.15 U	0.42 J B	1.1 U	1.1 U	1.2 U	1.6 U	1.1 U	1.4 U	1.1 U
Trichlorofluoromethane	75-69-4	ug/Kg	NL	NL	NL	0.42 U	0.45 U	0.42 U	0.44 U	0.47 U	0.49 U	0.51 U	0.7 U	0.47 U	0.59 U	0.49 U
Vinyl chloride	75-01-4	ug/Kg	20	900	20	0.57 U	0.60 U	0.56 U	0.60 U	0.61 U	0.63 U	0.66 U	0.9 U	0.6 U	0.76 U	0.64 U
Xylenes, Total	1330-20-7	ug/Kg	260	100000	1600	0.26 U	0.28 U	0.26 U	0.28 U	0.83 U	0.87 U	0.91 U	1.2 U	0.83 U	1 U	0.87 U

TABLE 2.5.1A
Surface Soil Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Volatile Organic Compounds

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	SS-09 2-6	SS-09 6-12	SS-09 12-24	SS-10 2-6	SS-10 6-12	SS-10 12-24	SS-11 2-6	SS-11 6-12	SS-11 12-24
Sample Depth						2'-6"	6'-12"	12'-24"	2'-6"	6'-12"	12'-24"	2'-6"	6'-12"	12'-24"
Lab Sample						480-140292-11	480-140292-12	480-140292-13	480-140292-14	480-140292-15	480-140292-16	480-140292-17	480-140292-18	480-140292-19
Date Sampled						08/10/2018	08/10/2018	08/10/2018	08/10/2018	08/10/2018	08/10/2018	08/10/2018	08/10/2018	08/10/2018
1,1,1-Trichloroethane	71-55-6	ug/Kg	680	100000	680	0.54 U	0.56 U	0.49 U	0.33 U	0.51 U	0.45 U	0.38 U	0.36 U	0.41 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/Kg	NL	NL	NL	1.2 U	1.3 U	1.1 U	0.73 U	1.1 U	1.0 U	0.84 U	0.80 U	0.92 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ug/Kg	NL	NL	NL	1.7 U	1.8 U	1.6 U	1.0 U	1.6 U	1.4 U	1.2 U	1.1 U	1.3 U
1,1,2-Trichloroethane	79-00-5	ug/Kg	NL	NL	NL	0.96 U	1.0 U	0.89 U	0.59 U	0.92 U	0.80 U	0.68 U	0.64 U	0.74 U
1,1-Dichloroethane	75-34-3	ug/Kg	270	26000	270	0.90 U	0.95 U	0.83 U	0.55 U	0.86 U	0.75 U	0.64 U	0.60 U	0.70 U
1,1-Dichloroethene	75-35-4	ug/Kg	330	100000	330	0.90 U	0.95 U	0.83 U	0.55 U	0.86 U	0.76 U	0.64 U	0.61 U	0.70 U
1,2,4-Trichlorobenzene	120-82-1	ug/Kg	NL	NL	NL	0.45 U	0.47 U	0.41 U	0.27 U	0.43 U	0.38 U	0.32 U	0.30 U	0.35 U
1,2,4-Trimethylbenzene	95-63-6	ug/Kg	3600	52000	3600	1.4 U	1.5 U	1.3 U	0.87 U	1.4 U	1.2 U	1.0 U	0.95 U	1.1 U
1,2-Dibromo-3-Chloropropane	96-12-8	ug/Kg	NL	NL	NL	3.7 U	3.9 U	3.4 U	2.3 U	3.5 U	3.1 U	2.6 U	2.5 U	2.8 U
1,2-Dibromoethane	106-93-4	ug/Kg	NL	NL	NL	0.95 U	1.0 U	0.87 U	0.58 U	0.91 U	0.79 U	0.67 U	0.64 U	0.73 U
1,2-Dichlorobenzene	95-50-1	ug/Kg	1100	100000	1100	0.58 U	0.61 U	0.53 U	0.35 U	0.55 U	0.48 U	0.41 U	0.39 U	0.45 U
1,2-Dichloroethane	107-06-2	ug/Kg	20	3100	20	0.37 U	0.39 U	0.34 U	0.23 U	0.35 U	0.31 U	0.26 U	0.25 U	0.29 U
1,2-Dichloropropane	78-87-5	ug/Kg	NL	NL	NL	3.7 U	3.9 U	3.4 U	2.3 U	3.5 U	3.1 U	2.6 U	2.5 U	2.8 U
1,3,5-Trimethylbenzene	108-67-8	ug/Kg	8400	52000	8400	0.48 U	0.50 U	0.44 U	0.29 U	0.45 U	0.40 U	0.34 U	0.32 U	0.37 U
1,3-Dichlorobenzene	541-73-1	ug/Kg	2400	49000	2400	0.38 U	0.40 U	0.35 U	0.23 U	0.36 U	0.32 U	0.27 U	0.25 U	0.29 U
1,4-Dichlorobenzene	106-46-7	ug/Kg	1800	13000	1800	1.0 U	1.1 U	0.95 U	0.63 U	0.99 U	0.86 U	0.73 U	0.69 U	0.80 U
2-Butanone (MEK)	78-93-3	ug/Kg	120	100000	120	2.7 U *	2.8 U *	2.5 U *	1.6 U	2.6 U	2.3 U	1.9 U	1.8 U	2.1 U
2-Hexanone	591-78-6	ug/Kg	NL	NL	NL	3.7 U	3.9 U	3.4 U	2.3 U	3.5 U	3.1 U	2.6 U	2.5 U	2.8 U
4-Isopropyltoluene	99-87-6	ug/Kg	NL	NL	NL	0.59 U	0.62 U	0.55 U	0.36 U	0.57 U	0.50 U	0.42 U	0.40 U	0.46 U
4-Methyl-2-pentanone (MIBK)	108-10-1	ug/Kg	NL	NL	NL	2.4 U	2.5 U	2.2 U	1.5 U	2.3 U	2.0 U	1.7 U	1.6 U	1.9 U
Acetone	67-64-1	ug/Kg	50	100000	50	35 J	**110**	**100**	7.6 J	44	5.2 U	**71**	43	36
Benzene	71-43-2	ug/Kg	60	4800	60	3.9 J	7.3 J	6.5 J	0.22 U	0.35 U	0.30 U	0.26 U	0.24 U	0.28 U
Bromodichloromethane	75-27-4	ug/Kg	NL	NL	NL	0.99 U	1.0 U	0.91 U	0.60 U	0.95 U	0.83 U	0.70 U	0.66 U	0.76 U
Bromoform	75-25-2	ug/Kg	NL	NL	NL	3.7 U	3.9 U	3.4 U	2.3 U	3.5 U	3.1 U	2.6 U	2.5 U	2.8 U
Bromomethane	74-83-9	ug/Kg	NL	NL	NL	0.66 U	0.70 U	0.61 U	0.41 U	0.63 U	0.56 U	0.47 U	0.45 U	0.51 U
Carbon disulfide	75-15-0	ug/Kg	NL	NL	NL	3.7 U	3.9 U	3.4 U	2.3 U	3.5 U	3.1 U	2.6 U	2.5 U	2.8 U
Carbon tetrachloride	56-23-5	ug/Kg	760	2400	760	0.71 U	0.75 U	0.66 U	0.44 U	0.68 U	0.60 U	0.50 U	0.48 U	0.55 U
Chlorobenzene	108-90-7	ug/Kg	1100	100000	1100	0.97 U	1.0 U	0.90 U	0.59 U	0.93 U	0.81 U	0.69 U	0.65 U	0.75 U
Chloroethane	75-00-3	ug/Kg	NL	NL	NL	1.7 U	1.8 U	1.5 U	1.0 U	1.6 U	1.4 U	1.2 U	1.1 U	1.3 U
Chloroform	67-66-3	ug/Kg	370	49000	370	0.46 U	0.48 U	0.42 U	0.28 U	0.44 U	0.38 U	0.32 U	0.31 U	0.35 U
Chloromethane	74-87-3	ug/Kg	NL	NL	NL	0.45 U	0.47 U	0.41 U	0.27 U	0.43 U	0.37 U	0.31 U	0.30 U	0.34 U
cis-1,2-Dichloroethene	156-59-2	ug/Kg	250	100000	250	0.94 U	0.99 U	0.87 U	0.58 U	0.90 U	0.79 U	0.67 U	0.63 U	0.73 U
cis-1,3-Dichloropropene	10061-01-5	ug/Kg	NL	NL	NL	1.1 U	1.1 U	0.98 U	0.65 U	1.0 U	0.89 U	0.75 U	0.71 U	0.82 U
Cyclohexane	110-82-7	ug/Kg	NL	NL	NL	1.8 J	3.9 J	3.4 J	0.63 U	0.99 U	0.86 U	0.73 U	0.69 U	0.80 U
Dibromochloromethane	124-48-1	ug/Kg	NL	NL	NL	0.94 U	0.99 U	0.87 U	0.58 U	0.90 U	0.79 U	0.67 U	0.63 U	0.73 U
Dichlorodifluoromethane	75-71-8	ug/Kg	NL	NL	NL	0.61 U	0.64 U	0.56 U	0.37 U	0.58 U	0.51 U	0.43 U	0.41 U	0.47 U
Ethylbenzene	100-41-4	ug/Kg	1000	41000	1000	0.61 J	1.2 J	1.0 J	0.31 U	0.49 U	0.43 U	0.36 U	0.34 U	0.39 U
Isopropylbenzene	98-82-8	ug/Kg	2300*	NL	NL	1.1 U	1.2 U	1.0 U	0.68 U	1.1 U	0.93 U	0.79 U	0.75 U	0.86 U
m,p-Xylene	179601-23-1	ug/Kg	260	100000	1600	2.3 J	4.4 J	3.5 J	0.76 U	1.2 U	1.0 U	0.88 U	0.83 U	0.96 U
Methyl acetate	79-20-9	ug/Kg	NL	NL	NL	4.5 U	4.7 U	4.1 U	2.7 U	4.3 U	3.7 U	3.1 U	3.0 U	3.4 U
Methyl tert-butyl ether	1634-04-4	ug/Kg	930	100000	930	0.72 U	0.76 U	0.67 U	0.44 U	0.69 U	0.61 U	0.51 U	0.49 U	0.56 U
Methylcyclohexane	108-87-2	ug/Kg	NL	NL	NL	2.9 J	5.9 J	5.5 J	0.68 U	1.1 U	0.94 U	0.79 U	0.75 U	0.87 U
Methylene Chloride	75-09-2	ug/Kg	50	100000	50	3.4 U	3.6 U	3.1 U	2.1 U	3.2 U	2.8 U	2.4 U	2.3 U	2.6 U
Naphthalene	91-20-3	ug/Kg	12000	NL	NL	0.99 U	1.4 J	1.1 J	0.60 U	0.95 U	0.83 U	0.70 U	0.66 U	0.76 U
n-Butylbenzene	104-51-8	ug/Kg	12000	100000	12000	0.64 U	0.68 U	0.59 U	0.39 U	0.61 U	0.54 U	0.45 U	0.43 U	0.50 U
N-Propylbenzene	103-65-1	ug/Kg	3900	100000	3900	0.59 U	0.62 U	0.55 U	0.36 U	0.56 U	0.49 U	0.42 U	0.40 U	0.46 U
o-Xylene	95-47-6	ug/Kg	260	100000	1600	1.5 J	3.4 J	2.7 J	0.59 U	0.92 U	0.81 U	0.68 U	0.65 U	0.74 U
sec-Butylbenzene	135-98-8	ug/Kg	11000	100000	11000	0.64 U	0.68 U	0.59 U	0.39 U	0.61 U	0.54 U	0.45 U	0.43 U	0.50 U
Styrene	100-42-5	ug/Kg	NL	NL	NL	0.37 U	0.39 U	0.34 U	0.23 U	0.35 U	0.31 U	0.26 U	0.25 U	0.28 U
tert-Butylbenzene	98-06-6	ug/Kg	5900	100000	5900	0.77 U	0.81 U	0.71 U	0.47 U	0.73 U	0.64 U	0.54 U	0.52 U	0.59 U
Tetrachloroethene	127-18-4	ug/Kg	1300	19000	1300	0.99 U	1.0 U	0.91 U	0.60 U	0.95 U	0.83 U	0.70 U	0.67 U	0.76 U
Toluene	108-88-3	ug/Kg	700	100000	700	6.7 J	12	10	0.34 U	0.53 U	0.47 U	0.39 U	0.53 J	0.54 J
trans-1,2-Dichloroethene	156-60-5	ug/Kg	190	100000	190	0.76 U	0.80 U	0.70 U	0.47 U	0.73 U	0.64 U	0.54 U	0.51 U	0.59 U
trans-1,3-Dichloropropene	10061-02-6	ug/Kg	NL	NL	NL	3.2 U	3.4 U	3.0 U	2.0 U	3.1 U	2.7 U	2.3 U	2.2 U	2.5 U
Trichloroethene	79-01-6	ug/Kg	470	21000	470	1.6 U	1.7 U	1.5 U	0.99 U	1.6 U	1.4 U	1.1 U	1.1 U	1.3 U
Trichlorofluoromethane	75-69-4	ug/Kg	NL	NL	NL	0.70 U	0.73 U	0.64 U	0.43 U	0.67 U	0.58 U	0.49 U	0.47 U	0.54 U
Vinyl chloride	75-01-4	ug/Kg	20	900	20	0.90 U	0.95 U	0.83 U	0.55 U	0.86 U	0.75 U	0.64 U	0.60 U	0.70 U
Xylenes, Total	1330-20-7	ug/Kg	260	100000	1600	3.8 J	7.8 J	6.2 J	0.76 U	1.2 U	1.0 U	0.88 U	0.83 U	0.96 U

TABLE 2.5.1B
Surface Soil Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Semi-Volatile Organic Compounds

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	COMP-1 0"-6"		COMP-2 6"-12"		COMP-3 12"-24"		SS-01-0-6		SS-01-6-12		SS-01-12-24		SS-02-0-6		SS-02-6-12		SS-02-12-24		SS-03-0-6	
Sample Depth						0"-6"		6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		0"-6"	
Lab Sample						480-140223-9		480-140223-10		480-140223-11		460-164840-1		460-164840-2		460-164840-3		460-164840-4		460-164840-5		460-164840-6		460-164840-7	
Date Sampled						08/09/2018		08/09/2018		08/09/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018	
2,4,5-Trichlorophenol	95-95-4	ug/Kg	NL	NL	NL	250	U	500	U	51	U	13	U	12	U	12	U	13	U	13	U	13	U	13	U
2,4,6-Trichlorophenol	88-06-2	ug/Kg	NL	NL	NL	180	U	370	U	38	U	19	U	18	U	18	U	20	U	20	U	19	U	20	U
2,4-Dichlorophenol	120-83-2	ug/Kg	NL	NL	NL	96	U	200	U	20	U	8.1	U	7.7	U	7.5	U	8.2	U	8.2	U	8.1	U	8.3	U
2,4-Dimethylphenol	105-67-9	ug/Kg	NL	NL	NL	220	U	450	U	45	U	17	U	16	U	16	U	17	U	17	U	17	U	17	U
2,4-Dinitrophenol	51-28-5	ug/Kg	NL	NL	NL	4200	U	8500	U	870	UJ	190	U	180	U	170	U	190	U	190	U	190	U	190	U
2,4-Dinitrotoluene	121-14-2	ug/Kg	NL	NL	NL	190	U	380	U	39	U	19	U	18	U	18	U	20	U	20	U	19	U	20	U
2,6-Dinitrotoluene	606-20-2	ug/Kg	NL	NL	NL	110	U	220	U	22	U	12	U	12	U	12	U	13	U	13	U	12	U	13	U
2-Chloronaphthalene	91-58-7	ug/Kg	NL	NL	NL	150	U	300	U	31	U	18	U	17	U	16	U	18	U	18	U	18	U	18	U
2-Chlorophenol	95-57-8	ug/Kg	NL	NL	NL	170	U	340	U	34	U	5.4	U	5.1	U	5	U	5.4	U	5.4	U	5.4	U	5.5	U
2-Methylnaphthalene	91-57-6	ug/Kg	NL	NL	NL	180	U	370	U	38	U	4.8	U	4.5	U	73	J	4.9	U	4.9	U	27	J	4.9	U
2-Methylphenol	95-48-7	ug/Kg	330	100000	1000000	110	U	220	U	22	U	6.2	U	5.9	U	5.7	U	6.3	U	6.3	U	6.2	U	6.3	U
2-Nitroaniline	88-74-4	ug/Kg	NL	NL	NL	130	U	270	U	28	U	14	U	14	U	13	U	15	U	15	U	14	U	15	U
2-Nitrophenol	88-75-5	ug/Kg	NL	NL	NL	260	U	520	U	53	U	12	U J	12	U J	11	U J	12	U J	12	U J	12	U J	13	U J
3,3'-Dichlorobenzidine	91-94-1	ug/Kg	NL	NL	NL	1100	U	2200	U	220	U	58	U J	55	U J	54	U J	59	U J	59	U J	58	U J	59	U J
3-Nitroaniline	99-09-2	ug/Kg	NL	NL	NL	250	U	510	U	52	U	21	U	20	U	19	U	21	U	21	U	21	U	21	U
4,6-Dinitro-2-methylphenol	534-52-1	ug/Kg	NL	NL	NL	910	U	1900	U	190	U	62	U	59	U	58	U	63	U	63	U	62	U	63	U
4-Bromophenyl phenyl ether	101-55-3	ug/Kg	NL	NL	NL	130	U	260	U	26	U	5	U	4.7	U	4.6	U	5	U	5	U	5	U	5.1	U
4-Chloro-3-methylphenol	59-50-7	ug/Kg	NL	NL	NL	220	U	460	U	46	U	6.4	U	6	U	5.9	U	6.5	U	6.5	U	6.4	U	6.5	U
4-Chloroaniline	106-47-8	ug/Kg	NL	NL	NL	220	U	460	U	46	U	27	U	25	U	25	U	27	U	27	U	27	U	27	U
4-Chlorophenyl phenyl ether	7005-72-3	ug/Kg	NL	NL	NL	110	U	230	U	23	U	6	U	5.7	U	5.6	U	6.1	U	6.1	U	6	U	6.2	U
4-Methylphenol	106-44-5	ug/Kg	NL	NL	NL	110	U	220	U	22	U	6.5	U	6.2	U	6	U	6.6	U	6.6	U	6.5	U	6.7	U
4-Nitroaniline	100-01-6	ug/Kg	NL	NL	NL	470	U	970	U	98	U	14	U	14	U	13	U	14	U	14	U	14	U	15	U
4-Nitrophenol	100-02-7	ug/Kg	NL	NL	NL	630	U	1300	U	130	UJ	63	U	59	U	58	U	63	U	63	U	62	U	64	U
Acenaphthene	83-32-9	ug/Kg	20000	100000	98000	130	U	270	U	29	J	28	U	26	U	450		28	U	28	U	28	J	28	U
Acenaphthylene	208-96-8	ug/Kg	100000	100000	107000	120	U	240	U	86	J	4	U	3.8	U	23	J	4	U	4	U	14	J	4.0	U
Acetophenone	98-86-2	ug/Kg	NL	NL	NL	120	U	250	U	25	U	6.2	U	5.9	U	5.7	U	6.3	U	6.3	U	6.2	U	6.3	U
Anthracene	120-12-7	ug/Kg	100000	100000	1000000	220	U	460	U	150	J	4.3	U	4.1	U	220	J	4.3	U	4.3	U	85	J	4.4	U
Atrazine	1912-24-9	ug/Kg	NL	NL	NL	310	U	640	U	65	U	9.7	U	9.2	U	9	U	9.8	U	9.8	U	9.7	U	9.9	U
Benzaldehyde	100-52-7	ug/Kg	NL	NL	NL	720	U	1500	U	150	U	17	U	16	U	15	U	17	U	17	U	17	U	17	U
Benzo[a]anthracene	56-55-3	ug/Kg	1000	1000	1000	370	J	460	J	660		13	U	77		200		14	U	14	U	340	J	14	U
Benzo[a]pyrene	50-32-8	ug/Kg	1000	1000	22000	340	J	470	J	680		10	U J	72	J	180	J	10	U J	32	J	290	J	10	U J
Benzo[b]fluoranthene	205-99-2	ug/Kg	1000	1000	1700	520	J	590	J	760		9.9	U J	110	J	260	J	10	U J	49	J	410	J	17	J
Benzo[g,h,i]perylene	191-24-2	ug/Kg	100000	100000	1000000	240	J	320	J	430		11	U	45	J	95	J	11	U	21	J	150	J	12	U
Benzo[k]fluoranthene	207-08-9	ug/Kg	800	3900	1700	160	J	340	J	400	F2J	7.5	U	43		99		7.6	U	19	J	160		7.7	U
Biphenyl	92-52-4	ug/Kg	NL	NL	NL	130	U	270	U	28	U	5.1	U	4.8	U	39	J	5.2	U	5.2	U	5.1	U	5.2	U
bis (2-chloroisopropyl) ether	108-60-1	ug/Kg	NL	NL	NL	180	U	370	U	38	U	6.9	U	6.6	U	6.4	U	7	U	7	U	6.9	U	7.1	U
Bis(2-chloroethoxy)methane	111-91-1	ug/Kg	NL	NL	NL	190	U	390	U	40	U	13	U	12	U	12	U	13	U	13	U	13	U	13	U
Bis(2-chloroethyl)ether	111-44-4	ug/Kg	NL	NL	NL	120	U	240	U	24	U	4.6	U	4.4	U	4.3	U	4.7	U	4.7	U	4.6	U	4.7	U
Bis(2-ethylhexyl) phthalate	117-81-7	ug/Kg	NL	NL	NL	310	U	630	U	72	J	20	U * J	19	U * J	250	J *	21	U * J	21	U * J	20	U * J	21	U * J
Butyl benzyl phthalate	85-68-7	ug/Kg	NL	NL	NL	150	U	300	U	81	J	18	U * J	17	U * J	17	U * J	18	U * J	280	J *	18	U * J	18	U * J
Caprolactam	105-60-2	ug/Kg	NL	NL	NL	270	U	560	U	56	U	23	U J	22	U J	21	U J	23	U J	23	U J	23	U J	23	U J
Carbazole	86-74-8	ug/Kg	NL	NL	NL	110	U	220	U	51	J	4.5	U	4.2	U	12	J	4.5	U	4.5	U	33	J	4.6	U
Chrysene	218-01-9	ug/Kg	1000	3900	1000	420	J	410	U	680		7.9	J	87	J	190	J	6.6	U	33	J	300	J	6.6	U
Dibenz(a,h)anthracene	53-70-3	ug/Kg	330	330	1000	160	U	330	U	150	J	17	U	16	J	29	J	17	U	17	U	51		17	U
Dibenzofuran	132-64-9	ug/Kg	700	59000	210000	110	U	220	U	24	J	5.4	U	5.1	U	750		5.5	U	5.5	U	19	J	5.5	U
Diethyl phthalate	84-66-2	ug/Kg	NL	NL	NL	120	U	240	U	24	U	5.6	U	5.3	U	5.1	U	5.6	U	5.6	U	5.5	U	5.7	U
Dimethyl phthalate	131-11-3	ug/Kg	NL	NL	NL	110	U	220	U	22	U	4.6	U	4.4	U	4.3	U	4.7	U	4.7	U	4.6	U	4.7	U
Di-n-butyl phthalate	84-74-2	ug/Kg	NL	NL	NL	150	U	320	U	32	U	68	U J	64	U J	63	U J	69	U J	69	U J	68	U J	69	U J
Di-n-octyl phthalate	117-84-0	ug/Kg	NL	NL	NL	110	U	220	U	22	U	20	U J	19	U J	19	U J	21	U J	21	U J	20	U J	21	U J
Fluoranthene	206-44-0	ug/Kg	100000	100000	1000000	890	J	760	J	1300		5	U	150	J	450		5	U	36	J	610		5.1	U
Fluorene	86-73-7	ug/Kg	30000	100000	386000	110	U	220	U	43	J	5.2	U	4.9	U	710		5.3	U	5.3	U	24	J	5.3	U
Hexachlorobenzene	118-74-1	ug/Kg	NL	NL	NL	120	U	250	U	25	U	5.6	U	5.3	U	5.2	U	5.7	U	5.7	U	5.6	U	5.7	U
Hexachlorobutadiene	87-68-3	ug/Kg	NL	NL	NL	130	U	270	U	28	U	8.2	U	7.7	U	7.6	U	8.3	U	8.3	U	8.1	U	8.3	U
Hexachlorocyclopentadiene	77-47-4	ug/Kg	NL	NL	NL	120	U	250	U	25	U	34	U J	32	U J	31	U J	34	U J	34	U J	34	U J	34	U J
Hexachloroethane	67-72-1	ug/Kg	NL	NL	NL	120	U	240	U	24	U	5.9	U	5.6	U	5.5	U	6	U	6	U	5.9	U	6.0	U
Indeno[1,2,3-cd]pyrene	193-39-5	ug/Kg	500	500	8200	200	J	300	J	400		15	U J	51	J	110	J	15	U J	26	J	180	J	15	U J
Isophorone	78-59-1	ug/Kg	NL	NL	NL	190	U	390	U	40	U	10	U	9.5	U	9.3	U	10	U	10	U	10	U	10	U
Naphthalene	91-20-3	ug/Kg	12000	100000	12000	120	U	240	U	26	J	6.6	U	9.8	J	150	J	6.7	U	6.7	U	30	J	6.8	U
Nitrobenzene	98-95-3	ug/Kg	NL	NL	NL	100	U	210	U	21	U	9.2	U	8.7	U	8.5	U	9.3	U	9.3	U	9.2	U	9.4	U
N-Nitrosodi-n-propylamine	621-64-7	ug/Kg	NL	NL	NL	150	U	320	U	32	U	6.1	U	5.8	U	5.7	U	6.2	U	6.2	U	6.1	U	6.2	U
N-Nitrosodiphenylamine	86-30-6	ug/Kg	NL	NL	NL	740	U	1500	U	150	U	7.3	U	6.9	U	6.8	U	7.4	U	7.4	U	7.3	U	7.5	U
Pentachlorophenol	87-86-5	ug/Kg	NL	NL	NL	910	U	1900	U	190	U	79	U	74	U	73	U	80	U	80	U	78	U	80	U
Phenanthrene	85-01-8	ug/Kg	100000	100000	1000000	670	J	330	J	530		6.7	U	58	J	1300		6.8	U	6.8	U	330	J	6.9	U
Phenol	108-95-2	ug/Kg	330	100000	330	140	U	280	U	29	U	5.7	U	5.4	U	5.3	U	5.8	U	5.8	U	5.7	U	5.8	U
Pyrene	129-00-0	ug/Kg	100000	100000	1000000	740	J	660	J	1000		9.5	U	160	J	420		9.7	U	42	J	580		9.7	U

TABLE 2.5.1C
Surface Soil Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Metals (totals)

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	COMP-1 0"-6"		COMP-2 6"-12"		COMP-3 12"-24"		SS-01-0-6		SS-01-6-12		SS-01-12-24		SS-02-0-6		SS-02-6-12		SS-02-12-24		SS-03-0-6	
Sample Depth						0"-6"		6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		0"-6"	
Lab Sample						480-140223-9		480-140223-10		480-140223-11		460-164840-1		460-164840-2		460-164840-3		460-164840-4		460-164840-5		460-164840-6		460-164840-7	
Date Sampled						08/09/2018		08/09/2018		08/09/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018	
Aluminum	7429-90-5	mg/Kg	NL	NL	NL	12500		13100		11700		12500		9030		9140		13000		9210		10400		12500	
Antimony	7440-36-0	mg/Kg	NL	NL	NL	0.44	UJ	0.44	U	0.45	U F1J	0.93	U J	0.94	U J	0.94	U J	0.99	U J	0.88	U J	1.0	U J	1.0	U J
Arsenic,	7440-38-2	mg/Kg	13	16	16	7.3		7.5		11		7.2		4.8		5.7		8.0		7.0		8.4		7.4	
Barium	7440-39-3	mg/Kg	350	400	820	65	J	122	J	80.1	F1J	48.9		72.9		85.3		52.3		42.8		91.0		51.5	
Beryllium	7440-41-7	mg/Kg	7.2	72	47	0.45		0.48		0.48		0.46		0.4	J	0.4	J	0.47		0.35	J	0.47		0.48	
Cadmium	7440-43-9	mg/Kg	2.5	4.3	7.5	0.14	J ^	0.28		0.2	J	0.14	U	0.14	U	0.14	U	0.15	U	0.13	U	0.15	U	0.15	U
Calcium	7440-70-2	mg/Kg	NL	NL	NL	18100	BJ	24800	BJ	18600	BJ	931	J	45000		34300		1010	J	24800		24700		6110	
Chromium	7440-47-3	mg/Kg	30	180	NS	15.4	J	17.9	J	15.5	J	14.3		13.6		13.5		15.4		13.3		15.2		14.9	
Cobalt	7440-48-4	mg/Kg	NL	NL	NL	10.2		11.6		9.8		9.3	J	8	J	7.8	J	9.7	J	8.7	J	9.3	J	9.4	J
Copper	7440-50-8	mg/Kg	50	270	1720	24.4		204		43.2		16.4		32.8		**196**		18.3		18.6		35.4		20.7	
Iron	7439-89-6	mg/Kg	NL	NL	NL	21400	J	24900	J	21500	J	23000		20900		19900		25300		23100		23600		24500	
Lead	7439-92-1	mg/Kg	63	400	450	44.8		**99.3**		**101**		14.1		**193**		**89**		15.4		15.9		**96.8**		14.0	
Magnesium	7439-95-4	mg/Kg	NL	NL	NL	3990	J	5130	J	4310	F1J	3040		4540		5040		3300		4120		4250		3320	
Manganese	7439-96-5	mg/Kg	1600	2000	2000	515	BJ	545	BJ	522	BJ	597		534		674		630		641		423		564	
Nickel	7440-02-0	mg/Kg	30	310	130	21.7		24.9		23		20		19.6		20.3		21.1		21.3		21.7		20.9	
Potassium	7440-09-7	mg/Kg	NL	NL	NL	1160	J	1530	J	1410	F1J	571	J	635	J	677	J	506	J	594	J	681	J	499	J
Selenium	7782-49-2	mg/Kg	3.9	180	4	0.44	U	0.44	U	0.45	U	2.5	U	2.5	U	2.5	U	2.6	U	2.3	U	2.7	U	2.7	U
Silver	7440-22-4	mg/Kg	2	180	8.3	0.22	U	0.22	U	0.22	U	0.2	U	0.2	U	0.2	U	0.21	U	0.19	U	0.21	U	0.21	U
Sodium	7440-23-5	mg/Kg	NL	NL	NL	93.8	J BU	181	B	190	B	83.4	U	96.2	J	106	J	88.3	U	78.8	U	203	J	89.7	U
Thallium	7440-28-0	mg/Kg	NL	NL	NL	0.33	U	0.33	U	0.33	U	0.66	U	0.67	U	0.67	U	0.70	U	0.63	U	0.71	U	0.71	U
Vanadium	7440-62-2	mg/Kg	NL	NL	NL	18.3	J	22.1	J	18.9	J	16.4		15.1		18.7		17.5		12.4		18.9		16.8	
Zinc	7440-66-6	mg/Kg	109	10000	2480	80		**151**	J	**111**	J	55.4		**135**		**147**		59.1		56.9		**166**		59.3	
Mercury	7439-97-6	mg/Kg	0.18	0.81	0.73	0.068		0.17		0.17		0.023		0.071		0.18		0.025		0.014	J	0.13		0.036	

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	SS-03-6-12		SS-03-12-24		SS-04-0-6		SS-04-6-12		SS-04-12-24		SS-05-0-6		SS-05-6-12		SS-05-12-24		Duplicate (SS-05-12-24)	
Sample Depth						6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		12"-24"	
Lab Sample						460-164840-8		460-164840-9		460-164840-10		460-164840-11		460-164840-12		460-164840-13		460-164840-14		460-164840-15		460-164840-16	
Date Sampled						09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018	
Aluminum	7429-90-5	mg/Kg	NL	NL	NL	10700		10800		12800		9240		8950		13500		8070		12000		14400	
Antimony	7440-36-0	mg/Kg	NL	NL	NL	0.93	U	0.97	U	0.93	U	0.98	U	0.96	U	0.95	U F1	0.85	U	0.98	U	0.96	U
Arsenic,	7440-38-2	mg/Kg	13	16	16	6.9		6.2		7.4		6.4		6.0		6.7		5.5		4.8		8.3	
Barium	7440-39-3	mg/Kg	350	400	820	55.1		64.1		56.8		121		116		53.7		43.1		48.8		62.1	
Beryllium	7440-41-7	mg/Kg	7.2	72	47	0.43		0.44		0.46		0.44		0.41	J	0.45		0.33	J	0.51		0.50	
Cadmium	7440-43-9	mg/Kg	2.5	4.3	7.5	0.14	U	0.15	U	0.14	U	0.15	U	0.15	U	0.14	U	0.13	U	0.15	U	0.15	U
Calcium	7440-70-2	mg/Kg	NL	NL	NL	23100		28800		1850		46300		32100		1020	J	35500		7390		1410	
Chromium	7440-47-3	mg/Kg	30	180	NS	14.6		15.9		14.7		14.2		14.7		15.1		14.9		15.5		16.3	
Cobalt	7440-48-4	mg/Kg	NL	NL	NL	9.5	J	9.1	J	9.4	J	8.2	J	7.6	J	9.6	J	7.3	J	10.5	J	9.7	J
Copper	7440-50-8	mg/Kg	50	270	1720	26.1		23.7		20.5		31.3		34.1		21.9		27.6		22.9		21.4	
Iron	7439-89-6	mg/Kg	NL	NL	NL	24500		24500		23900		20200		20800		24700		20100		23200		25600	
Lead	7439-92-1	mg/Kg	63	400	450	26.2		37.3		24.4		**137**		**118**		15.1		51.8		40.7		16.0	
Magnesium	7439-95-4	mg/Kg	NL	NL	NL	4580		4860		3230		5460		4550		3300		6940		3990		3400	
Manganese	7439-96-5	mg/Kg	1600	2000	2000	654		613		634		477		551		590		487		316		627	
Nickel	7440-02-0	mg/Kg	30	310	130	23.0		23.6		20.3		20.1		19.0		20.6		22.1		23.3		21.8	
Potassium	7440-09-7	mg/Kg	NL	NL	NL	721	J	911	J	555	J	705	J	703	J	488	J	694	J	764	J	553	J
Selenium	7782-49-2	mg/Kg	3.9	180	4	2.5	U	2.6	U	2.5	U	2.6	U	2.6	U	2.5	U	2.3	U	2.6	U	2.6	U
Silver	7440-22-4	mg/Kg	2	180	8.3	0.20	U	0.20	U	0.20	U	0.21	U	0.20	U	0.20	U	0.18	U	0.21	U	0.20	U
Sodium	7440-23-5	mg/Kg	NL	NL	NL	83.1	U	150	J	83.1	U	268	J	222	J	85.3	U	75.9	J	123	J	86.5	U
Thallium	7440-28-0	mg/Kg	NL	NL	NL	0.66	U	0.69	U	0.66	U	0.69	U	0.68	U	0.68	U	0.60	U	0.70	U	0.69	U
Vanadium	7440-62-2	mg/Kg	NL	NL	NL	15.2		16.7		17.6		18.2		18.5		18.7		26.5		19.9		19.6	
Zinc	7440-66-6	mg/Kg	109	10000	2480	74.9		88.9		65.4		**169**		**156**		59.6		102		79.4		64.9	
Mercury	7439-97-6	mg/Kg	0.18	0.81	0.73	0.034		0.12		0.030		0.14		**0.20**		0.031		0.14		0.11		0.027	

TABLE 2.5.1D

Surface Soil Samples

Former Stow Manufacturing, NYSDEC BCP Site #C704058

435 State Street, Binghamton, New York

Polychlorinated Biphenyls (PCBs)

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	COMP-1 0"-6"		COMP-2 6"-12"		COMP-3 12"-24"		SS-01-0-6		SS-01-6-12		SS-01-12-24		SS-02-0-6		SS-02-6-12		SS-02-12-24		SS-03-0-6	
Sample Depth						0"-6"		6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		0"-6"	
Lab Sample						480-140223-9		480-140223-10		480-140223-11		460-164840-1		460-164840-2		460-164840-3		460-164840-4		460-164840-5		460-164840-6		460-164840-7	
Date Sampled						08/09/2018		08/09/2018		08/09/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018	
PCB-1016	12674-11-2	ug/Kg	100	1000	3200	52	U	47	U	46	U	10	U	9.8	U	9.6	U	10	U	10	U	10	U	11	U
PCB-1221	11104-28-2	ug/Kg				52	U	47	U	46	U	10	U	9.8	U	9.6	U	10	U	10	U	10	U	11	U
PCB-1232	11141-16-5	ug/Kg				52	U	47	U	46	U	10	U	9.8	U	9.6	U	10	U	10	U	10	U	11	U
PCB-1242	53469-21-9	ug/Kg				52	U	47	U	46	U	10	U	9.8	U	9.6	U	10	U	10	U	10	U	11	U
PCB-1248	12672-29-6	ug/Kg				52	U	47	U	46	U	10	U	9.8	U	9.6	U	10	U	10	U	10	U	11	U
PCB-1254	11097-69-1	ug/Kg				120	U	110	U	110	U	11	U	10	U	9.9	U	11	U	11	U	11	U	11	U
PCB-1260	11096-82-5	ug/Kg				120	U	110	U	110	U	11	U	10	U	9.9	U	11	U	11	U	11	U	11	U
Aroclor 1268	11100-14-4	ug/Kg				NR		NR		NR		11	U	10	U	9.9	U	11	U	11	U	11	U	11	U
Aroclor-1262	37324-23-5	ug/Kg				NR		NR		NR		11	U	10	U	9.9	U	11	U	11	U	11	U	11	U
Total PCBs	NA	ug/Kg				ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	SS-03-6-12		SS-03-12-24		SS-04-0-6		SS-04-6-12		SS-04-12-24		SS-05-0-6		SS-05-6-12		SS-05-12-24		Duplicate SS-05-12-24)	
Sample Depth						6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		12"-24"	
Lab Sample						460-164840-8		460-164840-9		460-164840-10		460-164840-11		460-164840-12		460-164840-13		460-164840-14		460-164840-15		460-164840-16	
Date Sampled						09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018	
PCB-1016	12674-11-2	ug/Kg	100	1000	3200	9.5	U	9.8	U	10	U	10	U	9.7	U	10	U	9.4	U	9.7	U	11	U
PCB-1221	11104-28-2	ug/Kg				9.5	U	9.8	U	10	U	10	U	9.7	U	10	U	9.4	U	9.7	U	11	U
PCB-1232	11141-16-5	ug/Kg				9.5	U	9.8	U	10	U	10	U	9.7	U	10	U	9.4	U	9.7	U	11	U
PCB-1242	53469-21-9	ug/Kg				9.5	U	9.8	U	10	U	10	U	9.7	U	10	U	9.4	U	9.7	U	11	U
PCB-1248	12672-29-6	ug/Kg				9.5	U	9.8	U	10	U	10	U	9.7	U	10	U	9.4	U	9.7	U	11	U
PCB-1254	11097-69-1	ug/Kg				9.8	U	10	U	11	U	11	U	10	U	11	U	9.7	U	10	U	11	U
PCB-1260	11096-82-5	ug/Kg				9.8	U	10	U	11	U	11	U	65	J	11	U	9.7	U	10	U	11	U
Aroclor 1268	11100-14-4	ug/Kg				9.8	U	10	U	11	U	11	U	10	U	11	U	9.7	U	10	U	11	U
Aroclor-1262	37324-23-5	ug/Kg				9.8	U	10	U	11	U	11	U	10	U	11	U	9.7	U	10	U	11	U
Total PCBs	NA	ug/Kg				ND		ND		ND		ND		65	J	ND		ND		ND		ND	

TABLE 2.5.1E
Surface Soil Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Pesticides

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	COMP-1 0"-6"		COMP-2 6"-12"		COMP-3 12"-24"		SS-01-0-6		SS-01-6-12		SS-01-12-24		SS-02-0-6		SS-02-6-12		SS-02-12-24		SS-03-0-6	
Sample Depth						0"-6"		6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		0"-6"	
Lab Sample						480-140223-9		480-140223-10		480-140223-11		460-164840-1		460-164840-2		460-164840-3		460-164840-4		460-164840-5		460-164840-6		460-164840-7	
Date Sampled						08/09/2018		08/09/2018		08/09/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018	
4,4'-DDD	72-54-8	ug/Kg	0.0033	13000	14000	3.5	U	**4.5**	J BU	3.6	U	1.3	U	1.3	U	**11**		1.3	U	1.3	U	1.3	U	1.3	U
4,4'-DDE	72-55-9	ug/Kg	0.0033	8900	17000	**3.9**	J BU	**4.9**	J BU	**3.9**	J BU	0.92	U	0.87	U	**4.9**	J	0.93	U	0.93	U	**2.5**	J	0.93	U
4,4'-DDT	50-29-3	ug/Kg	0.0033	7900	136000	**5.3**	J	**7.4**	J	4.4	U F1	1.4	U	1.4	U	1.3	U	1.4	U	1.4	U	**5.8**	J	1.5	U
Aldrin	309-00-2	ug/Kg	0.005	97	190	4.4	U	4.5	U	4.6	U	1.2	U	1.1	U	1.1	U	1.2	U	1.2	U	1.2	U	1.2	U
alpha-BHC	319-84-6	ug/Kg	0.02	480	20	3.2	U	**3.9**	J	**6.6**	J F2	0.79	U	0.75	U	0.73	U	0.8	U	0.8	U	0.79	U	0.80	U
beta-BHC	319-85-7	ug/Kg	0.036	360	90	3.2	U	3.3	U	3.4	U	0.87	U	0.82	U	0.81	U	0.88	U	0.88	U	0.87	U	0.89	U
cis-Chlordane	5103-71-9	ug/Kg	0.094	4200	2900	8.9	U	9	U	9.3	U	19	U	18	U	17	U	19	U	19	U	19	U	19	U
delta-BHC	319-86-8	ug/Kg	0.04	100000	250	3.3	U	3.4	U	**5.2**	J B	0.48	U	0.45	U	0.44	U	0.48	U	0.48	U	0.47	U	0.48	U
Dieldrin	60-57-1	ug/Kg	0.005	200	100	4.3	U	4.3	U	4.5	U F1	1	U	0.96	U	0.93	U	1	U	1	U	1	U	1.0	U
Endosulfan I	959-98-8	ug/Kg	2.4	24000	102000	3.4	U	3.5	U	3.6	U	1.2	U	1.1	U	1.1	U	1.2	U	1.2	U	1.2	U	1.2	U
Endosulfan II	33213-65-9	ug/Kg	2.4	24000	102000	3.2	U	**7**	J	3.4	U	2	U	1.9	U	1.8	U	2	U	2	U	2	U	2.0	U
Endosulfan sulfate	1031-07-8	ug/Kg	2.4	24000	1000000	3.4	U	3.4	U	**6.4**	J F2	0.98	U	0.92	U	0.9	U	0.99	U	0.99	U	0.97	U	0.99	U
Endrin	72-20-8	ug/Kg	0.014	11000	60	3.6	U	3.6	U	3.7	U	1.1	U	1.1	U	1	U	1.1	U	1.1	U	1.1	U	1.1	U
Endrin aldehyde	7421-93-4	ug/Kg	NL	NL	NL	4.6	U	4.6	U	4.8	U	1.8	U	1.7	U	1.7	U	1.9	U	1.9	U	1.8	U	1.9	U
Endrin ketone	53494-70-5	ug/Kg	NL	NL	NL	4.4	U	14	J	4.6	U	1.5	U	1.4	U	1.4	U	1.5	U	1.5	U	1.5	U	1.5	U
gamma-BHC (Lindane)	58-89-9	ug/Kg	0.1	1300	100	3.3	U	3.3	U	**5.2**	J B	0.72	U	0.68	U	0.67	U	0.73	U	0.73	U	0.72	U	0.73	U
Heptachlor	76-44-8	ug/Kg	0.042	2100	680	3.9	U	3.9	U	4.1	J F2 F1	0.92	U	0.87	U	0.85	U	0.93	U	0.93	U	0.91	U	0.93	U
Heptachlor epoxide	1024-57-3	ug/Kg	NL	NL	NL	4.6	U	4.7	U	4.8	U	1.2	U	1.1	U	1.1	U	1.2	U	1.2	U	1.2	U	1.2	U
Methoxychlor	72-43-5	ug/Kg	NL	NL	NL	3.7	U	3.7	U	3.8	J F2 F1	1.8	U	1.7	U	1.6	U	1.8	U	1.8	U	1.8	U	1.8	U
Toxaphene	8001-35-2	ug/Kg	NL	NL	NL	100	U	110	U	110	U	28	U	27	U	26	U	28	U	28	U	28	U	29	U
trans-Chlordane	5103-74-2	ug/Kg	NL	NL	NL	5.7	U	5.8	U	6.0	U	NR		NR		NR		NR		NR		NR		NR	

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	SS-03-6-12		SS-03-12-24		SS-04-0-6		SS-04-6-12		SS-04-12-24		SS-05-0-6		SS-05-6-12		SS-05-12-24		Duplicate (SS-05-12-24)	
Sample Depth						6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		0"-6"		6"-12"		12"-24"		12"-24"	
Lab Sample						460-164840-8		460-164840-9		460-164840-10		460-164840-11		460-164840-12		460-164840-13		460-164840-14		460-164840-15		460-164840-16	
Date Sampled						09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018		09/14/2018	
4,4'-DDD	72-54-8	ug/Kg	0.0033	13000	14000	1.2	U	1.3	U	1.3	U	**23**		**2.5**	J p	1.3	U	1.2	U	1.2	U	1.3	U
4,4'-DDE	72-55-9	ug/Kg	0.0033	8900	17000	0.84	U	0.87	U	0.91	U	**11**		**2.6**	J	0.92	U	0.83	U	0.87	U	0.93	U
4,4'-DDT	50-29-3	ug/Kg	0.0033	7900	136000	1.3	U	1.4	U	1.4	U	**18**		**3.7**	J p	1.4	U	1.3	U	1.3	U	1.5	U
Aldrin	309-00-2	ug/Kg	0.005	97	190	1.1	U	1.1	U	1.2	U	1.2	U	1.1	U	1.2	U	1.1	U	1.1	U	1.2	U
alpha-BHC	319-84-6	ug/Kg	0.02	480	20	0.72	U	0.75	U	0.79	U	0.80	U	0.74	U	0.79	U	0.72	U	0.74	U	0.80	U
beta-BHC	319-85-7	ug/Kg	0.036	360	90	0.80	U	0.82	U	0.87	U	0.88	U	0.82	U	0.87	U	0.79	U	0.82	U	0.89	U
cis-Chlordane	5103-71-9	ug/Kg	0.094	4200	2900	17	U	18	U	19	U	19	U	18	U	19	U	17	U	18	U	19	U
delta-BHC	319-86-8	ug/Kg	0.04	100000	250	0.44	U	0.45	U	0.47	U	0.48	U	0.45	U	0.48	U	0.43	U	0.45	U	0.48	U
Dieldrin	60-57-1	ug/Kg	0.005	200	100	0.92	U	0.96	U	1.0	U	1.0	U	0.95	U	1.0	U	0.92	U	0.95	U	1.0	U
Endosulfan I	959-98-8	ug/Kg	2.4	24000	102000	1.1	U	1.1	U	1.2	U	1.2	U	1.1	U	1.2	U	1.1	U	1.1	U	1.2	U
Endosulfan II	33213-65-9	ug/Kg	2.4	24000	102000	1.8	U	1.9	U	2.0	U	2.0	U	1.9	U	2.0	U	1.8	U	1.9	U	2.0	U
Endosulfan sulfate	1031-07-8	ug/Kg	2.4	24000	1000000	0.89	U	0.92	U	0.97	U	0.99	U	0.92	U	0.98	U	0.89	U	0.92	U	0.99	U
Endrin	72-20-8	ug/Kg	0.014	11000	60	1.0	U	1.1	U	1.1	U	1.1	U	1.0	U	1.1	U	1.0	U	1.1	U	1.1	U
Endrin aldehyde	7421-93-4	ug/Kg	NL	NL	NL	1.7	U	1.7	U	1.8	U	1.9	U	1.7	U	1.8	U	1.7	U	1.7	U	1.9	U
Endrin ketone	53494-70-5	ug/Kg	NL	NL	NL	1.4	U	1.4	U	1.5	U	1.5	U	1.4	U	1.5	U	1.4	U	1.4	U	1.5	U
gamma-BHC (Lindane)	58-89-9	ug/Kg	0.1	1300	100	0.66	U	0.68	U	0.72	U	0.73	U	0.68	U	0.72	U	0.65	U	0.68	U	0.73	U
Heptachlor	76-44-8	ug/Kg	0.042	2100	680	0.84	U	0.87	U	0.91	U	0.93	U	0.86	U	0.92	U	0.83	U	0.87	U	0.93	U
Heptachlor epoxide	1024-57-3	ug/Kg	NL	NL	NL	1.1	U	1.1	U	1.2	U	1.2	U	1.1	U	1.2	U	1.1	U	1.1	U	1.2	U
Methoxychlor	72-43-5	ug/Kg	NL	NL	NL	1.6	U	1.7	U	1.8	U	1.8	U	1.7	U	1.8	U	1.6	U	1.7	U	1.8	U
Toxaphene	8001-35-2	ug/Kg	NL	NL	NL	26	U	27	U	28	U	28	U	26	U	28	U	26	U	27	U	29	U
trans-Chlordane	5103-74-2	ug/Kg	NL	NL	NL	NR		NR		NR		NR		NR		NR		NR		NR		NR	

TABLE 2.5.1F
Subsurface Soil Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Volatile Organic Compounds

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	RISB-01 8"-10'	RISB-02 16'-18'	RISB-06 5'-10'	RISB-07 7'-10'	RISB-09	RISB-11 15'-17'	RISB-14 4'-8'	RISB-15 6'-8'	FIELD DUPLICATE (RISB-15 6'-8')	DUPE 8/9/2018 (RISB-01 8'-10')	DUPE 8/8/18 (RISB-09)
Sample Depth						8'-10'	16'-18'	5'-10'	7'-10'	7'-13'	15'-17'	4'-8'	6'-8'	6'-8'	8'-10'	7'-13'
Lab Sample						480-140223-3	480-140223-6	480-140143-2	480-140143-1	480-140143-3	480-140223-1	480-141411-1	480-141411-2	480-141411-3	480-140223-8	480-140143-4
Date Sampled						08/09/2018	08/09/2018	08/08/2018	08/08/2018	08/08/2018	08/08/2018	9/6/2018	9/6/2018	9/6/2018	08/09/2018	08/08/2018
1,1,1-Trichloroethane	71-55-6	ug/Kg	680	100000	680	0.51 U	17 U	0.46 UJ F1	0.56 U	0.52 U	0.36 U H	25 U F1 F2	0.51 U	0.65 U	0.64 U	0.44 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/Kg	NL	NL	NL	1.1 U	10 U	1.0 UJ F1	1.2 U	1.2 U	0.81 U H	15 U F1 F2	1.1 U	1.4 U	1.4 U	0.99 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ug/Kg	NL	NL	NL	1.6 U	31 U	1.4 U	1.7 U	1.6 U	1.1 U H	46 U F2	1.6 U	2.0 U	2.0 U	1.4 U
1,1,2-Trichloroethane	79-00-5	ug/Kg	NL	NL	NL	0.92 U	13 U	0.82 UJ F1	0.99 U	0.93 U	0.65 U H	19 U F2	0.92 U	1.2 U	1.1 U	0.80 U
1,1-Dichloroethane	75-34-3	ug/Kg	270	26000	270	0.86 U	19 U	0.77 U	0.93 U	0.88 U	0.61 U H	28 U F2	0.86 U	1.1 U	1.1 U	0.75 U
1,1-Dichloroethene	75-35-4	ug/Kg	330	100000	330	0.87 U	21 U	0.77 U	0.94 U	0.88 U	0.61 U H	32 U F2	0.87 U	1.1 U	1.1 U	0.75 U
1,2,4-Trichlorobenzene	120-82-1	ug/Kg	NL	NL	NL	0.43 U	23 U	0.38 UJ F1	0.46 U	0.44 U	0.30 U H	35 U F2	0.43 U	0.54 U	0.53 U	0.37 U
1,2,4-Trimethylbenzene	95-63-6	ug/Kg	3600	52000	3600	1.4 U	17 U	1.2 UJ F1	1.5 U	1.4 U	0.96 U H	230 F1 F2 J	99	120	1.7 U	1.2 U
1,2-Dibromo-3-Chloropropane	96-12-8	ug/Kg	NL	NL	NL	3.5 U	31 U	3.1 UJ F1	3.8 U	3.6 U	2.5 U H	46 U F1 F2	3.5 U	4.4 U	4.4 U	3.1 U
1,2-Dibromoethane	106-93-4	ug/Kg	NL	NL	NL	0.91 U	11 U	0.81 UJ F1	0.98 U	0.92 U	0.64 U H	16 U F2	0.91 U	1.1 U	1.1 U	0.79 U
1,2-Dichlorobenzene	95-50-1	ug/Kg	1100	100000	1100	0.55 U	16 U	0.49 UJ F1	0.60 U	0.56 U	0.39 U H	23 U F1 F2	2.8 J	3.0 J	0.69 U	0.48 U
1,2-Dichloroethane	107-06-2	ug/Kg	20	3100	20	0.36 U	25 U	0.32 UJ F1	0.38 U	0.36 U	0.25 U H	37 U F1 F2	0.36 U	0.45 U	0.44 U	0.31 U
1,2-Dichloropropane	78-87-5	ug/Kg	NL	NL	NL	3.5 U	9.9 U	3.1 UJ F1	3.8 U	3.6 U	2.5 U H	15 U F1 F2	3.5 U	4.4 U	4.4 U	3.1 U
1,3,5-Trimethylbenzene	108-67-8	ug/Kg	8400	52000	8400	0.46 U	19 U	0.41 UJ F1	0.49 U	0.46 U	0.32 U H	89 J F1 F2	30	36	0.59 J	0.39 U
1,3-Dichlorobenzene	541-73-1	ug/Kg	2400	49000	2400	0.36 U	16 U	0.32 UJ F1	0.39 U	0.37 U	0.26 U H	24 U F1 F2	0.36 U	0.46 U	0.45 U	0.31 U
1,4-Dichlorobenzene	106-46-7	ug/Kg	1800	13000	1800	0.99 U	8.6 U	0.88 UJ F1	1.1 U	1.0 U	0.70 U H	13 U F1 F2	0.99 U	1.2 U	1.2 U	0.86 U
2-Butanone (MEK)	78-93-3	ug/Kg	120	100000	120	100	180 U	2.3 UJ F1 *	2.8 U	2.6 U	18 J H	270 U F1 F2 J	61	65	**280**	2.2 U
2-Hexanone	591-78-6	ug/Kg	NL	NL	NL	3.5 U	130 U	3.1 UJ F1	3.8 U	3.6 U	2.5 U H	190 U F1 F2	3.5 U	4.4 U	4.4 U	3.1 U
4-Isopropyltoluene	99-87-6	ug/Kg	NL	NL	NL	0.57 U	21 U	0.51 U F1	0.61 U	0.58 U	0.40 U H	31 U F1 F2	4.2 J	5.5 J	0.70 U	0.49 U
4-Methyl-2-pentanone (MIBK)	108-10-1	ug/Kg	NL	NL	NL	2.3 U	20 U	2.1 UJ F1	2.5 U	2.4 U	1.6 U H	29 U F1 F2	2.3 U	2.9 U	2.9 U	2.0 U
Acetone	67-64-1	ug/Kg	50	100000	50	**490**	**250**	47 J F2 F1	**150**	25 J	**110** H	380 U F1 F2 J	**320**	**460**	**1100**	**51**
Benzene	71-43-2	ug/Kg	60	4800	60	0.35 U	12 U	0.31 UJ F1	0.37 U	0.35 U	0.24 U H	17 U F1 F2	0.73 J	0.69 J	0.43 U	0.30 U
Bromodichloromethane	75-27-4	ug/Kg	NL	NL	NL	0.95 U	12 U	0.84 UJ F1	1.0 U	0.96 U	0.67 U H	18 U F1 F2	0.95 U	1.2 U	1.2 U	0.82 U
Bromoform	75-25-2	ug/Kg	NL	NL	NL	3.5 U	31 U	3.1 UJ F1	3.8 U	3.6 U	2.5 U H	46 U F2	3.5 U	4.4 U	4.4 U	3.1 U
Bromomethane	74-83-9	ug/Kg	NL	NL	NL	0.64 U	14 U	0.57 U	0.69 U	0.65 U	0.45 U H	20 U F2	0.64 U J	0.80 U	0.79 U	0.55 U
Carbon disulfide	75-15-0	ug/Kg	NL	NL	NL	3.5 U	28 U	3.1 UJ F1 F2	3.8 U	3.6 U	2.5 U H	42 U F2 J	3.5 U	4.4 U	5.6 J	3.1 U
Carbon tetrachloride	56-23-5	ug/Kg	760	2400	760	0.69 U	16 U	0.61 UJ F1	0.74 U	0.70 U	0.48 U H	23 U F1 F2 J	0.69 U	0.86 U	0.85 U	0.59 U
Chlorobenzene	108-90-7	ug/Kg	1100	100000	1100	0.94 U	8.1 U	0.83 UJ F1	1.0 U	0.95 U	0.66 U H	12 U F2	0.94 U	1.2 U	1.2 U	0.81 U
Chloroethane	75-00-3	ug/Kg	NL	NL	NL	1.6 U	13 U	1.4 U	1.7 U	1.6 U	1.1 U H	19 U F2	1.6 U	2.0 U	2.0 U	1.4 U
Chloroform	67-66-3	ug/Kg	370	49000	370	0.44 U	42 U	0.39 UJ F1	0.47 U	0.44 U	0.31 U H	63 U F1 F2	0.44 U	0.55 U	0.54 U	0.38 U
Chloromethane	74-87-3	ug/Kg	NL	NL	NL	0.43 U	15 U	0.38 U	0.46 U	0.43 U	0.30 U H	22 U F2	0.43 U J	0.54 U	0.53 U	0.37 U
cis-1,2-Dichloroethene	156-59-2	ug/Kg	250	100000	250	0.91 U	17 U	0.81 UJ F1	0.98 U	0.92 U	0.64 U H	25 U F1 F2	0.91 U	1.1 U	1.1 U	0.78 U
cis-1,3-Dichloropropene	10061-01-5	ug/Kg	NL	NL	NL	1.0 U	15 U	0.91 UJ F1	1.1 U	1.0 U	0.72 U H	22 U F2	1.0 U	1.3 U	1.3 U	0.88 U
Cyclohexane	110-82-7	ug/Kg	NL	NL	NL	55	14 U	0.88 U	1.1 U	1.0 U	0.70 U H	350 F1 * F2 J	17	36	57	0.86 U
Dibromochloromethane	124-48-1	ug/Kg	NL	NL	NL	0.91 U	30 U	0.81 UJ F1	0.98 U	0.92 U	0.64 U H	44 U F2	0.91 U	1.1 U	1.1 U	0.78 U
Dichlorodifluoromethane	75-71-8	ug/Kg	NL	NL	NL	0.59 U	27 U	0.52 UJ F2	0.63 U	0.59 U	0.41 U H	40 U F2 J	0.59 U	0.74 U	0.72 U	0.51 U
Ethylbenzene	100-41-4	ug/Kg	1000	41000	1000	0.49 U	18 U	0.43 UJ F1	0.53 U	0.50 U	0.34 U H	27 U F2	2.9 J	2.9 J	0.61 U	0.42 U
Isopropylbenzene	98-82-8	ug/Kg	2300*	NL	NL	1.1 U	32 J	0.95 UJ F1	1.2 U	1.1 U	0.75 U H	43 J F1 F2	3.5 J	3.9 J	1.3 U	0.92 U
m,p-Xylene	179601-23-1	ug/Kg	260	100000	1600	1.2 U	34 U	1.1 UJ F1	1.3 U	1.2 U	0.84 U H	56 J F1 F2	10 J	11 J	1.5 U	1.0 U
Methyl acetate	79-20-9	ug/Kg	NL	NL	NL	4.3 U	67 J	3.8 U	4.6 U	4.3 U	3.0 U H	43 U F1 F2	4.3 U	5.4 U	5.3 U	3.7 U
Methyl tert-butyl ether	1634-04-4	ug/Kg	930	100000	930	0.70 U	23 U	0.62 U	0.75 U	0.71 U	0.49 U H	35 U F2	0.70 U	0.87 U	0.86 U	0.60 U
Methylcyclohexane	108-87-2	ug/Kg	NL	NL	NL	28	29 U	0.96 UJ F1	1.2 U	1.1 U	0.76 U H	400 F1 F2 J	11	19	30	0.93 U
Methylene Chloride	75-09-2	ug/Kg	50	100000	50	3.3 U	34 J B	2.9 UJ	3.5 UJ	3.3 UJ	2.3 U H	18 U F2	3.8 J B U	4.1 U	4.0 U	2.8 UJ
Naphthalene	91-20-3	ug/Kg	12000	NL	NL	0.95 U	21 UJ	0.84 UJ F1 F2	1.0 U	0.96 U	0.67 U H	53 J F1 F2	6.7 J	11	1.2 U	0.82 U
n-Butylbenzene	104-51-8	ug/Kg	12000	100000	12000	0.62 U	77	0.55 UJ F1	0.67 U	0.63 U	0.43 U H	27 U F1 F2	6.1 J	9.2	0.76 U	0.53 U
N-Propylbenzene	103-65-1	ug/Kg	3900	100000	3900	0.57 U	27 J	0.50 UJ F1	0.61 U	0.58 U	0.40 U H	67 J F1 F2	5.5 J	6.5 J	0.70 U	0.49 U
o-Xylene	95-47-6	ug/Kg	260	100000	1600	0.93 U	8.0 U	0.82 UJ F1	1.0 U	0.94 U	0.65 U H	12 U F1 F2	7.4	7.6 J	1.1 U	0.80 U
sec-Butylbenzene	135-98-8	ug/Kg	11000	100000	11000	0.62 U	140	0.55 UJ F1	0.67 U	0.63 U	0.43 U H	34 U F1 F2	5.7 J	6.9 J	0.76 U	0.53 U
Styrene	100-42-5	ug/Kg	NL	NL	NL	0.35 U	15 U	0.31 UJ F1	0.38 U	0.36 U	0.25 U H	22 U F2	0.35 U	0.44 U	0.44 U	0.31 U
tert-Butylbenzene	98-06-6	ug/Kg	5900	100000	5900	0.80 J	36 J	0.66 UJ F1	0.80 U	0.75 U	0.52 U H	25 U F1 F2	0.74 U	0.93 U	0.91 U	0.64 U
Tetrachloroethene	127-18-4	ug/Kg	1300	19000	1300	0.95 U	8.3 U	0.85 UJ F1	1.0 U	0.96 U	0.67 U H	12 U F2	0.95 U	1.2 U	1.2 U	0.82 U
Toluene	108-88-3	ug/Kg	700	100000	700	0.54 U	16 U	0.48 UJ F1	0.58 U	0.54 U	0.38 U H	62 J F2	1.8 J	1.6 J	0.83 J	0.46 U
trans-1,2-Dichloroethene	156-60-5	ug/Kg	190	100000	190	0.73 U	14 U	0.65 UJ F1	0.79 U	0.74 U	0.52 U H	22 U F2	0.73 U	0.92 U	0.91 U	0.63 U
trans-1,3-Dichloropropene	10061-02-6	ug/Kg	NL	NL	NL	3.1 U	6.0 U	2.8 UJ F1	3.4 U	3.2 U	2.2 U H	9.0 U F2	3.1 U	3.9 U	3.9 U	2.7 U
Trichloroethene	79-01-6	ug/Kg	470	21000	470	1.6 U	17 U	1.4 UJ F1	1.7 U	1.6 U	1.1 U H	25 U F1 F2	1.6 U	2.0 U	1.9 U	1.3 U
Trichlorofluoromethane	75-69-4	ug/Kg	NL	NL	NL	0.67 U	29 U	0.60 U F2	0.72 U	0.68 U	0.47 U H	43 U F1 F2 J	0.67 U	0.84 U	0.83 U	0.58 U
Vinyl chloride	75-01-4	ug/Kg	20	900	20	0.86 U	21 U	0.77 U	0.93 U	0.88 U	0.61 U H	31 U F2	0.86 U	1.1 U	1.1 U	0.75 U
Xylenes, Total	1330-20-7	ug/Kg	260	100000	1600	1.2 U	34 U	1.1 UJ F1	1.3 U	1.2 U	0.84 U H	56 J F1 F2	17	19	1.5 U	1.0 U

TABLE 2.5.1G
Subsurface Soil Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Semi-Volatile Organic Compounds

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	RISB-01 8'-10'		RISB-02 16'-18'		RISB-06 5'-10'		RISB-07 7'-10'		RISB-09		RISB-11 15'-17'		RISB-14 4'-8'		RISB-15 6'-8'		FIELD DUPLICATE (RISB-15 6'-8')		DUPE 8/8/18 (RISB-09)		DUPE 8/9/2018 (RISB-01 8'-10')	
Sample Depth						8'-10'		16'-18'		5'-10'		7'-10'		7'-13'		15'-17'		4'-8'		6'-8'		6'-8'		7'-13'		8'-10'	
Lab Sample						480-140223-3		480-140223-6		480-140143-2		480-140143-1		480-140143-3		480-140223-1		480-141411-1		480-141411-2		480-141411-3		480-140143-4		480-140223-8	
Date Sampled						08/09/2018		08/09/2018		08/08/2018		08/08/2018		08/08/2018		08/08/2018		09/06/2018		09/06/2018		09/06/2018		08/08/2018		08/09/2018	
2,4,5-Trichlorophenol	95-95-4	ug/Kg	NL	NL	NL	62	U	57	U	51	U	1000	U	1100	U	57	U	260	U	280	U	1200	U	260	U	59	U
2,4,6-Trichlorophenol	88-06-2	ug/Kg	NL	NL	NL	46	U	42	U	38	U	740	U	780	U	42	U	190	U	210	U	880	U	190	U	44	U
2,4-Dichlorophenol	120-83-2	ug/Kg	NL	NL	NL	24	U	22	U	20	U	390	U	410	U	22	U	100	U	110	U	470	U	100	U	23	U
2,4-Dimethylphenol	105-67-9	ug/Kg	NL	NL	NL	55	U	51	U	45	U	890	U	940	U	51	U	230	U	250	U	1100	U	230	U	53	U
2,4-Dinitrophenol	51-28-5	ug/Kg	NL	NL	NL	1100	U	970	U	870	UJ F2	17000	UJ	18000	UJ	970	U	4300	U	4700	U	20000	U	4500	UJ	1000	U
2,4-Dinitrotoluene	121-14-2	ug/Kg	NL	NL	NL	47	U	43	U	39	U	760	U	800	U	43	U	190	U	210	U	910	U	200	U	45	U
2,6-Dinitrotoluene	606-20-2	ug/Kg	NL	NL	NL	27	U	25	U	22	U	430	U	460	U	25	U	110	U	120	U	520	U	110	U	26	U
2-Chloronaphthalene	91-58-7	ug/Kg	NL	NL	NL	38	U	35	U	31	U	610	U	640	U	35	U	160	U	170	U	730	U	160	U	36	U
2-Chlorophenol	95-57-8	ug/Kg	NL	NL	NL	42	U	38	U	34	U	670	U	710	U	38	U	170	U	190	U	810	U	180	U	40	U
2-Methylnaphthalene	91-57-6	ug/Kg	NL	NL	NL	46	U	42	U	38	U	740	U	780	U	42	U	190	U	210	U	880	U	190	U	44	U
2-Methylphenol (o-cresol)	95-48-7	ug/Kg	330	100000	1000000	27	U	25	U	22	U	430	U	460	U	25	U	110	U	120	U	520	U	110	U	26	U
2-Nitroaniline	88-74-4	ug/Kg	NL	NL	NL	34	U	31	U	28	U	540	U	570	U	31	U	140	U	150	U	650	U	140	U	32	U
2-Nitrophenol	88-75-5	ug/Kg	NL	NL	NL	64	U	59	U	53	U	1000	U	1100	U	59	U	270	U	290	U	1200	U	270	U	62	U
3,3'-Dichlorobenzidine	91-94-1	ug/Kg	NL	NL	NL	270	U	250	U	220	U	4300	U	4600	U	250	U	1100	U	1200	U	5200	U	1100	U	260	U
3-Nitroaniline	99-09-2	ug/Kg	NL	NL	NL	63	U	58	U	52	U	1000	U	1100	U	58	U	260	U	280	U	1200	U	270	U	61	U
4,6-Dinitro-2-methylphenol	534-52-1	ug/Kg	NL	NL	NL	230	U	210	U	190	U F2	3700	U	3900	U	210	U	940	U	1000	U	4400	U	970	U	220	U
4-Bromophenyl phenyl ether	101-55-3	ug/Kg	NL	NL	NL	32	U	30	U	27	U	520	U	550	U	30	U	130	U F2	150	U	620	U	140	U	31	U
4-Chloro-3-methylphenol	59-50-7	ug/Kg	NL	NL	NL	56	U	52	U	46	U	910	U	960	U	52	U	230	U	250	U	1100	U	240	U	54	U
4-Chloroaniline	106-47-8	ug/Kg	NL	NL	NL	56	U	52	U	46	U	910	U	960	U	52	U	230	U	250	U	1100	U	240	U	54	U
4-Chlorophenyl phenyl ether	7005-72-3	ug/Kg	NL	NL	NL	28	U	26	U	23	U	460	U	480	U	26	U	120	U	130	U	550	U	120	U	27	U
4-Methylphenol	106-44-5	ug/Kg	NL	NL	NL	27	U	25	U	22	U	430	U	460	U	25	U	110	U	120	U	520	U	110	U	45	J
4-Nitroaniline	100-01-6	ug/Kg	NL	NL	NL	120	U	110	U	99	U	1900	U	2000	U	110	U	490	U	540	U	2300	U	510	U	110	U
4-Nitrophenol	100-02-7	ug/Kg	NL	NL	NL	160	U	150	U	130	UJ	2600	UJ	2700	UJ	150	U	660	U	720	U	3100	U	680	UJ	150	U
Acenaphthene	83-32-9	ug/Kg	20000	100000	98000	34	U	31	U	28	U	540	U	570	U	31	U	140	U	150	U	650	U	140	U	54	J
Acenaphthylene	208-96-8	ug/Kg	100000	100000	107000	30	U	27	U	24	U	480	U	500	U	27	U	120	U	130	U	570	U	130	J	28	U
Acetophenone	98-86-2	ug/Kg	NL	NL	NL	31	U	28	U	25	U	500	U	530	U	29	U	130	U	140	U	600	U	130	U	30	U
Anthracene	120-12-7	ug/Kg	100000	100000	1000000	56	U	52	U	46	U F1	910	U	960	U	52	U	230	U	250	U	1200	J	240	U	130	J
Atrazine	1912-24-9	ug/Kg	NL	NL	NL	79	U	73	U	65	U	1300	U	1400	U	73	U	330	U	360	U	1500	U	340	U	76	U
Benzaldehyde	100-52-7	ug/Kg	NL	NL	NL	180	U	170	U	150	U	2900	U	3100	U	170	U	750	U	820	U	3500	U	770	U	170	U
Benzo[a]anthracene	56-55-3	ug/Kg	1000	1000	1000	96	J	21	U	71	J F2 F1	370	U	400	J	21	U	94	U	220	J	**2600**	J	610	J	190	J
Benzo[a]pyrene	50-32-8	ug/Kg	1000	1000	22000	100	J	31	U	83	J F2 F1	540	U	570	U	31	U	140	U	260	J	**2500**	J	620	J	170	J
Benzo[b]fluoranthene	205-99-2	ug/Kg	1000	1000	1700	140	J	33	U	110	J F2 F1	590	U	650	J	33	U	150	U F1 F2	340	J	**3600**	J	840	J	220	
Benzo[g,h,i]perylene	191-24-2	ug/Kg	100000	100000	1000000	90	J	22	U	62	J	390	U	410	U	22	UJ	100	U	290	J	1500	J	450	J	120	J
Benzo[k]fluoranthene	207-08-9	ug/Kg	800	3900	1700	63	J	27	U	48	J F1	480	U	500	U	27	U	120	U	200	J	**1000**	J	460	J	89	J
Biphenyl	92-52-4	ug/Kg	NL	NL	NL	34	U	31	U	28	U	540	U	570	U	31	U	140	U	150	U	650	U	140	U	32	U
bis (2-chloroisopropyl) ether	108-60-1	ug/Kg	NL	NL	NL	46	U	42	U	38	U	740	U	780	U	42	U	190	U	210	U	880	U	190	U	44	U
Bis(2-chloroethoxy)methane	111-91-1	ug/Kg	NL	NL	NL	48	U	44	U	40	U	780	U	830	U	45	U	200	U	220	U	940	U	210	U	46	U
Bis(2-chloroethyl)ether	111-44-4	ug/Kg	NL	NL	NL	30	U	27	U	24	U	480	U	500	U	27	U	120	U	130	U	570	U	130	U	28	U
Bis(2-ethylhexyl) phthalate	117-81-7	ug/Kg	NL	NL	NL	1200		72	U	64	U	1300	U	1300	U	72	U	320	U	350	U	1500	U	330	U	1800	
Butyl benzyl phthalate	85-68-7	ug/Kg	NL	NL	NL	38	U	35	U	31	U F1	610	U	640	U	35	U	160	U	170	U	730	U	160	U	77	J
Caprolactam	105-60-2	ug/Kg	NL	NL	NL	68	U	63	U	56	U	1100	U	1200	U	63	U	280	U	310	U	1300	U	290	U	66	U
Carbazole	86-74-8	ug/Kg	NL	NL	NL	27	U	25	U	22	U	430	U	460	U	25	U	110	U	120	U	650	J	110	J	26	U
Chrysene	218-01-9	ug/Kg	1000	3900	1000	110	J	210		61	J F2 F1	820	U	870	U	47	U	210	U	390	J	**2400**	J	690	J	200	J
Dibenz(a,h)anthracene	53-70-3	ug/Kg	330	330	1000	40	U	37	U	33	U	650	U	690	U	37	U	170	U	180	U	780	U	170	U	39	U
Dibenzofuran	132-64-9	ug/Kg	700	59000	210000	27	U	25	U	22	U	430	U	460	U	25	U	110	U	120	U	520	U	110	U	26	J
Diethyl phthalate	84-66-2	ug/Kg	NL	NL	NL	30	U	27	U	24	U F1	480	U	500	U	27	U	120	U	130	U	570	U	130	U	59	J
Dimethyl phthalate	131-11-3	ug/Kg	NL	NL	NL	27	U	25	U	22	U	430	U	460	U	25	U	110	U	120	U	520	U	110	U	26	U
Di-n-butyl phthalate	84-74-2	ug/Kg	NL	NL	NL	39	U	36	U	32	U	630	U	670	U	36	U	160	U	180	U	750	U	170	U	110	J
Di-n-octyl phthalate	117-84-0	ug/Kg	NL	NL	NL	27	U	25	U	22	U	430	U	460	U	25	U	110	U	120	U	520	U	110	U	26	U
Fluoranthene	206-44-0	ug/Kg	100000	100000	1000000	160	J	31	J	130	J F2 F1	390	U	560	J	22	U	260	J	440	J	6100		1000		430	
Fluorene	86-73-7	ug/Kg	30000	100000	386000	27	J	25	U	22	U	430	U	460	U	25	U	110	U	120	U	530	J	110	U	30	J
Hexachlorobenzene	118-74-1	ug/Kg	NL	NL	NL	31	U	28	U	25	U	500	U	530	U	29	U	130	U F2	140	U	600	U	130	U	30	U
Hexachlorobutadiene	87-68-3	ug/Kg	NL	NL	NL	34	U	31	U	28	U	540	U	570	U	31	U	140	U J	150	U J	650	U	140	U	32	U
Hexachlorocyclopentadiene	77-47-4	ug/Kg	NL	NL	NL	31	U	28	U	25	U	500	U	530	U	29	U	130	U	140	U	600	U	130	U	30	U
Hexachloroethane	67-72-1	ug/Kg	NL	NL	NL	30	U	27	U	24	U	480	U	500	U	27	U	120	U	130	U	570	U	130	U	28	U
Indeno[1,2,3-cd]pyrene	193-39-5	ug/Kg	500	500	8200	76	J	26	U	60	J	460	U	480	U	26	UJ	120	U	180	J	**1300**	J	390	J	98	J
Isophorone	78-59-1	ug/Kg	NL	NL	NL	48	U	44	U	40	U	780	U	830	U	45	U	200	U	220	U	940	U	210	U	46	U
Naphthalene	91-20-3	ug/Kg	12000	100000	12000	30	U	27	U	24	U	480	U	500	U	27	U	120	U	130	U	730	J	130	U	40	J
Nitrobenzene	98-95-3	ug/Kg	NL	NL	NL	25	U	23	U	21	U	410	U	440	U	24	U	110	U	110	U	490	U	110	U	25	U
N-Nitrosodi-n-propylamine	621-64-7	ug/Kg	NL	NL	NL	39	U	36	U	32	U	630	U	670	U	36	U	160	U	180	U	750	U	170	U	37	U
N-Nitrosodiphenylamine	86-30-6	ug/Kg	NL	NL	NL	190	U	170	U	150	U	3000	U	3200	U	170	U	770	U	830	U	3600	U	790	U	180	U
Pentachlorophenol	87-86-5	ug/Kg	NL	NL	NL	230	U	210	U	190	U	3700	U	3900	U	210	U	940	U	1000	U	4400	U	970	U	220	U
Phenanthrene	85-01-8	ug/Kg	100000	100000	1000000	120	J	31	U	57	J F2 F1	540	U	570	U	31	U	190	J	190	J	4100	J	650	J	250	
Phenol	108-95-2	ug/Kg	330	100000	330	35	U	32	U	29	U	560	U	600	U	32	U	140	U	160	U	680	U	150	U	34	U
Pyrene	129-00-0	ug/Kg	100000	100000	1000000	190	J	74	J	110	J F2 F1	430	U	460	U	25	U	210	J	720	J	5000		820	J	420	

TABLE 2.5.1G

Subsurface Soil Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Semi-Volatile Organic Compounds

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	COMP4-NW-061119		COMP5-Bottom-061119		COMP6-SE-061119		DUPE-OIL-061119	
Sample Depth					4-16ft		22ft		15-18ft		NL	
Lab Sample					460-184308-5		460-184308-6		460-184308-7		460-184308-8	
Date Sampled					6/11/2019		6/11/2019		6/11/2019		6/11/2019	
Acenaphthene	83-32-9	ug/Kg	20000	100000	44	J F1	< 34		< 29		< 33	
Acenaphthylene	208-96-8	ug/Kg	100000	100000	17	J F1	< 4.9		21	J	< 4.6	
Anthracene	120-12-7	ug/Kg	100000	100000	67	J F1	< 5.3		< 4.5		34	J
Benzo[a]anthracene	56-55-3	ug/Kg	1000	1000	230	F1	< 17		120		71	
Benzo[a]pyrene	50-32-8	ug/Kg	1000	1000	170	F1	< 13		99		51	
Benzo[b]fluoranthene	205-99-2	ug/Kg	1000	1000	290	F1	< 12		160		95	
Benzo[g,h,i]perylene	191-24-2	ug/Kg	100000	100000	140	J F1	< 14		65	J	40	J
Benzo[k]fluoranthene	207-08-9	ug/Kg	800	3900	120	F1	< 9.3		50		30	J
Chrysene	218-01-9	ug/Kg	1000	3900	270	J F1	< 8.0		130	J	130	J
Dibenz(a,h)anthracene	53-70-3	ug/Kg	330	330	25	J	< 21		< 17	U	< 19	U
Fluoranthene	206-44-0	ug/Kg	100000	100000	490	F1	< 6.2		190	J	130	J
Fluorene	86-73-7	ug/Kg	30000	100000	70	J F1	< 6.4		16	J	41	J
Indeno[1,2,3-cd]pyrene	193-39-5	ug/Kg	500	500	150		< 19		75		48	
Naphthalene	91-20-3	ug/Kg	12000	100000	77	J F1	< 8.2		43	J	96	J
Phenanthrene	85-01-8	ug/Kg	100000	100000	330	J F1	< 83		79	J	150	J
Pyrene	129-00-0	ug/Kg	100000	100000	410	J F1	< 12		160	J	180	J

TABLE 2.5.1H
Subsurface Soil Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Metals (totals)

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	RISB-01 8"-10'		RISB-02 16'-18'		RISB-06 5'-10'		RISB-07 7'-10'		RISB-09		DUPE 8/8/18 (RISB-09)		RISB-11 15'-17'		DUPE 8/9/2018 (RISB-01 8'-10')	
Sample Depth						8'-10'		16'-18'		5'-10'		7'-10'		7'-13'		7'-13'		15'-17'		8'-10'	
Lab Sample						480-140223-3		480-140223-6		480-140143-2		480-140143-1		480-140143-3		480-140143-4		480-140223-1		480-140223-8	
Date Sampled						08/09/2018		08/09/2018		08/08/2018		08/08/2018		08/08/2018		08/08/2018		08/08/2018		08/09/2018	
Aluminum	7429-90-5	mg/Kg	NL	NL	NL	11300		17700		5470	J F1 F2	8720	J	8780	J	8710	J	8990		11600	
Antimony	7440-36-0	mg/Kg	NL	NL	NL	1.8	J	0.51	UJ	0.44	UJ F1 F2	0.44	UJ	0.46	UJ	0.46	UJ	0.52	UJ	0.51	UJ
Arsenic,	7440-38-2	mg/Kg	13	16	16	12.1		6.4		7.7		6.7		12.3		8.2		6.8		**14.4**	
Barium	7440-39-3	mg/Kg	350	400	820	**373**	J	121		108	J F1 F2	42.2	J	57.7	J	63.1	J	107		**460**	J
Beryllium	7440-41-7	mg/Kg	7.2	72	47	0.37		0.65		1.2		0.5		0.4		0.38		0.4		0.35	
Cadmium	7440-43-9	mg/Kg	2.5	4.3	7.5	1.8		0.08	J ^	**3.3**		0.13	J	0.71		**2.7**		0.33		1.9	
Calcium	7440-70-2	mg/Kg	NL	NL	NL	11300	J B	1080	BJ	3300	J F1 F2 B	2210	J B	26000	J B	74100	J B	20600	BJ	27600	JB
Chromium	7440-47-3	mg/Kg	30	180	NS	**55.3**	J	23.9	J	8.9		13.7		24.2		13.2		23	J	**60.7**	J
Cobalt	7440-48-4	mg/Kg	NL	NL	NL	10.0		12.3		5.2		10		7.5		5.4		7.8		16	
Copper	7440-50-8	mg/Kg	50	270	1720	**136**		15.9		28	J F1 F2	30.3	J	**104**	J	**79.1**	J	35.7		**278**	
Iron	7439-89-6	mg/Kg	NL	NL	NL	51400	J	25500	J	6100	J F1 F2 B	19000	J B	31300	J B	14300	J B	18600	J	120000	J
Lead	7439-92-1	mg/Kg	63	400	450	**416**		17.2		**78.6**	J F1 F2	47.7	J	**152**	J	**86.9**	J	59.9		**766**	
Magnesium	7439-95-4	mg/Kg	NL	NL	NL	2180	J	4020	J	362	J F1 F2	2220	J	4380	J	6590	J	6490	J	2290	J
Manganese	7439-96-5	mg/Kg	1600	2000	2000	621	JB	396	BJ	113	J F1 F2 B	653	J B	435	J B	479	J B	780	BJ	968	J B
Nickel	7440-02-0	mg/Kg	30	310	130	33.5		29.6		11.7	J F1	20.2	J	20.8	J	16.6	J	17.4		49.5	
Potassium	7440-09-7	mg/Kg	NL	NL	NL	1170	J	1480		929	J F1 F2	1390	J	1060	J	1210	J	1130	J	1290	J
Selenium	7782-49-2	mg/Kg	3.9	180	4	0.53	U	0.51	U	0.94	J	0.44	U	0.87	J	0.46	U	0.59	J	0.51	U
Silver	7440-22-4	mg/Kg	2	180	8.3	1.8		0.26	U	0.22	U	0.22	U	0.23	U	0.23	U	0.26	U	**4**	
Sodium	7440-23-5	mg/Kg	NL	NL	NL	816	B	73.4	J B U	344		91.7	J	336		416		253	B	1260	B
Thallium	7440-28-0	mg/Kg	NL	NL	NL	0.40	U	0.39	U	0.33	U	0.33	U	0.35	U	0.35	U	0.39	U	0.39	U
Vanadium	7440-62-2	mg/Kg	NL	NL	NL	16.3	J	23.4	J	17.5		DUP		20.6		12.8		15.2		16.7	J
Zinc	7440-66-6	mg/Kg	109	10000	2480	**637**	J	88.1	J	**299**	J F2	77.8	J	**476**	J	**769**	J	99.6		**890**	J
Mercury	7439-97-6	mg/Kg	0.18	0.81	0.73	**0.55**		0.042		**0.2**		0.13		**0.19**		**0.2**		0.018	J	**0.3**	

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	RISB-10S 3'-5'	RISB-10S-1 3'-5'	RISB-10S-1 5'-7'	RISB-10S-1 7'-10'	RISB-10S-2 3'-5'	RISB-10S-2 5'-7'	RISB-10S-2 7'-10'	RISB-10S-3 3'-5'
Sample Depth						3'-5'	3'-5'	5'-7'	7'-10'	3'-5'	5'-7'	7'-10'	3'-5'
Lab Sample						460-167931-1	460-167931-2	460-167931-3	460-167931-4	460-167931-5	460-167931-6	460-167931-7	460-167931-8
Date Sampled						10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018
Lead	7439-92-1	mg/Kg	63	400	450	108	56.2	213	**70.7** J	25.7 J	**106** J	**109** J	**91.4** J

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	RISB-10S-3 5'-7'	RISB-10S-3 7'-10'	RISB-10S-4 3'-5'	RISB-10S-4 5'-7'	RISB-10S-4 7'-10'	RISB-10S-5 3'-5'	RISB-10S-5 5'-7'	RISB-10S-5 7'-10'
Sample Depth						5'-7'	7'-10'	3'-5'	5'-7'	7'-10'	3'-5'	5'-7'	7'-10'
Lab Sample						460-167931-9	460-167931-10	460-167931-11	460-167931-12	460-167931-13	460-167931-14	460-167931-15	460-167931-16
Date Sampled						10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018	10/22/2018
Lead	7439-92-1	mg/Kg	63	400	450	**649** J	28.7 J	**150** J	**136** J	**143** J	**120** J	**155** J	**196** J

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	DUPE (RISB-10S 3'-5')	COMP1-NW-061119	DUPE-Lead-061119	COMP2-SE-061119	COMP3-Bottom-061119
Sample Depth						3'-5'	5-7ft	4-7ft	4-7ft	7ft
Lab Sample						460-167931-17	460-184308-1	460-184308-2	460-184308-3	460-184308-4
Date Sampled						10/22/2018	6/11/2019	6/11/2019	6/11/2019	6/11/2019
Lead	7439-92-1	mg/Kg	63	400	450	**102** J	595	183	147	181

TABLE 2.5.1I

Subsurface Soil Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Polychlorinated Biphenyls (PCBs)

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	RISB-01 8"-10'		RISB-02 16'-18'		RISB-07 7'-10'		RISB-06 5'-10'		RISB-09		RISB-11 15'-17'		DUPE 8/9/2018 (RISB-01 8'-10')		DUPE 8/8/18 (RISB-09)	
Sample Depth						8'-10'		16'-18'		7'-10'		5'-10'		7'-13'		15'-17'		8'-10'		7'-13'	
Lab Sample						480-140223-3		480-140223-6		480-140143-1		480-140143-2		480-140143-3		480-140223-1		480-140223-8		480-140143-4	
Date Sampled						08/09/2018		08/09/2018		08/08/2018		08/08/2018		08/08/2018		08/08/2018		08/09/2018		08/08/2018	
PCB-1016	12674-11-2	mg/Kg	0.1	1	3.2	0.066	U	0.055	U	0.049	U	0.051	U	0.45	U	0.051	U	0.060	U	0.050	U
PCB-1221	11104-28-2	mg/Kg				0.066	U	0.055	U	0.049	U	0.051	U	0.45	U	0.051	U	0.060	U	0.050	U
PCB-1232	11141-16-5	mg/Kg				0.066	U	0.055	U	0.049	U	0.051	U	0.45	U	0.051	U	0.060	U	0.050	U
PCB-1242	53469-21-9	mg/Kg				0.066	U	0.055	U	0.049	U	0.051	U	0.45	U	0.051	U	0.060	U	0.050	U
PCB-1248	12672-29-6	mg/Kg				0.066	U	0.055	U	0.049	U	0.051	U	0.45	U	0.051	U	0.060	U	0.050	U
PCB-1254	11097-69-1	mg/Kg				0.16	U	0.13	U	0.12	U	0.12	U	1.1	U	0.12	U	0.84		0.12	U
PCB-1260	11096-82-5	mg/Kg				0.16	U	0.13	U	0.12	U	0.12	U	1.1	U	0.12	U	0.14	U	0.18	J
Total PCBs	NA	mg/Kg				ND		ND		ND		ND		ND		ND		**0.84**		**0.18**	J

TABLE 2.5.1J

Subsurface Soil Samples

Former Stow Manufacturing, NYSDEC BCP Site #C704058

435 State Street, Binghamton, New York

Pesticides

Sample ID	CAS #	Units	6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs	6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site	6 NYCRR Part 375-6.8(b) Restricted Use SCO for the Protection of Groundwater	RISB-01 8'-10'		RISB-02 16'-18'		RISB-06 5'-10'		RISB-07 7'-10'		RISB-09		RISB-11 15'-17'		DUPE 8/8/18 (RISB-09)		DUPE 8/9/2018 (RISB-01 8'-10')	
Sample Depth						8'-10'		16'-18'		5'-10'		7'-10'		7'-13'		15'-17'		7'-13'		8'-10'	
Lab Sample						480-140223-3		480-140223-6		480-140143-2		480-140143-1		480-140143-3		480-140223-1		480-140143-4		480-140223-8	
Date Sampled						08/09/2018		08/09/2018		08/08/2018		08/08/2018		08/08/2018		08/08/2018		08/08/2018		08/09/2018	
4,4'-DDD	72-54-8	ug/Kg	0.0033	13000	14000	620	B	0.40	U	2.6	J	4.1	J	1.0	J	0.40	U	0.75	U	5.4	J B
4,4'-DDE	72-55-9	ug/Kg	0.0033	8900	17000	24	BJ	0.43	U	1.9	U	20		1.4	J	0.44	U	2.1	J	18	J B
4,4'-DDT	50-29-3	ug/Kg	0.0033	7900	136000	11	J	0.48	U	2.1	J F1 F2	89		2.3	J	0.49	U	3.0	J	5.0	U
Aldrin	309-00-2	ug/Kg	0.005	97	190	5.5	U	0.51	U	2.2	U	2.2	U	0.93	U	0.51	U	0.95	U	5.2	U
alpha-BHC	319-84-6	ug/Kg	0.02	480	20	4.6	J	0.37	U	1.6	U	1.6	U	0.68	U	0.58	J	0.69	U	3.8	U
beta-BHC	319-85-7	ug/Kg	0.036	360	90	4.0	U	1.5	J	1.6	U	1.6	U	0.68	U	0.61	J	0.69	U	3.8	U
cis-Chlordane	5103-71-9	ug/Kg	0.094	4200	2900	11	U	1.0	U	4.5	U *	4.4	U *	1.9	U *	1.0	U	1.9	U *	11	U
delta-BHC	319-86-8	ug/Kg	0.04	100000	250	4.1	U	1.0	J B	3.4	J B	3.4	J B	0.70	U	0.63	J B	0.72	U	4.0	U
Dieldrin	60-57-1	ug/Kg	0.005	200	100	5.3	U	0.49	U	2.2	U	2.1	U	0.91	U	0.88	UJ B	0.92	U	10	J B
Endosulfan I	959-98-8	ug/Kg	2.4	24000	102000	15	J	0.40	U	1.7	U	1.7	U	0.73	U	0.40	U	0.74	U	4.1	U
Endosulfan II	33213-65-9	ug/Kg	2.4	24000	102000	4.0	U	0.37	U	1.6	U	1.6	U	0.68	U	0.37	U	0.69	U	3.8	U
Endosulfan sulfate	1031-07-8	ug/Kg	2.4	24000	1000000	4.1	U	0.38	U	1.7	U	1.7	U	0.71	U	0.78	J	0.72	U	4.0	U
Endrin	72-20-8	ug/Kg	0.014	11000	60	4.4	U	0.41	U	1.8	U	1.8	U	0.75	U	0.81	J	0.76	U	4.2	U
Endrin aldehyde	7421-93-4	ug/Kg	NL	NL	NL	5.7	U	0.74	J	2.3	U	2.3	U	1.3	J	0.53	U	0.98	U	5.4	U
Endrin ketone	53494-70-5	ug/Kg	NL	NL	NL	5.5	U	0.51	U	2.2	U	2.2	U	0.93	U	0.51	U	0.95	U	5.2	U
gamma-BHC (Lindane)	58-89-9	ug/Kg	0.1	1300	100	4.1	U	0.38	U	2.2	J F2	2.6	J	2.6	J	0.38	U	0.71	U	5.3	J B
Heptachlor	76-44-8	ug/Kg	0.042	2100	680	4.8	U	2.0	J	2.0	U	1.9	U	0.82	J	0.45	U	0.83	U	4.6	U
Heptachlor epoxide	1024-57-3	ug/Kg	NL	NL	NL	5.7	U	0.53	U	2.3	U *	2.3	U *	0.98	U *	0.54	U	0.99	U *	5.5	U
Methoxychlor	72-43-5	ug/Kg	NL	NL	NL	4.5	U	0.42	U	1.8	J F1 F2	1.8	U	0.77	U	0.42	U	0.79	U	4.3	U
Toxaphene	8001-35-2	ug/Kg	NL	NL	NL	130	U	12	U	53	U	52	U	22	U	12	U	22	U	120	U
trans-Chlordane	5103-74-2	ug/Kg	NL	NL	NL	7.1	U	0.66	U	2.9	U F2	2.8	U	4.1	J	2.7		1.2	U	6.8	U

TABLE 2.5.1K

Subsurface Soil Samples

Former Stow Manufacturing, NYSDEC BCP Site #C704058

435 State Street, Binghamton, New York

TCLP RCRA Metals

Sample ID	CAS #	Units	Hazardous Waste Regulatory Limit	RISB-10 3'-5'		RISB-01 3'-5'		RISB-02 6'-8'		RISB-04 9'-11'	
Sample Depth				3'-5'		3'-5'		6'-8'		9'-11'	
Lab Sample				480-140223-2		480-140223-4		480-140223-5		480-140223-7	
Date Sampled				08/08/2018		08/09/2018		08/09/2018		08/09/2018	
Arsenic, Total Recoverable	7440-38-2	mg/L	5.0	0.0080	J	0.0056	U	0.0056	U	0.0056	U
Barium, Total Recoverable	7440-39-3	mg/L	100.0	0.42	J	2.1		0.21	J	0.29	J
Cadmium, Total Recoverable	7440-43-9	mg/L	1.0	0.0063		0.0084		0.025		0.00090	J
Chromium, Total Recoverable	7440-47-3	mg/L	5.0	0.010	U	0.010	U	0.010	U	0.010	U
Lead, Total Recoverable	7439-92-1	mg/L	5.0	6.5		0.29		2.7		0.016	J
Selenium, Total Recoverable	7782-49-2	mg/L	1.0	0.0091	J	0.0087	U	0.0087	U	0.011	J
Silver, Total Recoverable	7440-22-4	mg/L	5.0	0.0017	U	0.0017	U	0.0017	U	0.0017	U
Mercury, Total Recoverable	7439-97-6	mg/L	0.2	0.00012	UF1	0.00012	UJ	0.00012	U	0.00012	U

REFERENCE PAGE FOR SAMPLE RESULTS

Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
LaBella Project #2182159

NOTES

< - The compound was not detected at the indicated concentration.

SVOCs - Semi-Volatile Organic Compounds

VOCs - Volatile Organic Compounds

NYSDEC - New York State Department of Environmental Conservation

mg/kg - milligrams per kilogram

µg/kg - micrograms per kilogram

µg/l - micrograms per liter

ng/L - nanograms per Liter or parts per trillion (PPT)

NYS - New York State

ND - Non Detect

NA - Not Applicable

** Denotes turbidity in NTU at time of sampling

NS - Not Sampled

NL - Not Listed

USEPA - denotes United States Environmental Protection Agency

TCLP - Toxic Characteristic Leaching Procedure

RCRA denotes Resource Conservation and Recovery Act

CP-51 denotes NYSDEC Commissioner Policy CP-51 (October 2010)

Highlighted soil sample result indicates compound was detected above the laboratory reporting limit but below the TOGS 1.1.1 Groundwater Standard or Part 375-6.8(a) Unrestr

Highlighted soil sample result indicates compound was detected exceeding the 6 NYCRR Part 375-6.8(b) Restricted Use SCOs for a Retricted Residential Site

Highlighted soil sample result indicates compound was detected exceeding the 6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs

Underlined soil sample results indicates the compound was detected exceeding the 6 NYCRR Part 375-6.8(b) Restricted Use SCOs for the Protection of Groundwater

Highlighted groundwater result indicates compound was detected exceeding the TOGS 1.1.1 Groundwater Standards

Highliighted soil sample results indicates compound was detected exceeding the Hazardous Waste Regulatory Limit

Laboratory Qualifiers

J denotes the result is estimated

B: The same analyte is found in the associated blank

J0: J0: Calibration verification outside of acceptance limits. Result is estimated.

J2: Surrogate recovery limits have been exceeded; values are outside lower control limits

V3: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. BDL results will be unaffected.

J3: The associated batch QC was outside the established quality control range for precision

J4: The associated batch QC was outside the established quality control range for accuracy

J5: The sample matrix interfered with the ability to make any accurate determination; spike value is highJ6: The sample matrix interfered with the ability to make any accurate d

J7: Surrogate recovery cannot be used for control limit evaluation due to dilutionV: The sample concentration is too high to evaluate accurate spike recoveries.

U denotes Not Detected above laboratory reporting limit

* isotope dilution analyte is outside acceptance limits

D denotes sample was diluted and reanalyzed

F1 - MS and/or MSD Recovery is outside acceptance limits.

F2 - MS/MSD RPD exceeds control limits

F4 - MS/MSD RPD exceeds control limits due to sample size difference.

TABLE 6.3.1
Groundwater Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Volatile Organic Compounds

Sample ID	CAS #	Units	TOGS 1.1.1 Groundwater Standards	LBA-MW-01R		LBA-MW-02R		LBA-MW-03R		LBA-MW-04R		LBA-MW-05R		LBA-MW-06R		LBA-MW-07R		FIELD DUPLICATE (LBA-MW-01R)	DUPE (LBA-MW-04R)
Sample Depth (ft bgs)				10-25		10-25		10-25		7.8-17.8		6.8-21.8		10-25		10-25		7.8-17.8	10-25
Lab Sample				480-141409-1	460-167932-1	480-141409-2	460-167932-8	480-141409-3	460-167932-6	480-141409-4	460-167932-2	480-141409-5	460-167932-7	480-141409-6	460-167932-3	480-141409-7	460-167932-4	480-141409-8	460-167932-5
Date Sampled				09/05/2018	10/24/2018	09/07/2018	10/24/2018	09/05/2018	10/24/2018	09/04/2018	10/24/2018	09/07/2018	10/24/2018	09/04/2018	10/24/2018	09/05/2018	10/24/2018	09/07/2018	10/24/2017
1,1,1-Trichloroethane	71-55-6	ug/L	5	3.3 U	0.24 U	0.82 U	0.24 U	0.82 U	0.24 U	0.82 U	0.24 U	3.3 U	0.24 U	8.2 U	0.24 U	0.82 U	0.24 U	0.82 U	0.24 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/L	5	0.84 U	0.37 U	0.21 U	0.37 U	0.21 U	0.37 U	0.21 U	0.37 U	0.84 U	0.37 U	2.1 U	0.37 U	0.21 U	0.37 U	0.21 U	0.37 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ug/L	5	1.2 U	0.31 UJ	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	1.2 U	0.31 U	3.1 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
1,1,2-Trichloroethane	79-00-5	ug/L	1	0.92 U	0.43 U	0.23 U	0.43 U	0.23 U	0.43 U	0.23 U	0.43 U	0.92 U	0.43 U	2.3 U	0.43 U	0.23 U	0.43 U	0.23 U	0.43 U
1,1-Dichloroethane	75-34-3	ug/L	5	1.5 U	0.26 U	0.38 U	0.26 U	0.38 U	0.26 U	0.38 U	0.26 U	1.5 U	0.26 U	3.8 U	0.26 U	0.38 U	0.26 U	0.38 U	0.26 U
1,1-Dichloroethene	75-35-4	ug/L	5	1.2 U	0.12 U	0.29 U	0.12 U	0.29 U	0.12 U	0.29 U	0.12 U	1.2 U	0.12 U	2.9 U	0.12 U	0.29 U	0.12 U	0.29 U	0.12 U
1,2,4-Trichlorobenzene	120-82-1	ug/L	5	1.6 U	0.37 UJ F1	0.41 U	0.37 U	0.41 U	0.37 U	0.41 U	0.37 U	1.6 U	0.37 U	4.1 U	0.37 U	0.41 U	0.37 U	0.41 U	0.37 U
1,2,4-Trimethylbenzene	95-63-6	ug/L	5	3.0 U	0.37 UJ F1	0.75 U	0.37 U	0.75 U	0.37 U	0.75 U	0.37 U	3.0 U	0.37 U	91	8.2	0.75 U	0.37 U	0.75 U	0.37 U
1,2-Dibromo-3-Chloropropane	96-12-8	ug/L	0.04	1.6 U	0.38 U	0.39 U	0.38 UJ	0.39 U	0.38 UJ	0.39 U	0.38 UJ	1.6 U	0.38 U	3.9 U	0.38 U	0.39 U	0.38 U	0.39 U	0.38 UJ
1,2-Dibromoethane	106-93-4	ug/L	0.00006	2.9 U	0.50 U	0.73 U	0.50 UJ	0.73 U	0.50 UJ	0.73 U F1	0.50 UJ	2.9 U	0.50 U	7.3 U	0.50 U	0.73 U	0.50 U	0.73 U	0.50 UJ
1,2-Dichlorobenzene	95-50-1	ug/L	3	3.2 U	0.43 U	0.79 U	0.43 U	0.79 U	0.43 U	0.79 U	0.43 U	3.2 U	0.43 U	7.9 U	0.43 U	0.79 U	0.43 U	0.79 U	0.43 U
1,2-Dichloroethane	107-06-2	ug/L	0.6	0.84 U	0.43 U	0.21 U	0.43 U	0.21 U	0.43 U	0.21 U	0.43 U	0.84 U	0.43 U	2.1 U	0.43 U	0.21 U	0.43 U	0.21 U	0.43 U
1,2-Dichloropropane	78-87-5	ug/L	1	2.9 U	0.35 U	0.72 U	0.35 U	0.72 U	0.35 U	0.72 U F1	0.35 U	2.9 U	0.35 U	7.2 U	0.35 U	0.72 U	0.35 U	0.72 U	0.35 U
1,3,5-Trimethylbenzene	108-67-8	ug/L	5	3.1 U	0.33 UJ F1	0.77 U	0.33 U	0.77 U	0.33 U	0.77 U	0.33 U	3.1 U	0.33 UJ	24	1.8	0.77 U	0.33 U	0.77 U	0.33 U
1,3-Dichlorobenzene	541-73-1	ug/L	3	3.1 U	0.34 U	0.78 U	0.34 U	0.78 U	0.34 U	0.78 U	0.34 U	3.1 U	0.34 U	7.8 U	0.34 U	0.78 U	0.34 U	0.78 U	0.34 U
1,4-Dichlorobenzene	106-46-7	ug/L	3	3.4 U	0.76 U	0.84 U	0.76 U	0.84 U	0.76 U	0.84 U	0.76 U	3.4 U	0.76 U	8.4 U	0.76 U	0.84 U	0.76 U	0.84 U	0.76 U
2-Butanone (MEK)	78-93-3	ug/L	50	5.3 U	1.9 U	1.3 U	1.9 U	1.3 U	1.9 U	1.3 U	1.9 U	5.3 U	1.9 U	13 U	1.9 U	1.3 U	1.9 U	1.3 U	1.9 U
2-Hexanone	591-78-6	ug/L	50	5.0 U	2.9 U	1.2 U	2.9 U	1.2 U	2.9 U	1.2 U	2.9 U	5.0 U	2.9 U	12 U	2.9 U	1.2 U	2.9 U	1.2 U	2.9 U
4-Isopropyltoluene	99-87-6	ug/L	5	1.2 U	0.37 UJ * F1	0.31 U	0.37 U	0.31 U	0.37 U	0.31 U	0.37 U	1.2 U	0.37 UJ *	3.1 U	0.64 J	0.31 U	0.37 U	0.31 U	0.37 U
4-Methyl-2-pentanone (MIBK)	108-10-1	ug/L	NL	8.4 U	2.7 U	2.1 U	2.7 U	2.1 U	2.7 U	2.1 U	2.7 U	8.4 U	2.7 U	21 U	2.7 U	2.1 U	2.7 U	2.1 U	2.7 U
Acetone	67-64-1	ug/L	50	12 U	5.0 U	4.9 J	5.0 U	3.0 U	5.0 U	3.0 U	5.0 U	12 U	5.0 U	30 U	5.0 U	7.0 J	5.0 U	3.0 U	5.0 U
Benzene	71-43-2	ug/L	1	1.6 U	0.43 U	0.41 U	0.43 U	0.41 U	0.43 U	0.41 U	0.43 U	1.6 U	0.43 U	4.1 U	0.43 U	0.41 U	0.43 U	0.41 U	0.43 U
Bromodichloromethane	75-27-4	ug/L	50	1.6 U	0.34 U	0.39 U	0.34 U	0.39 U	0.34 U	0.39 U	0.34 U	1.6 U	0.34 U	3.9 U	0.34 U	0.39 U	0.34 U	0.39 U	0.34 U
Bromoform	75-25-2	ug/L	50	1.0 U	0.54 U	0.26 U	0.54 UJ	0.26 U	0.54 UJ	0.26 U	0.54 UJ	1.0 U	0.54 U	2.6 U	0.54 UJ	0.26 U	0.54 UJ	0.26 U	0.54 UJ
Bromomethane	74-83-9	ug/L	5	2.8 U	1.0 UJ	0.69 U	1.0 U	0.69 U	1.0 U	0.69 U	1.0 U	2.8 U	1.0 UJ	6.9 U	1.0 U	0.69 U	1.0 U	0.69 U	1.0 U
Carbon disulfide	75-15-0	ug/L	NL	0.76 U	0.22 J	0.19 U	0.16 U	0.19 U	0.16 U	0.19 U	0.16 U	0.76 U	0.16 U	1.9 U	0.16 U	0.19 U	0.16 U	0.19 U	0.16 U
Carbon tetrachloride	56-23-5	ug/L	5	1.1 UJ	0.21 U	0.27 UJ	0.21 U	0.27 UJ	0.21 U	0.27 UJ	0.21 U	1.1 UJ	0.21 U	2.7 UJ	0.21 U	0.27 UJ	0.21 U	0.27 UJ	0.21 U
Chlorobenzene	108-90-7	ug/L	5	3.0 U	0.38 U	0.75 U	0.38 U	0.75 U	0.38 U	0.75 U	0.38 U	3.0 U	0.38 U	7.5 U	0.38 U	0.75 U	0.38 U	0.75 U	0.38 U
Chloroethane	75-00-3	ug/L	5	1.3 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	1.3 U	0.32 U	3.2 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Chloroform	67-66-3	ug/L	7	1.4 U	0.33 U	0.34 U	0.60 J	0.34 U	0.33 U	0.34 U	0.33 U	1.4 U	0.33 U	3.4 U	0.33 U	0.34 U	0.33 U	0.34 U	0.33 U
Chloromethane	74-87-3	ug/L	5	1.4 U	0.14 U	0.35 U	0.14 U	0.35 U	0.14 U	0.35 U	0.14 U	1.4 U	0.14 U	3.5 U	0.14 U	0.35 U	0.14 U	0.35 U	0.14 U
cis-1,2-Dichloroethene	156-59-2	ug/L	5	3.2 U	0.22 U	0.81 U	0.22 U	0.81 U	0.22 U	0.81 U	0.22 U	3.2 U	0.22 U	8.1 U	0.22 U	0.81 U	0.22 U	0.81 U	0.22 U
cis-1,3-Dichloropropene	10061-01-5	ug/L	0.4	1.4 U	0.46 U	0.36 U	0.46 U	0.36 U	0.46 U	0.36 U	0.46 U	1.4 U	0.46 U	3.6 U	0.46 U	0.36 U	0.46 U	0.36 U	0.46 U
Cyclohexane	110-82-7	ug/L	NL	2.3 J	2.6 J	1.8	1.9	0.18 U	0.32 U	0.18 U	0.32 U	0.72 U	0.32 U	1.8 U	0.32 U	0.18 U	0.32 U	3.4	0.32 U
Dibromochloromethane	124-48-1	ug/L	50	1.3 UJ	0.28 U	0.32 UJ	0.28 U	0.32 UJ	0.28 U	0.32 UJ F1	0.28 U	1.3 UJ	0.28 U	3.2 UJ	0.28 U	0.32 UJ	0.28 U	0.32 UJ	0.28 U
Dichlorodifluoromethane	75-71-8	ug/L	5	2.7 U	0.12 UJ	0.68 U	0.12 U	0.68 U	0.12 U	0.68 U	0.12 U	2.7 U	0.12 U	6.8 U	0.12 U	0.68 U	0.12 U	0.68 U	0.12 U
Ethylbenzene	100-41-4	ug/L	5	3.0 U	0.30 U	0.74 U	0.30 U	0.74 U	0.30 U	0.74 U	0.30 U	3.0 U	0.30 U	15	4.2	0.74 U	0.30 U	0.74 U	0.30 U
Isopropylbenzene	98-82-8	ug/L	5	3.2 U	0.34 U	0.79 U	0.34 U	0.79 U	0.34 U	0.79 U	0.34 U	3.2 U	0.34 U	36	34	0.79 U	0.34 U	0.79 U	0.34 U
m,p-Xylene	179601-23-1	ug/L	5	2.6 U	0.30 U	0.66 U	0.30 U	0.66 U	0.30 U	0.66 U	0.30 U	2.6 U	0.30 U	9.4 J	1.3	0.66 U	0.30 U	0.66 U	0.30 U
Methyl acetate	79-20-9	ug/L	NL	5.2 U	0.31 U	1.3 U	0.31 U	1.3 U	0.31 U	1.3 U	0.31 U	5.2 U	0.31 U	13 U	0.31 U	1.3 U	0.31 U	1.3 U	0.31 U
Methyl tert-butyl ether	1634-04-4	ug/L	10	0.64 U	0.47 U	0.16 U	0.47 U	0.16 U	0.47 U	0.16 U	0.47 U	0.64 U	0.47 U	1.6 U	0.47 U	0.16 U	0.47 U	0.16 U	0.47 U
Methylcyclohexane	108-87-2	ug/L	NL	0.64 U	0.64 J * F1	0.16 U	0.52 J	0.16 U	0.26 U	0.16 U	0.26 U	0.64 U	0.26 UJ	1.6 U	0.93 J	0.16 U	0.26 U	1.2	0.26 U
Methylene Chloride	75-09-2	ug/L	5	3.1 J	0.32 U	0.44 U	0.32 U	0.44 U	0.32 U	0.80 J	0.32 U	4.3	0.32 U	7.3 J	0.32 U	0.50 J	0.32 U	0.44 U	0.32 U
Naphthalene	91-20-3	ug/L	10	1.7 U	0.41 U	0.43 U	0.41 U	0.43 U	0.41 U	0.43 U	0.41 U	1.7 U	0.41 U	17	3.6	0.43 U	0.41 U	0.43 U	0.41 U
n-Butylbenzene	104-51-8	ug/L	5	2.6 U	0.32 UJ F1	0.64 U	0.32 U	0.64 U	0.32 U	0.64 U	0.32 U	2.6 U	0.32 UJ	18	22	1.2	0.32 U	0.64 U	0.32 U
N-Propylbenzene	103-65-1	ug/L	5	2.8 U	0.32 UJ * F1	0.69 U	0.32 U	0.69 U	0.32 U	0.69 U	0.32 U	2.8 U	0.32 UJ	38	43	0.69 U	0.32 U	0.69 U	0.32 U
o-Xylene	95-47-6	ug/L	5	3.0 U	0.36 U	0.76 U	0.36 U	0.76 U	0.36 U	0.76 U	0.36 U	3.0 U	0.36 U	7.6 U	1.3	0.76 U	0.36 U	0.76 U	0.36 U
sec-Butylbenzene	135-98-8	ug/L	5	3.0 U	0.37 UJ * F1	0.75 U	0.37 U	0.75 U	0.37 U	0.75 U	0.37 U	3.0 U	0.37 UJ *	21	26	0.92 J	0.37 U	0.75 U	0.37 U
Styrene	100-42-5	ug/L	5	2.9 U	0.42 U	0.73 U	0.42 U	0.73 U	0.42 U	0.73 U	0.42 U	2.9 U	0.42 U	7.3 U	0.42 U	0.73 U	0.42 U	0.73 U	0.42 U
tert-Butylbenzene	98-06-6	ug/L	5	3.2 U	0.34 UJ * F1	0.81 U	0.34 U	0.81 U	0.34 U	0.81 U	0.34 U	3.2 U	0.34 UJ *	8.1 U	6.9	0.81 U	0.34 U	0.81 U	0.34 U
Tetrachloroethene	127-18-4	ug/L	5	1.4 U	0.25 U	0.36 U	0.25 U	0.49 J	0.49 J	0.36 U F1	0.25 U	1.4 U	0.25 U	3.6 U	0.25 U	0.36 U	0.25 U	0.36 U	0.25 U
Toluene	108-88-3	ug/L	5	2.0 U	0.38 U	0.51 U	0.38 U	0.51 U	0.38 U	0.51 U	0.38 U	2.0 U	0.38 U	5.1 U	0.38 U	0.51 U	0.38 U	0.51 U	0.38 U
trans-1,2-Dichloroethene	156-60-5	ug/L	5	3.6 U	0.24 U	0.90 U	0.24 U	0.90 U	0.24 U	0.90 U	0.24 U	3.6 U	0.24 U	9.0 U	0.24 U	0.90 U	0.24 U	0.90 U	0.24 U
trans-1,3-Dichloropropene	10061-02-6	ug/L	0.4	1.5 U	0.49 U	0.37 U	0.49 U	0.37 U	0.49 U	0.37 U	0.49 U	1.5 U	0.49 U	3.7 U	0.49 U	0.37 U	0.49 U	0.37 U	0.49 U
Trichloroethene	79-01-6	ug/L	5	1.8 U	0.31 U	0.46 U	0.31 U	0.46 U	0.31 U	0.46 U	0.31 U	1.8 U	0.31 U	4.6 U	0.31 U	0.46 U	0.31 U	0.46 U	0.31 U
Trichlorofluoromethane	75-69-4	ug/L	5	3.5 U	0.14 U	0.88 U	0.14 U	0.88 U	0.14 U	0.88 U	0.14 U	3.5 U	0.14 U	8.8 U	0.14 U	0.88 U	0.14 U	0.88 U	0.14 U
Vinyl chloride	75-01-4	ug/L	2	3.6 U	0.17 U	0.90 U	0.17 U	0.90 U	0.17 U	0.90 U	0.17 U	3.6 U	0.17 U	9.0 U	0.17 U	0.90 U	0.17 U	0.90 U	0.17 U
Xylenes, Total	1330-20-7	ug/L	5	2.6 U	0.65 U	0.66 U	0.65 U	0.66 U	0.65 U	0.66 U	0.65 U	2.6 U	0.65 U	9.4 J	2.7	0.66 U	0.65 U	0.66 U	0.65 U
1,4-Dioxane	123-91-1	ug/L	NL	NS	NS	1.0 U	NS	1.0 U	NS	0.50 U	NS	NS	NS	NS	NS	NS	NS	NS	NS

TABLE 6.3.2
Groundwater Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Semi-Volatile Organic Compounds

Sample ID	CAS #	Units	TOGS 1.1.1 Groundwater Standards	LBA-MW-01R		LBA-MW-02R		LBA-MW-03R		LBA-MW-04R		LBA-MW-05R		LBA-MW-06R		LBA-MW-07R		FIELD DUPLICATE (LBA-MW-01R)	
Sample Depth (ft bgs)				10-25		10-25		10-25		7.8-17.8		6.8-21.8		10-25		10-25		7.8-17.8	
Lab Sample				480-141409-1		480-141409-2	460-167932-7	480-141409-3		480-141409-4		480-141409-5		480-141409-6		480-141409-7		480-141409-8	
Date Sampled				09/05/2018		09/07/2018	10/24/2018	09/05/2018		09/04/2018		09/07/2018		09/04/2018		09/05/2018		09/07/2018	
2,4,5-Trichlorophenol	95-95-4	ug/L	NL	2.4	U	9.6	0.56 U	0.48	U *	0.50	U *	2.5	U	2.6	U	3.0	U	4.8	U
2,4,6-Trichlorophenol	88-06-2	ug/L	NL	3.1	U	12	0.60 U	0.61	U *	0.64	U *	3.2	U	3.3	U	3.8	U	6.1	U
2,4-Dichlorophenol	120-83-2	ug/L	1	2.6	U	10	0.84 U	0.51	U *	0.53	U *	2.7	U	2.8	U	3.2	U	5.1	U
2,4-Dimethylphenol	105-67-9	ug/L	50	2.5	U	10	0.48 U	0.50	U *	0.52	U *	2.6	U	2.7	U	3.1	U	5.0	U
2,4-Dinitrophenol	51-28-5	ug/L	10	11	U	44	29 UJ *	2.2	U *	2.3	U *	12	U	12	U	14	U	22	U
2,4-Dinitrotoluene	121-14-2	ug/L	5	2.2	U	8.9	2.0 U	0.45	U *	0.47	U *	2.3	U	2.4	U	2.8	U	4.5	U
2,6-Dinitrotoluene	606-20-2	ug/L	5	2.0	U	8.0	0.78 U	0.40	U *	0.42	U *	2.1	U	2.2	U	2.5	U	4.0	U
2-Chloronaphthalene	91-58-7	ug/L	10	2.3	U	9.2	2.4 U	0.46	U *	0.48	U *	2.4	U	2.5	U	2.9	U	4.6	U
2-Chlorophenol	95-57-8	ug/L	5	2.7	U	11	0.75 U	0.53	U *	0.55	U *	2.8	U	2.9	U	3.3	U	5.3	U
2-Methylnaphthalene	91-57-6	ug/L	NL	3.0	U	12	2.2 U	0.60	U *	0.63	U *	3.1	U	3.3	U	3.8	U	6.0	U
2-Methylphenol	95-48-7	ug/L	5	2.0	U	8.0	0.52 U	0.40	U *	0.42	U *	2.1	U	2.2	U	2.5	U	4.0	U
2-Nitroaniline	88-74-4	ug/L	5	2.1	U	8.4	0.95 U	0.42	U *	0.44	U *	2.2	U	2.3	U	2.6	U	4.2	U
2-Nitrophenol	88-75-5	ug/L	5	2.4	U	9.6	1.5 U	0.48	U *	0.50	U *	2.5	U	2.6	U	3.0	U	4.8	U
3,3'-Dichlorobenzidine	91-94-1	ug/L	5	2.0	U *	8.0	U * 2.9 U	0.40	U *	0.42	U *	2.1	U *	2.2	U *	2.5	U *	4.0	U *
3-Nitroaniline	99-09-2	ug/L	5	2.4	U *	9.6	U * 1.9 U	0.48	U *	0.50	U *	2.5	U *	2.6	U *	3.0	U *	4.8	U *
4,6-Dinitro-2-methylphenol	534-52-1	ug/L	NL	11	U	44	27 U	2.2	U *	2.3	U *	11	U	12	U	14	U	22	U
4-Bromophenyl phenyl ether	101-55-3	ug/L	NL	2.3	U	9.0	1.5 U	0.45	U *	0.47	U *	2.3	U	2.4	U	2.8	U	4.5	U
4-Chloro-3-methylphenol	59-50-7	ug/L	NL	2.3	U	9.0	1.2 U	0.45	U *	0.47	U *	2.3	U	2.4	U	2.8	U	4.5	U
4-Chloroaniline	106-47-8	ug/L	5	3.0	U	12	3.8 U	0.59	U *	0.61	U *	3.1	U	3.2	U	3.7	U	5.9	U
4-Chlorophenyl phenyl ether	7005-72-3	ug/L	NL	1.8	U	7.0	2.6 U	0.35	U *	0.36	U *	1.8	U	1.9	U	2.2	U	3.5	U
4-Methylphenol	106-44-5	ug/L	NL	1.8	U	7.2	0.47 U	0.36	U *	0.38	U *	1.9	U	2.0	U	2.3	U	3.6	U
4-Nitroaniline	100-01-6	ug/L	5	1.3	U	5.0	1.1 U	0.25	U *	0.26	U F2 *	1.3	U	1.4	U	1.6	U	2.5	U
4-Nitrophenol	100-02-7	ug/L	NL	7.6	U	30	1.4 U	1.5	U *	1.6	U *	7.9	U	8.3	U	9.5	U	15	U
Acenaphthene	83-32-9	ug/L	20	2.1	U	8.2	2.2 U	0.41	U *	0.43	U *	2.1	U	2.2	U	2.6	U	4.1	U
Acenaphthylene	208-96-8	ug/L	20	1.9	U	7.6	1.6 U	0.38	U *	0.40	U *	2.0	U	2.1	U	2.4	U	3.8	U
Acetophenone	98-86-2	ug/L	NL	2.7	U	11	1.6 U	0.54	U *	0.56	U *	2.8	U	2.9	U	3.4	U	5.4	U
Anthracene	120-12-7	ug/L	50	1.4	U	5.6	1.3 U	0.28	U *	0.29	U *	1.5	U	1.5	U	1.8	U	2.8	U
Atrazine	1912-24-9	ug/L	7.5	2.3	U	9.2	2.7 U	0.46	U *	0.48	U *	2.4	U	2.5	U	2.9	U	4.6	U
Benzaldehyde	100-52-7	ug/L	NL	1.3	U	5.3	1.2 U	0.27	U *	0.28	U *	1.4	U	1.5	U	1.7	U	2.7	U
Benzo(a)anthracene	56-55-3	ug/L	0.002	1.8	U	7.2	1.2 U	0.36	U *	0.38	U *	1.9	U	2.0	U	2.3	U	3.6	U
Benzo(a)pyrene	50-32-8	ug/L	ND	2.4	U	9.4	0.81 U	0.47	U *	0.49	U F2 *	2.4	U	2.6	U	2.9	U	4.7	U
Benzo(b)fluoranthene	205-99-2	ug/L	0.002	1.7	U	6.8	2.3 U	0.34	U *	0.35	U *	1.8	U	1.8	U	2.1	U	3.4	U
Benzo(g,h,i)perylene	191-24-2	ug/L	NL	1.8	U	7.0	2.9 U	0.35	U *	0.36	U *	1.8	U	1.9	U	2.2	U	3.5	U
Benzo(k)fluoranthene	207-08-9	ug/L	0.002	3.7	U	15	1.3 U	0.73	U *	0.76	U *	3.8	U	4.0	U	4.6	U	7.3	U
Biphenyl	92-52-4	ug/L	5	3.3	U	13	2.4 U	0.65	U *	0.68	U *	3.4	U	3.5	U	4.1	U	6.5	U
bis (2-chloroisopropyl) ether	108-60-1	ug/L	5	2.6	U	10	1.3 U	0.52	U *	0.54	U *	2.7	U	2.8	U	3.3	U	5.2	U
Bis(2-chloroethoxy)methane	111-91-1	ug/L	5	1.8	U	7.0	0.48 U	0.35	U *	0.36	U *	1.8	U	1.9	U	2.2	U	3.5	U
Bis(2-chloroethyl)ether	111-44-4	ug/L	1	2.0	U	8.0	0.59 U	0.40	U *	0.42	U *	2.1	U	2.2	U	2.5	U	4.0	U
Bis(2-ethylhexyl) phthalate	117-81-7	ug/L	5	11	U	44	6.7	2.2	U *	2.3	U *	11	U	12	U	14	U	22	U
Butyl benzyl phthalate	85-68-7	ug/L	50	5.0	U	20	1.7 U	1.0	U *	1.0	U *	5.2	U	5.4	U	6.3	U	10	U
Caprolactam	105-60-2	ug/L	NL	14	J	44	25	2.2	U *	2.3	U *	11	U	24	J	360		22	U
Carbazole	86-74-8	ug/L	NL	1.5	U	6.0	1.4 U	0.30	U *	0.31	U *	1.6	U	1.6	U	1.9	U	3.0	U
Chrysene	218-01-9	ug/L	0.002	1.7	U	6.6	1.8 U	0.33	U *	0.34	U *	1.7	U	1.8	U	2.1	U	3.3	U
Dibenz(a,h)anthracene	53-70-3	ug/L	NL	2.1	U	8.4	1.4 U	0.42	U *	0.44	U *	2.2	U	2.3	U	2.6	U	4.2	U
Dibenzofuran	132-64-9	ug/L	NL	2.6	U	10	2.2 U	0.51	U *	0.53	U *	2.7	U	2.8	U	3.2	U	5.1	U
Diethyl phthalate	84-66-2	ug/L	50	1.1	U	4.4	2.0 U	0.22	U *	0.23	U *	1.1	U	1.2	U	1.4	U	2.2	U
Dimethyl phthalate	131-11-3	ug/L	50	1.8	U	7.2	1.5 U	0.36	U *	0.38	U *	1.9	U	2.0	U	2.3	U	3.6	U
Di-n-butyl phthalate	84-74-2	ug/L	50	1.6	U	6.2	1.7 U	0.31	U *	0.32	U *	1.6	U	1.7	U	1.9	U	3.1	U
Di-n-octyl phthalate	117-84-0	ug/L	50	2.4	U	9.4	9.5 UJ	0.47	U *	0.49	U *	2.4	U	2.6	U	2.9	U	4.7	U
Fluoranthene	206-44-0	ug/L	50	2.0	U	8.0	1.7 U	0.40	U *	0.42	U *	2.1	U	2.2	U	2.5	U	4.0	U
Fluorene	86-73-7	ug/L	50	1.8	U	7.2	1.8 U	0.36	U *	0.38	U *	1.9	U	2.0	U	2.3	U	3.6	U
Hexachlorobenzene	118-74-1	ug/L	0.04	2.6	U	10	0.79 U	0.51	U *	0.53	U *	2.7	U	2.8	U	3.2	U	5.1	U
Hexachlorobutadiene	87-68-3	ug/L	0.5	3.4	U	14	1.6 U	0.68	U *	0.71	U *	3.5	U	3.7	U	4.3	U	6.8	U
Hexachlorocyclopentadiene	77-47-4	ug/L	5	3.0	U	12	3.4 U	0.59	U *	0.61	U *	3.1	U	3.2	U	3.7	U	5.9	U
Hexachloroethane	67-72-1	ug/L	5	3.0	U	12	2.4 U	0.59	U *	0.61	U *	3.1	U	3.2	U	3.7	U	5.9	U
Indeno(1,2,3-cd)pyrene	193-39-5	ug/L	0.002	2.4	U	9.4	2.6 U	0.47	U *	0.49	U *	2.4	U	2.6	U	2.9	U	4.7	U
Isophorone	78-59-1	ug/L	50	2.2	U	8.6	1.6 U	0.43	U *	0.45	U *	2.2	U	2.3	U	2.7	U	4.3	U
Naphthalene	91-20-3	ug/L	10	3.8	U	15	2.3 U	0.76	U *	0.79	U *	4.0	U	4.1	U	4.8	U	7.6	U
Nitrobenzene	98-95-3	ug/L	0.4	1.5	U	5.8	1.1 U	0.29	U *	0.30	U *	1.5	U	1.6	U	1.8	U	2.9	U
N-Nitrosodi-n-propylamine	621-64-7	ug/L	NL	2.7	U	11	0.86 U	0.54	U *	0.56	U *	2.8	U	2.9	U	3.4	U	5.4	U
N-Nitrosodiphenylamine	86-30-6	ug/L	5	2.6	U	10	1.8 U	0.51	U *	0.53	U *	2.7	U	2.8	U	3.2	U	5.1	U
Pentachlorophenol	87-86-5	ug/L	1	11	U	44	2.9 U	2.2	U *	2.3	U *	11	U	12	U	14	U	22	U
Phenanthrene	85-01-8	ug/L	50	2.2	U	14	J 1.2 U	0.44	U *	0.46	U *	2.3	U	2.4	U	2.8	U	4.4	U
Phenol	108-95-2	ug/L	1	2.0	U	7.8	U 0.58 U	0.39	U *	0.41	U *	2.0	U	2.1	U	2.4	U	3.9	U
Pyrene	129-00-0	ug/L	50	1.7	U	6.8	U 3.3 U	0.34	U *	0.35	U *	1.8	U	1.8	U	2.1	U	3.4	U

TABLE 6.3.3
Groundwater Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Metals (totals)

Sample ID	CAS #	Units	TOGS 1.1.1 Groundwater Standards	LBA-MW-01R		LBA-MW-02R		LBA-MW-03R		LBA-MW-04R		LBA-MW-05R		LBA-MW-06R		LBA-MW-07R		FIELD DUPLICATE (LBA-MW-01R)	DUPE (LBA-MW-04R)
Sample Depth (ft bgs)				10-25		10-25		10-25		7.8-17.8		6.8-21.8		10-25		10-25		7.8-17.8	10-25
Lab Sample				480-141409-1	460-167932-1	480-141409-2	480-141409-2	480-141409-3	480-141409-3	480-141409-4	460-167932-2	480-141409-5	480-141409-5	480-141409-6	480-141409-6	480-141409-7	460-167932-5	480-141409-8	460-167932-5
Date Sampled				09/05/2018	10/24/2018	09/07/2018	10/24/2018	09/05/2018	10/24/2018	09/04/2018	10/24/2018	09/07/2018	10/24/2018	09/04/2018	09/04/2018	09/05/2018	10/24/2018	09/07/2018	10/24/2015
Turbidity (NTU)**				5.2	61	99+	94	6.9	7.3	45.3	14	6.0	35	62.4	69	98.6	32	5.2	32
Aluminum	7429-90-5	ug/L	2000	60 U	**2670**	**4700**	**4530**	**5500**	**4900**	110 J	1140	60 U	98.3 J	**17600**	1910	**270000**	**5750**	60 U	1910
Antimony	7440-36-0	ug/L	3	6.8 U	2.9 U	6.8 U	2.9 U	6.8 U	2.9 U	6.8 U	2.9 U	6.8 U	2.9 U	6.8 U	2.9 U	34 U	2.9 U	6.8 U	2.9 U
Arsenic,	7440-38-2	ug/L	25	5.6 U	2.8 J	21	24.9	5.6 U	4.5 J	5.6 U	2.7 U	6.9 J	2.7 U	18	3.5 J	**110**	3.5 J	5.6 U	3.3 J
Barium	7440-39-3	ug/L	1000	700	204	420	419	190	120 J	120	132 J	250	113 J	450	191 J	**2200**	110 J	720	134 J
Beryllium	7440-41-7	ug/L	3	0.3 U	0.23 U	0.3 U	0.23 J	0.3 U	0.23 U	0.3 U	0.23 U	0.3 U	0.23 U	1.4 J	0.26 J	**12**	0.38 J	0.3 U	0.23 U
Cadmium	7440-43-9	ug/L	5	0.5 U	0.31 J	0.5 U	0.22 U	0.5 U	0.22 U	0.5 U	0.22 U	0.5 U	0.22 U	0.95 J	0.22 U	**6.5** J	0.22 U	0.5 U	0.22 U
Calcium	7440-70-2	ug/L	NL	76600	18200	80900	105000	101000	28100	216000	202000	67400	29400	171000	80700	429000	127000	78200	196000
Chromium	7440-47-3	ug/L	50	1 U	20.9	8.7	9.1 J	9.4	17.9	1 U	2.3 J	1 U	1.7 J	22	2.6 J	**780**	216	1 U	5.2 J
Cobalt	7440-48-4	ug/L	NL	0.63 U	1.7 U	2.5 J	1.7 U	2.9 J	2.2 J	0.82 J	1.7 U	1.2 J	1.7 U	6.6	1.7 U	150	14.8 J	0.63 U	1.7 U
Copper	7440-50-8	ug/L	200	1.6 U	101	16	26.0	13	15.5 J	30	16.1 J	1.6 U	5.1 U	44	16.1 J	**1400**	21.3 J	1.6 U	32.5
Iron	7439-89-6	ug/L	300	**22500**	**24600**	**35200**	**46100**	**6400**	**6560**	190	**1400**	**22900**	**12600**	**38600**	**10500**	**399000** ^	**9900**	**22500**	3790
Lead	7439-92-1	ug/L	25	3.3 J	**238**	16	23.3	5.8 J	9.6 J	3 U	12.8	3 U	9.2 J	**56**	10.9	**740**	18.6	3.4 J	**33.3**
Magnesium	7439-95-4	ug/L	35000	5500	1660 J	**10300**	13900	14300	5710	22800	21300	8600	3720 J	35500	15600	**153000**	20100	5700	21400
Manganese	7439-96-5	ug/L	300	240 B	135	**2400** B	**2520**	**1100** B	**714**	**1500** B	**618**	**740** B	282	**4900** B	**1290**	**13400** B	**612**	240 B	**888**
Nickel	7440-02-0	ug/L	100	1.3 U	8.0 J	8.8 J	9.4 J	43	10.5 J	3.3 J	6.2 J	1.6 J	1.7 U	41	5.8 J	**850**	**552**	1.3 U	7.4 J
Potassium	7440-09-7	ug/L	NL	5700	1550 J	8400	8960	11600	3300 J	8400	8560	13000	4820 J	18700	7430	69900	12300	5900	8280
Selenium	7782-49-2	ug/L	10	8.7 U	6.6 U	8.7 U	6.6 U	8.7 U	6.6 U	**12** J	6.6 U	8.7 U	6.6 U	8.7 U	6.6 U	44 U	**11.4** J	8.7 U	6.6 U
Silver	7440-22-4	ug/L	50	1.7 U	1.1 U	1.7 U	1.1 U	1.7 U	1.1 U	1.7 U	1.1 U	1.7 U	1.1 U	1.7 U	1.1 U	8.5 U	1.1 U	1.7 U	1.1 U
Sodium	7440-23-5	ug/L	20000	**114000**	19900	**148000**	**194000**	**383000**	**88400**	**36800**	**39800**	**231000**	**91700**	**84700**	**28600**	**441000**	**432000**	**118000**	**35600**
Thallium	7440-28-0	ug/L	0.5	10 U	5.4 U	10 U	5.4 U	10 U	5.4 U	10 U	5.4 U	10 U	5.4 U	10 U	5.4 U	10 U	5.4 U	10 U	5.4 U
Vanadium	7440-62-2	ug/L	NL	1.5 U	3.7 J	9.2	8.4 J	9.8	7.9 J	1.5 U	2.5 U	1.5 U	2.5 U	12	2.5 U	450	9.9 J	1.5 U	3.5 J
Zinc	7440-66-6	ug/L	5000	4.3 J B	163	30 B	26.7 J	27 B	24.5 J	8.9 J B	14.4 J	4.8 J B	7.4 J	100 B	20.6 J	**1700** B	32.4	3.7 J B	35.1
Mercury	7439-97-6	ug/L	0.7	0.12 U	0.15 J	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	**2.7**	0.12 U	0.12 U	0.12 U

TABLE 6.3.4

Groundwater Samples
Former Stow Manufacturing, NYSDEC BCP Site #C704058
435 State Street, Binghamton, New York
Polychlorinated Biphenyls (PCBs)

Sample ID	CAS #	Units	TOGS 1.1.1 Groundwater Standards	LBA-MW-01R		LBA-MW-02R		LBA-MW-02R		LBA-MW-03R		LBA-MW-04R		LBA-MW-05R		LBA-MW-06R		LBA-MW-07R		FIELD DUPLICATE (LBA-MW-01R)	
Sample Depth (ft bgs)				10-25		10-25		10-25		10-25		7.8-17.8		6.8-21.8		10-25		10-25		7.8-17.8	
Lab Sample				480-141409-1		480-141409-2		460-1679362-8		480-141409-3		480-141409-4		480-141409-5		480-141409-6		480-141409-7		480-141409-8	
Date Sampled				09/05/2018		09/07/2018		10/24/2018		09/05/2018		09/04/2018		09/07/2018		09/04/2018		09/05/2018		09/07/2018	
PCB-1016	12674-11-2	ug/L	NL	0.22	U	0.18	U	0.60	U	0.18	U	0.22	U	0.18	U	0.18	U	0.20	U	0.18	U
PCB-1221	11104-28-2	ug/L	NL	0.22	UJ	0.18	UJ	0.60	U	0.18	UJ	0.22	UJ	0.18	UJ	0.18	UJ	0.20	UJ	0.18	UJ
PCB-1232	11141-16-5	ug/L	NL	0.22	U	0.18	U	0.60	U	0.18	U	0.22	U	0.18	U	0.18	U	0.20	U	0.18	U
PCB-1242	53469-21-9	ug/L	NL	0.22	U	0.18	U	0.60	U	0.18	U	0.22	U	0.18	U	0.18	U	0.20	U	0.18	U
PCB-1248	12672-29-6	ug/L	NL	0.22	U	0.18	U	0.60	U	0.18	U	0.22	U	0.18	U	0.18	U	0.20	U	0.18	U
PCB-1254	11097-69-1	ug/L	NL	0.31	UJ	0.50	J	8.4		0.26	UJ	0.31	UJ	0.25	UJ	0.26	UJ	0.28	UJ	0.25	UJ
PCB-1260	11096-82-5	ug/L	NL	0.31	U	0.25	U	0.54	U	0.26	U	0.31	U	0.25	U	0.26	U	0.28	U	0.25	U
Total PCBs	11096-82-5	ug/L	0.09	ND		**0.50**		**8.4**		ND		ND		ND		ND		ND		ND	

TABLE 6.3.5

Groundwater Samples

Former Stow Manufacturing, NYSDEC BCP Site #C704058

435 State Street, Binghamton, New York

Pesticides

Sample ID	CAS #	Units	TOGS 1.1.1 Groundwater Standards	LBA-MW-01R		LBA-MW-02R		LBA-MW-03R		LBA-MW-04R		LBA-MW-05R		LBA-MW-06R		LBA-MW-07R		FIELD DUPLICATE (LBA-MW-01R)	
Sample Depth (ft bgs)				10-25		10-25		10-25		7.8-17.8		6.8-21.8		10-25		10-25		7.8-17.8	
Lab Sample				480-141409-1		480-141409-2		480-141409-3		480-141409-4		480-141409-5		480-141409-6		480-141409-7		480-141409-8	
Date Sampled				09/05/2018		09/07/2018		09/05/2018		09/04/2018		09/07/2018		09/04/2018		09/05/2018		09/07/2018	
4,4'-DDD	72-54-8	ug/L	0.3	0.0092	U	0.046	U	0.046	U	0.0092	U	0.046	U	0.046	U	0.0092	U	0.0092	U
4,4'-DDE	72-55-9	ug/L	0.2	0.012	U	0.058	U	0.058	U	0.012	U	0.058	U	0.058	U	0.012	U	0.012	U
4,4'-DDT	50-29-3	ug/L	0.2	0.011	U	0.055	U	0.055	U	0.013	J	0.055	U	0.055	U	0.011	U	0.011	U
Aldrin	309-00-2	ug/L	ND	0.0081	U	0.041	U	0.041	U	0.0081	U	0.041	U	0.041	U	0.0081	U	0.0081	U
alpha-BHC	319-84-6	ug/L	0.01	0.0077	U	0.039	U	0.039	U	0.0077	U	0.039	U	0.039	U	0.0077	U	0.0077	U
beta-BHC	319-85-7	ug/L	0.04	0.025	U	0.12	U	0.12	U	0.025	U	0.12	U	0.12	U	0.025	U	0.025	U
cis-Chlordane	5103-71-9	ug/L	0.05	0.015	U	0.074	U	0.074	U	0.015	U	0.074	U	0.074	U	0.015	U	0.015	U
delta-BHC	319-86-8	ug/L	0.04	0.010	U	0.050	U	0.050	U	0.010	U	0.050	U	0.050	U	0.010	U	0.010	U
Dieldrin	60-57-1	ug/L	ND	0.0098	U	0.049	U	0.049	U	0.0098	U	0.049	U	0.049	U	0.0098	U	0.0098	U
Endosulfan I	959-98-8	ug/L	NL	0.011	U	0.055	U	0.055	U	0.011	U	0.055	U	0.055	U	0.011	U	0.011	U
Endosulfan II	33213-65-9	ug/L	NL	0.012	U	0.060	U	0.060	U	0.012	U	0.060	U	0.060	U	0.012	U	0.012	U
Endosulfan sulfate	1031-07-8	ug/L	NL	0.016	U	0.079	U	0.079	U	0.016	U	0.079	U	0.079	U	0.016	U	0.016	U
Endrin	72-20-8	ug/L	ND	0.014	U	0.069	U	0.069	U	0.014	U	0.069	U	0.069	U	0.014	U	0.014	U
Endrin aldehyde	7421-93-4	ug/L	5	0.016	U	0.082	U	0.082	U	0.016	U	0.082	U	0.082	U	0.016	U	0.016	U
Endrin ketone	53494-70-5	ug/L	5	0.012	U	0.060	U	0.060	U	0.012	U	0.060	U	0.060	U	0.012	U	0.012	U
gamma-BHC (Lindane)	58-89-9	ug/L	0.05	0.0080	U	0.040	U	0.040	U	0.0080	U	0.040	U	0.040	U	0.0080	U	0.0080	U
Heptachlor	76-44-8	ug/L	0.04	0.0085	U	0.043	U	0.043	U	0.0085	U	0.043	U	0.043	U	0.0085	U	0.0085	U
Heptachlor epoxide	1024-57-3	ug/L	0.03	0.0074	U	0.037	U	0.037	U	0.0074	U	0.037	U	0.037	U	0.0074	U	0.0074	U
Methoxychlor	72-43-5	ug/L	35	0.014	U	0.071	U	0.071	U	0.014	U	0.071	U	0.071	U	0.014	U	0.014	U
Toxaphene	8001-35-2	ug/L	0.06	0.12	U	0.60	U	0.60	U	0.12	U	0.60	U	0.60	U	0.12	U	0.12	U
trans-Chlordane	5103-74-2	ug/L	NL	0.011	U	0.055	U	0.055	U	0.011	U	0.055	U	0.055	U	0.011	U	0.011	U

TABLE 6.4

Soil Gas Samples

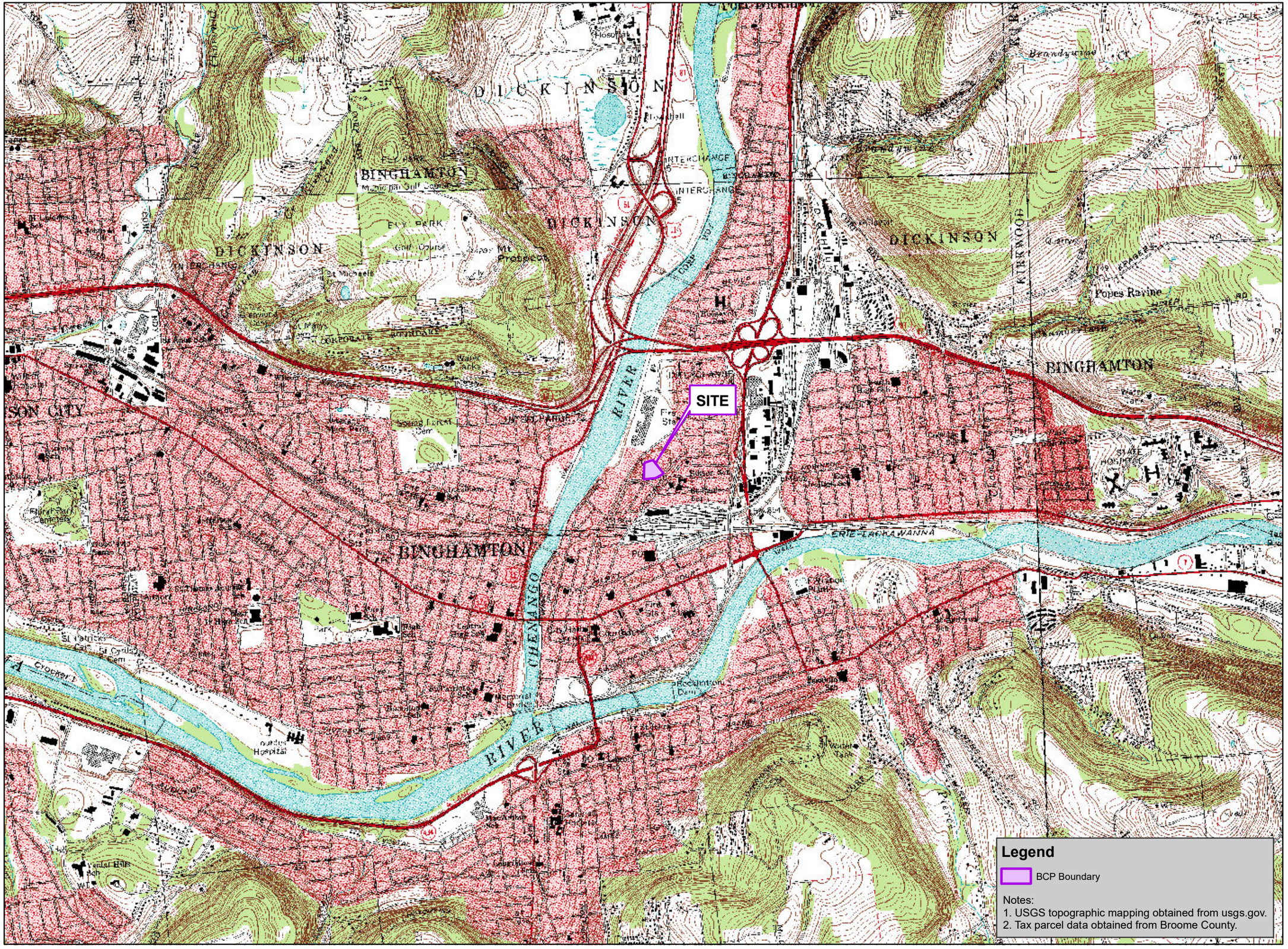
Former Stow Manufacturing, NYSDEC BCP Site #C704058

435 State Street, Binghamton, New York

Volatile Organic Compounds

Sample ID	Units	SG-01	SG-02	SG-03	SG-04	SG-05	RIOA-01
Sample Type		Soil Gas	Soil Gas	Soil Gas	Soil Gas	Soil Gas	Outdoor Air
Sample Depth		9'-10'	9'-10'	9'-10'	9'-10'	9'-10'	Not Applicable
Date Sampled		8/16/2018	8/16/2018	8/16/2018	8/16/2018	8/16/2018	8/16/2018
1,1,1-Trichloroethane	ug/m^3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82
1,1,2,2-Tetrachloroethane	ug/m^3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	ug/m^3	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82
1,1-Dichloroethane	ug/m^3	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61
1,1-Dichloroethene	ug/m^3	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
1,2,4-Trichlorobenzene	ug/m^3	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
1,2,4-Trimethylbenzene	ug/m^3	< 0.74	< 0.74	< 0.74	< 0.74	< 0.74	0.69
1,2-Dibromoethane	ug/m^3	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
1,2-Dichlorobenzene	ug/m^3	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90
1,2-Dichloroethane	ug/m^3	18	190	92	< 0.61	60	< 0.61
1,2-Dichloropropane	ug/m^3	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69
1,3,5-Trimethylbenzene	ug/m^3	< 0.74	3.8	< 0.74	< 0.74	< 0.74	< 0.74
1,3-butadiene	ug/m^3	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33	< 0.33
1,3-Dichlorobenzene	ug/m^3	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90
1,4-Dichlorobenzene	ug/m^3	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90
1,4-Dioxane	ug/m^3	< 1.1	0.72	2.3	< 1.1	0.4	< 1.1
2,2,4-trimethylpentane	ug/m^3	3200	2.8	2.3	10000	1.2	< 0.70
4-ethyltoluene	ug/m^3	< 0.74	< 0.74	< 0.74	< 0.74	< 0.74	< 0.74
Acetone	ug/m^3	75	660	250	190	170	42
Allyl chloride	ug/m^3	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47
Benzene	ug/m^3	< 0.48	13	17	4.9	5.5	1.1
Benzyl chloride	ug/m^3	< 0.86	< 0.86	< 0.86	< 0.86	< 0.86	< 0.86
Bromodichloromethane	ug/m^3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	ug/m^3	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
Bromomethane	ug/m^3	< 0.58	< 0.58	1.8	< 0.58	< 0.58	< 0.58
Carbon disulfide	ug/m^3	4.4	15	6.2	12	7.3	0.62
Carbon tetrachloride	ug/m^3	< 0.19	< 0.19	0.44	< 0.19	0.44	0.44
Chlorobenzene	ug/m^3	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69	< 0.69
Chloroethane	ug/m^3	< 0.40	3.4	2.5	0.71	1.7	< 0.40
Chloroform	ug/m^3	< 0.73	4	2.1	< 0.73	1.9	< 0.73
Chloromethane	ug/m^3	1.8	7.1	6.3	2.1	3.4	0.83
cis-1,2-Dichloroethene	ug/m^3	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16	< 0.16
cis-1,3-Dichloropropene	ug/m^3	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68
Cyclohexane	ug/m^3	200	9.6	4.1	1300	5.7	5.4
Dibromochloromethane	ug/m^3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
Ethyl acetate	ug/m^3	< 0.54	24	16	< 0.54	7.5	0.36
Ethylbenzene	ug/m^3	4	19	21	8.2	21	< 0.65
Freon 11	ug/m^3	0.9	20	7.1	0.56	1.6	1.3
Freon 113	ug/m^3	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
Freon 114	ug/m^3	< 1.0	< 1.0	< 1.0	3.1	< 1.0	< 1.0
Freon 12	ug/m^3	2.1	25	210	100	17	2.3
Heptane	ug/m^3	12	45	27	25	18	0.9
Hexachloro-1,3-butadiene	ug/m^3	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
Hexane	ug/m^3	490	18	15	68	3.9	0.95
Isopropyl alcohol	ug/m^3	< 0.37	110	73	< 0.37	19	31
m&p-Xylene	ug/m^3	11	32	33	17	29	0.61
Methyl Butyl Ketone	ug/m^3	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Methyl Ethyl Ketone	ug/m^3	10	160	34	19	21	2.7
Methyl Isobutyl Ketone	ug/m^3	< 1.2	5.7	4.8	< 1.2	3.9	< 1.2
Methyl tert-butyl ether	ug/m^3	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54	< 0.54
Methylene chloride	ug/m^3	< 0.52	8.4	4.4	< 0.52	2.2	< 0.52
o-Xylene	ug/m^3	5.3	17	16	7.8	12	< 0.65
Propylene	ug/m^3	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
Styrene	ug/m^3	8.6	24	23	18	25	< 0.64
Tetrachloroethylene	ug/m^3	< 1.0	3.5	< 1.0	< 1.0	4.6	< 1.0
Tetrahydrofuran	ug/m^3	< 0.44	40	11	< 0.44	6.4	< 0.44
Toluene	ug/m^3	250	6700	20000	3000	1000	2.3
trans-1,2-Dichloroethene	ug/m^3	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59	< 0.59
trans-1,3-Dichloropropene	ug/m^3	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68	< 0.68
Trichloroethene	ug/m^3	< 0.16	1.7	0.81	< 0.16	0.64	< 0.16
Vinyl acetate	ug/m^3	< 0.53	< 0.53	< 0.53	< 0.53	< 0.53	< 0.53
Vinyl Bromide	ug/m^3	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66	< 0.66
Vinyl chloride	ug/m^3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total VOCs	ug/m^3	4293.1	8162.72	20883.15	14776.37	1450.28	93.5

FIGURES



Path: I:\Binghamton Northside Ltd\2190179 - 435 State St Env. Monitoring\Drawings\SMP Drawings\Figure 1 - Topo Map.mxd

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PROJECT:
SITE MANAGEMENT PLAN

FORMER STOW MANUFACTURING
NYSDEC BCP SITE #C704058
435 STATE STREET
BINGHAMTON, NEW YORK

CLIENT:
BINGHAMTON NORTHSIDE LIMITED PARTNERSHIP

TITLE:
SITE LOCATION MAP

N
W E
S

0 1,100 2,200 Feet

1 inch = 2,000 feet

Intended to print as 11" x 17"

Wednesday, July 31, 2019

2190179

FIGURE 1

Notes:
1. All locations are approximate.
2. Aerial Image obtain from Pictometry International, Inc.
3. Aerial image may not represent current site features.

Path: I:\Binghamton Northside Ltd\2190179 - 435 State St Env. Monitoring\Drawings\SMP Drawings\Figure 2 - BCP Site Map.mxd

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TITLE:
BCP AND INSTITUTIONAL CONTROLS BOUNDARU

SITE MANAGEMENT PLAN

FORMER STOW MANUFACTURING
NYSDEC BCP SITE #C704058
435 STATE STREET
BINGHAMTON, NEW YORK

VOLUNTEER:
BINGHAMTON NORTHSIDE LIMITED PARTNERSHIP

STATE OF NEW YORK
DANIEL P. NOLL
No. 081996
LICENSED PROFESSIONAL ENGINEER

N
W E
S

0 25 50 100 Feet

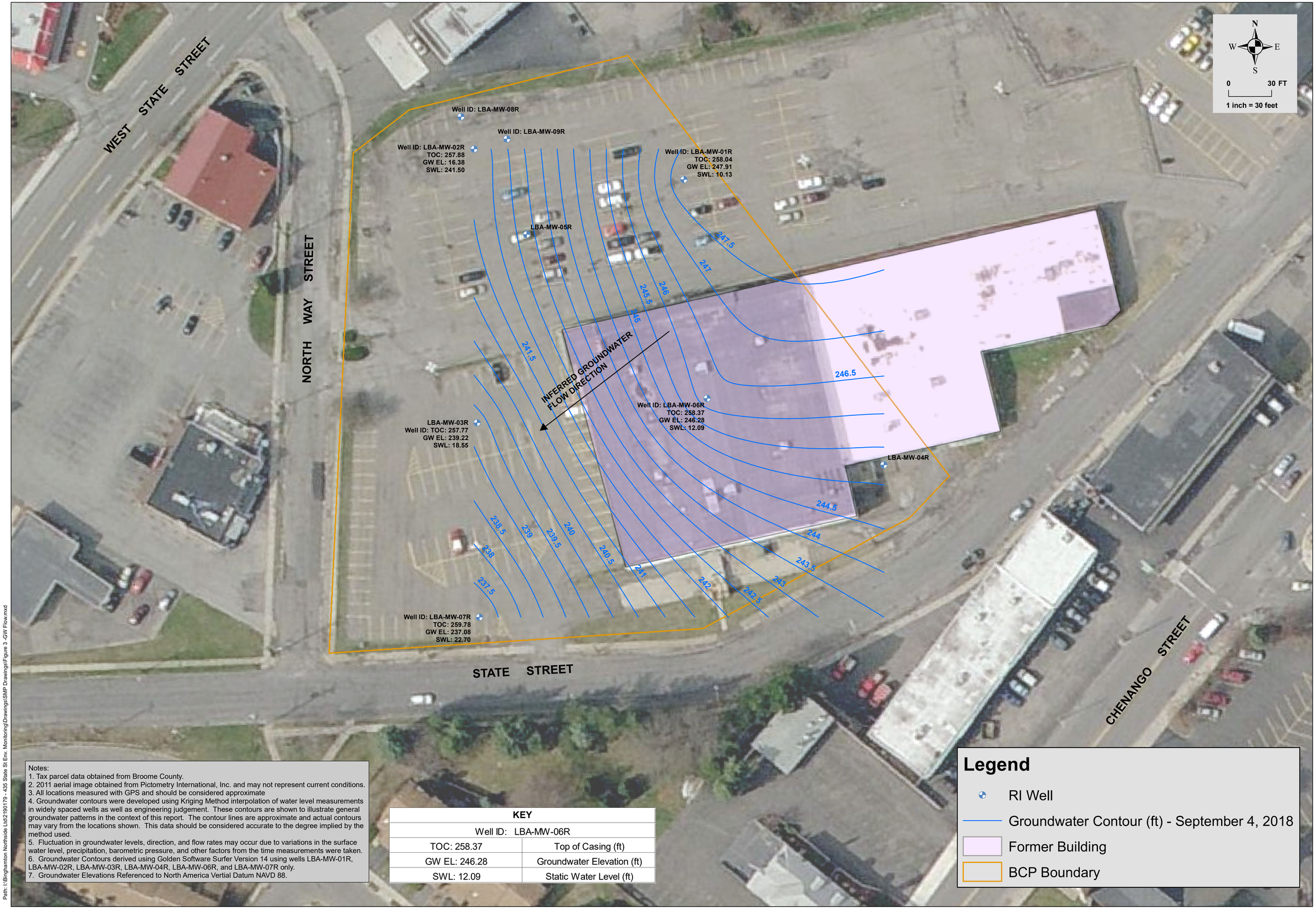
1 inch = 100 feet

INTENDED TO PRINT 11" X 17"

DATE; 7/31/2017

2190179

FIGURE 2



Notes:
1. Tax parcel data obtained from Broome County.
2. 2011 aerial image obtained from Pictometry International, Inc. and may not represent current conditions.
3. All locations measured with GPS and should be considered approximate
4. Groundwater contours were developed using Kriging Method interpolation of water level measurements in widely spaced wells as well as engineering judgement. These contours are shown to illustrate general groundwater patterns in the context of this report. The contour lines are approximate and actual contours may vary from the locations shown. This data should be considered accurate to the degree implied by the method used.
5. Fluctuation in groundwater levels, direction, and flow rates may occur due to variations in the surface water level, precipitation, barometric pressure, and other factors from the time measurements were taken.
6. Groundwater Contours derived using Golden Software Surfer Version 14 using wells LBA-MW-01R, LBA-MW-02R, LBA-MW-03R, LBA-MW-04R, LBA-MW-06R, and LBA-MW-07R only.
7. Groundwater Elevations Referenced to North America Vertial Datum NAVD 88.

KEY	
Well ID: LBA-MW-06R	
TOC: 258.37	Top of Casing (ft)
GW EL: 246.28	Groundwater Elevation (ft)
SWL: 12.09	Static Water Level (ft)

Legend

- RI Well
- Groundwater Contour (ft) - September 4, 2018
- Former Building
- BCP Boundary

Path: I:\Binghamton Northside Ltd\2190179 - 435 State St Env. Monitoring\Drawings\SMP Drawings\Figure 3 -GW Flow.mxd

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SITE MANAGEMENT PLAN
NYSDEC BCP SITE #C704058
FORMER STOW MANUFACTURING
435 STATE STREET
BINGHAMTON, NEW YORK

BINGHAMTON NORTHSIDE LIMITED PARTNSERSHIP

DRAWING TITLE

SEPTEMBER 4, 2018 GROUNDWATER CONTOURS AND ELEVATIONS

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Wednesday, July 31, 2019

PROJECT/DRAWING NUMBER

[2190179]

[FIGURE 3]

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It is a violation of New York Education Law Article 145 Sec.7209, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

PROJECT / CLIENT

SITE MANAGEMENT PLAN
NYSDEC BCP SITE #C704058
FORMER STOW MANUFACTURING
435 STATE STREET
BINGHAMTON, NEW YORK

BINGHAMTON NORTHSIDE LIMITED PARTNSERSHIP

DRAWING TITLE

REMAINING CONTAMINATION:
SURFACE SOIL SAMPLE LOCATIONS
RESULTS DETECTED ABOVE THE NYSDEC
SOIL CLEANUP OBJECTIVES

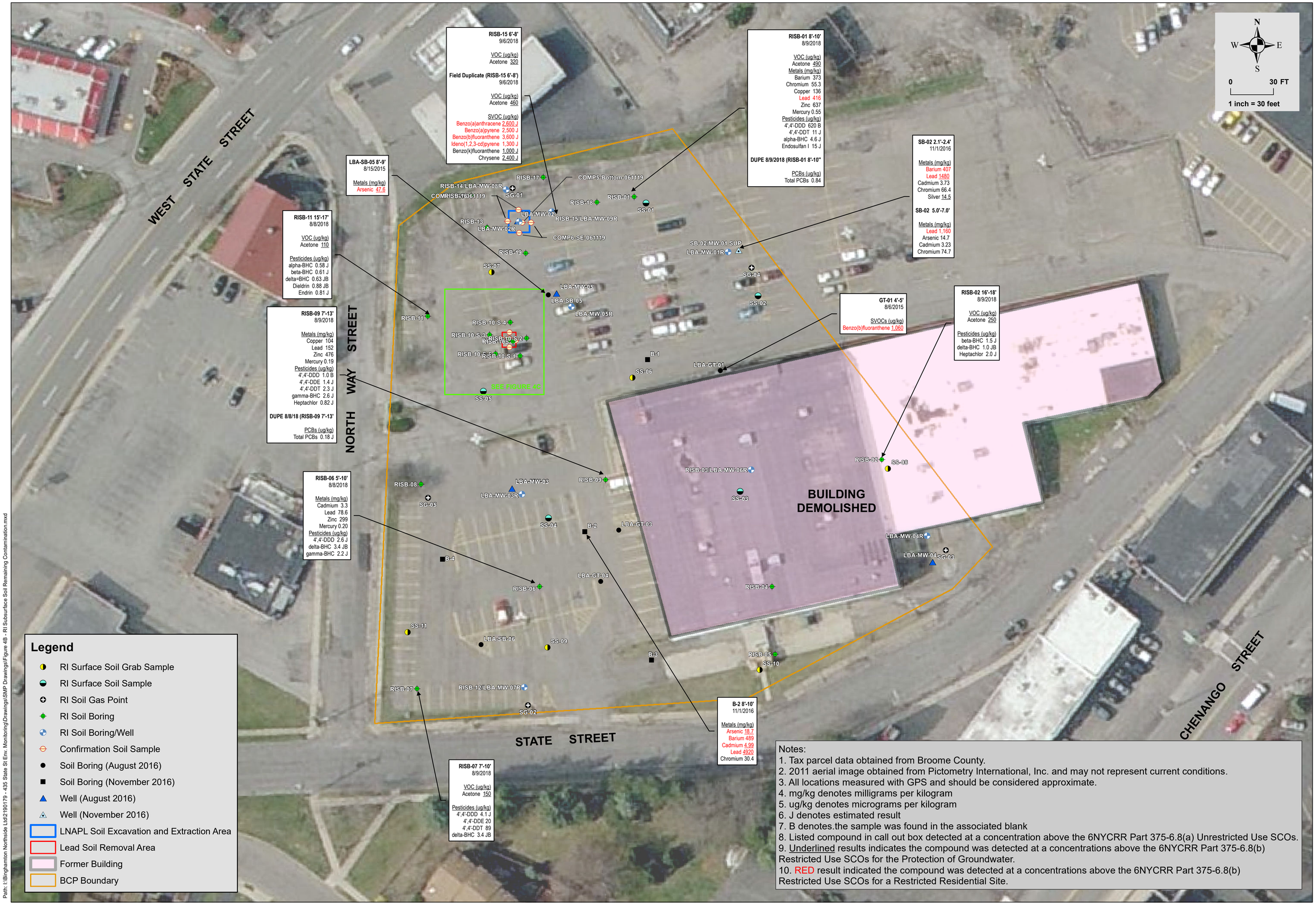
ISSUED FOR
FINAL
Wednesday, July 31, 2019

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

PROJECT/DRAWING NUMBER

[2190179]

[FIGURE 4A]



Notes:
1. Tax parcel data obtained from Broome County.
2. 2011 aerial image obtained from Pictometry International, Inc. and may not represent current conditions.
3. All locations measured with GPS and should be considered approximate.
4. mg/kg denotes milligrams per kilogram
5. ug/kg denotes micrograms per kilogram
6. J denotes estimated result
7. B denotes.the sample was found in the associated blank
8. Listed compound in call out box detected at a concentration above the 6NYCRR Part 375-6.8(a) Unrestricted Use SCOs.
9. Underlined results indicates the compound was detected at a concentrations above the 6NYCRR Part 375-6.8(b) Restricted Use SCOs for the Protection of Groundwater.
10. RED result indicated the compound was detected at a concentrations above the 6NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site.

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SITE MANAGEMENT PLAN
NYSDEC BCP SITE #C704058
FORMER STOW MANUFACTURING
435 STATE STREET
BINGHAMTON, NEW YORK
BINGHAMTON NORTHSIDE LIMITED PARTNSERSHIP

DRAWING TITLE
REMAINING CONTAMINATION:
SUBSURFACE SOIL SAMPLE LOCATIONS
RESULTS DETECTED ABOVE THE NYSDEC
SOIL CLEANUP OBJECTIVES

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Wednesday, July 31, 2019

PROJECT/DRAWING NUMBER
[2190179]
[FIGURE 4B]

Path: I:\Binghamton Northside Ltd\2190179 - 435 State St Env. Monitoring\Drawings\SMP Drawings\Figure 4B - RI Subsurface Soil Remaining Contamination.mxd

Legend

- Confirmation Soil Sample
- RI Soil Boring
- RI Soil Boring/Well
- Lead Soil Removal Area
- Former Building
- BCP Boundary

N W E S

0 5 FT

1 inch = 5 feet

COM1-NW-061119
06/11/2019

Metals 2'-7' (mg/kg)
Lead 535

RISB-10S-4
10/22/2018

Metals 3'-5' (mg/kg)
Lead 150

Metals 5'-7' (mg/kg)
Lead 136

Metals 7'-10' (mg/kg)
Lead 143

COMP3-Bottom-061119
06/11/2019

Metals 7' (mg/kg)
Lead 181

LBA-MW-05R

RISB-10S-2
10/22/2018

Metals 5'-7' (mg/kg)
Lead 106

Metals 7'-10' (mg/kg)
Lead 109

RISB-11

RISB-10-S-4

RISB-10-S-3

RISB-10-S-2

RISB-10

RISB-10S

RISB-10S-3
10/22/2018

Metals 3'-5' (mg/kg)
Lead 91.4

Metals 5'-7' (mg/kg)
Lead 649

Hazardous Waste Lead Soil Removal Area From 2'-7'

RISB-10-S-5

RISB-10-S-1

COMP2-SE-061119
06/11/2019

Metals 2'-7' (mg/kg)
Lead 183

DUPE-Lead-061119
06/11/2019

Metals 2'-7' (mg/kg)
Lead 147

RISB-10S-5
10/22/2018

Metals 3'-5' (mg/kg)
Lead 120

Metals 5'-7' (mg/kg)
Lead 155

Metals 7'-10' (mg/kg)
Lead 196

RISB-10S-1
10/22/2018

Metals 5'-7' (mg/kg)
Lead 213

Metals 7'-10' (mg/kg)
Lead 70.7

Notes:
1. Tax parcel data obtained from Broome County.
2. 2011 aerial image obtained from Pictometry International, Inc. and may not represent current conditions.
3 All locations measured with GPS and should be considered approximate.
4. mg/kg denotes milligrams per kilogram
5. Listed compound in call out box detected at a concentration above the 6NYCRR Part 375-6.8(a) Unrestricted Use SCOs.
6. Underlined results indicates the compound was detected at a concentrations above the 6NYCRR Part 375-6.8(b) Restricted Use SCOs for the Protection of Groundwater.
7. RED result indicated the compound was detected at a concentrations above the 6NYCRR Part 375-6.8(b) Restricted Use SCOs for a Restricted Residential Site.
9. mg/l denotes milligrams per liter

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SITE MANAGEMENT PLAN
NYSDEC BCP SITE #C704058
FORMER STOW MANUFACTURING
435 STATE STREET
BINGHAMTON, NEW YORK

BINGHAMTON NORTHSIDE LIMITED PARTNSERSHIP

DRAWING TITLE

REMAINING CONTAMINATION:
SUBSURFACE SOIL SAMPLE LOCATIONS
RESULTS DETECTED ABOVE THE NYSDEC
SOIL CLEANUP OBJECTIVES

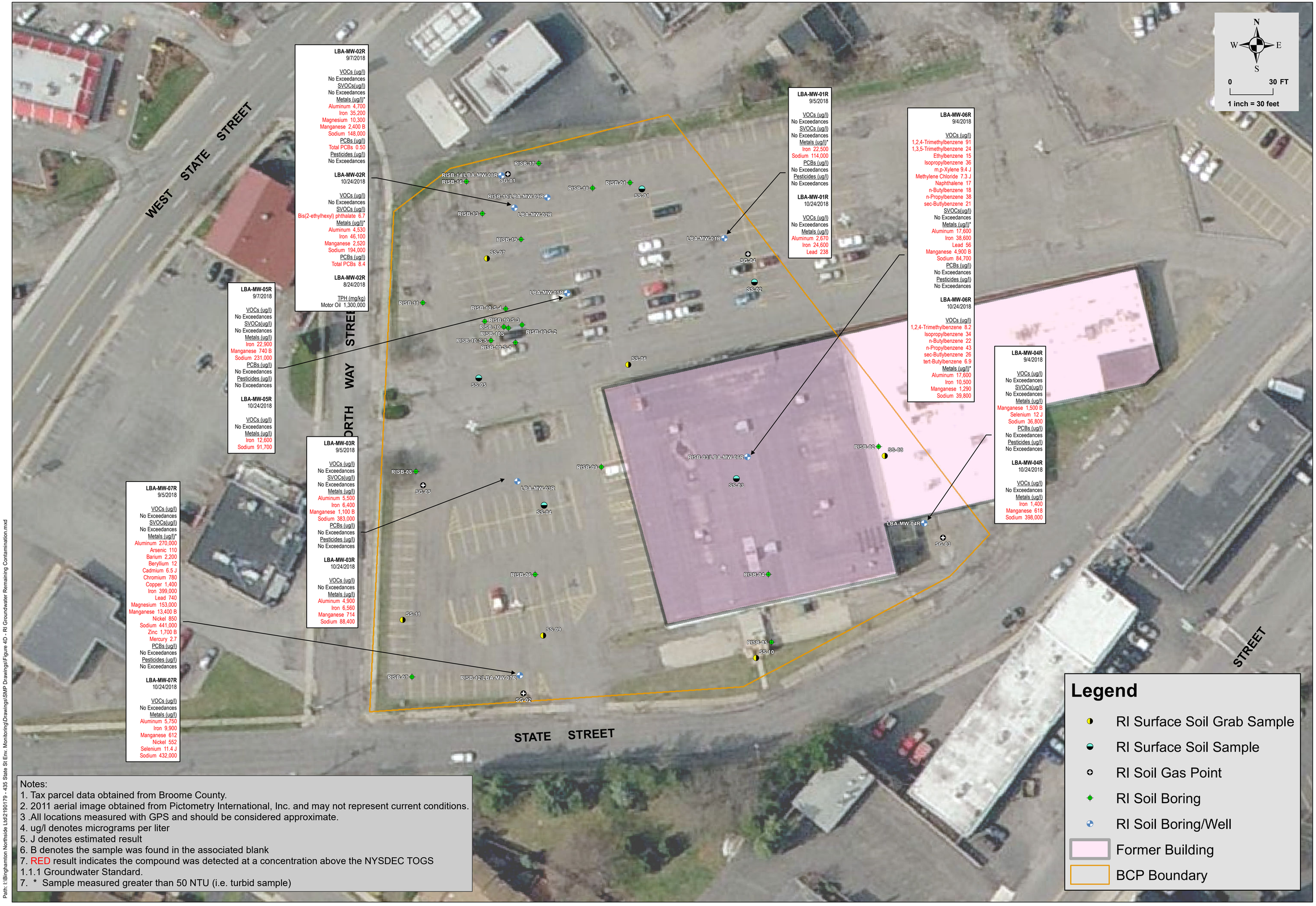
DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Wednesday, July 31, 2019

PROJECT/DRAWING NUMBER

[2190179]

[FIGURE 4C]



Path: I:\Binghamton Northside Ltd\2190179 - 435 State St Env. Monitoring\Drawings\SMP Drawings\Figure 4D - RI Groundwater Remaining Contamination.mxd

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NYSDEC BCP SITE #C704058
FORMER STOW MANUFACTURING
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BINGHAMTON NORTHSIDE LIMITED PARTNERSHIP

DRAWING TITLE

REMAINING CONTAMINATION
GROUNDWATER SAMPLE
RESULTS DETECTED ABOVE THE NYSDEC
TOGS 1.1.1 GROUNDWATER STANDARDS

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

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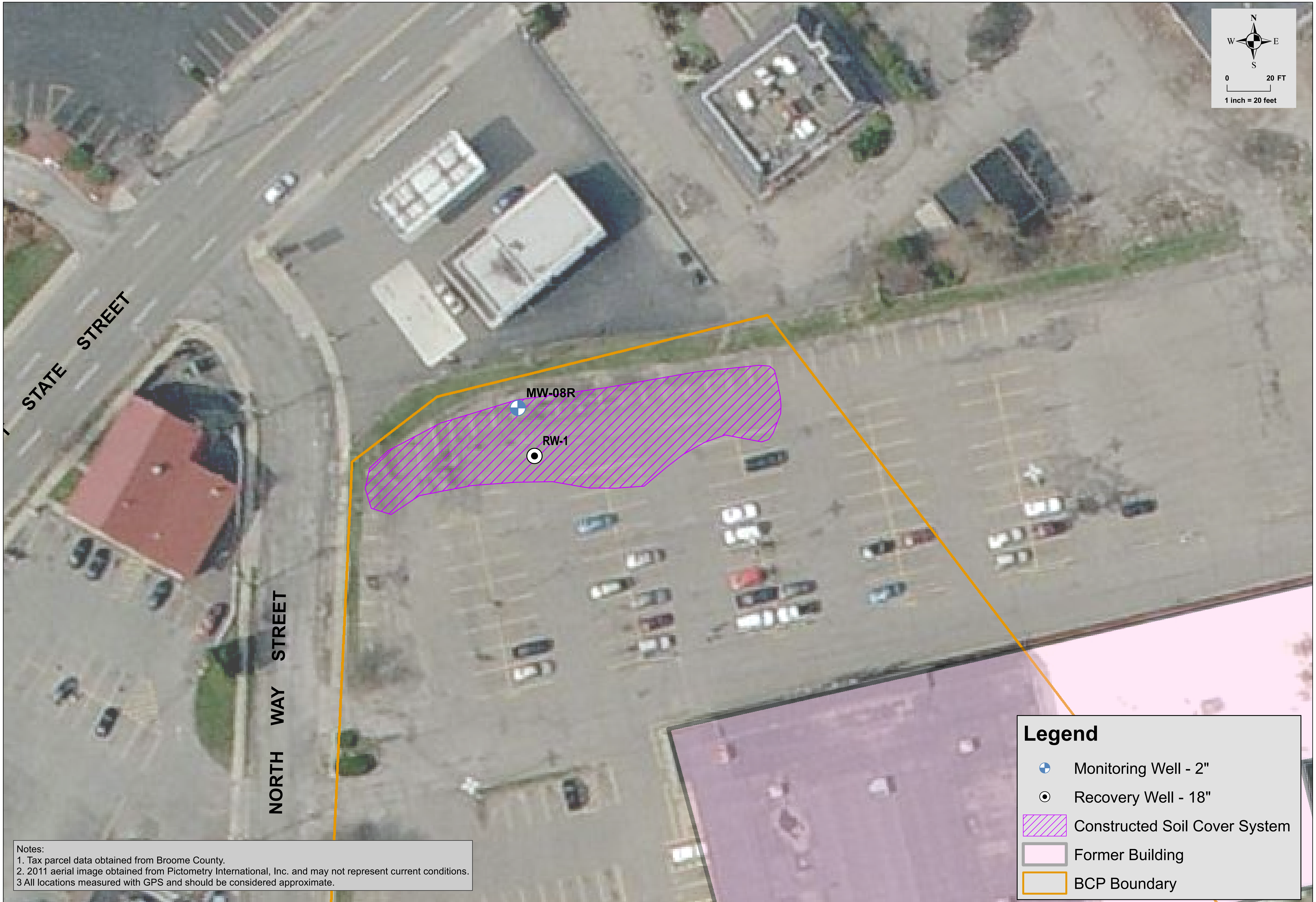
FINAL
Wednesday, July 31, 2019

PROJECT/DRAWING NUMBER

[2190179]

[FIGURE 4D]



Notes:
1. Tax parcel data obtained from Broome County.
2. 2011 aerial image obtained from Pictometry International, Inc. and may not represent current conditions.
3 All locations measured with GPS and should be considered approximate.

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SITE MANAGEMENT PLAN
NYSDEC BCP SITE #C704058
FORMER STOW MANUFACTURING
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BINGHAMTON NORTHSIDE LIMITED PARTNSERSHIP

DRAWING TITLE

RECOVERY WELL AND LOCATION
OF CONSTRUCTED SOIL COVER SYSTEM

ISSUED FOR
FINAL
Tuesday, November 5, 2019

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

PROJECT/DRAWING NUMBER
[2190179]
[FIGURE 5]

APPENDIX 1

Environmental Easement

BROOME COUNTY – STATE OF NEW YORK

JOSEPH A. MIHALKO, COUNTY CLERK
60 HAWLEY STREET, P.O. BOX 2062
BINGHAMTON, NY 13902

COUNTY CLERK'S RECORDING PAGE
*****THIS PAGE IS PART OF THE DOCUMENT – DO NOT DETACH*****

BOOK/PAGE: D2603 / 427
INSTRUMENT #: 201900029083

Receipt#: 20190980165
Clerk: GG
Rec Date: 10/09/2019 10:08:13 AM
Doc Grp: D
Descrip: EASEMENT
Num Pgs: 11
Rec'd Frm: SMPR TITLE AGENCY INC

Party1: BINGHAMTON NORTHSIDE HOUSING DEVELOPMENT FUND COMPANY INC
Party2: PEOPLE OF THE STATE OF NEW YORK/COMM OF DEC
Town: CITY OF BINGHAMTON

Recording:

Cover Page	5.00
Recording Fee	70.00
Cultural Ed	14.25
Records Management - Coun	1.00
Records Management - Stat	4.75
Sub Total:	95.00

Transfer Tax

Transfer Tax - State	0.00
Transfer Tax - County	0.00
Sub Total:	0.00
Total:	95.00

****** NOTICE: THIS IS NOT A BILL ******

***** Transfer Tax *****
Transfer Tax #: TT001056
Transfer Tax
Consideration: 0.00

Total: 0.00

WARNING***

This sheet constitutes the clerks endorsement, required by Section 316-A (5) & Section 319 of the Real Property Law of the State of New York. DO NOT DETACH.

Joseph A. Mihalko
Broome County Clerk

Record and Return To:

SMPR TITLE AGENCY INC
50 CHAPEL STREET
ALBANY NEW YORK 12207

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 17th day of September, 2019, between Owner(s) Binghamton Northside Housing Development Fund Company, Inc., (the "Grantor Fee Owner") having an office at c/o Community Potential Inc., 35 Exchange Street, Binghamton 13902, County of Broome, State of New York, and Binghamton Northside Limited Partnership, (the "Grantor Beneficial Owner"), having an office at c/o 3D Development Group L.L.C., 4549 Main Street, Suite 100, Amherst 14226, County of Erie, State of New York (collectively, the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor Fee Owner, is the nominal fee owner of real property located at the address of 435 State Street in the City of Binghamton, County of Broome and State of New York, known and designated on the tax map of the County Clerk of Broome as tax map parcel numbers: Section 144.82 Block 1 Lot 9.1, being the same as that property conveyed to Grantor Fee Owner by deed dated October 31, 2018 and recorded in the Broome County Clerk's Office in Liber and Page D2574/428. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 2.86 +/- acres, and is hereinafter more fully described in the Land Title Survey dated May 23, 2019 prepared by Ammon A. Bush L.L.S. of Shumaker Consulting Engineering & Land Surveying, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A;

M-072137
SMPR

WHEREAS, Grantor Beneficial Owner, is the owner of the beneficial interest in the Controlled Property being the same as a portion of that beneficial interest conveyed to Grantor Beneficial Owner by means of a Declaration of Interest and Nominee Agreement dated October 31, 2018 and recorded in the Broome County Clerk's Office in Liber and Page D2574/432 ; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C704058-02-17, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP;

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Broome County Department of Health to render it safe for use as drinking water or for industrial purposes, and

the user must first notify and obtain written approval to do so from the Department;

(5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(6) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(7) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

(9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP;

(10) 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 Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property

shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall, at such time as NYSDEC may require, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5) the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by

the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C704058
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

11. Consistency with the SMP. To the extent there is any conflict or inconsistency between the terms of this Environmental Easement and the SMP, regarding matters specifically addressed by the SMP, the terms of the SMP will control.

Remainder of Page Intentionally Left Blank

IN WITNESS WHEREOF, Grantor Fee Owner has caused this instrument to be signed in its name.

Binghamton Northside Housing Development Fund Company, Inc.,:

By: Elaine Miller

Print Name: Elaine Miller

Title: CEO Date: 8/27/19

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Erie)

On the 27th day of August, in the year 2019, before me, the undersigned, personally appeared Elaine Miller, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public - State of New York

Erika R. Curran
Notary Public
State of New York
Qualified in Erie County
My Commission Expires 5/6/2022
ID Number: 01CU6074087

IN WITNESS WHEREOF, Grantor Beneficial Owner has caused this instrument to be signed in its name.

Binghamton Northside Limited Partnership:

By: _____

Print Name: Bruce Levine

Title: Managing General Partner Date: 8-27-19

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF Erie)

On the 27th day of August, in the year 2019, before me, the undersigned, personally appeared Bruce Levine, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of New York

Erika R. Curran
Notary Public
State of New York
Qualified in Erie County
My Commission Expires 5/6/2022
ID Number: 01CU6074087

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____
Michael J. Ryan, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 17th day of September, in the year 2019, before me, the undersigned, personally appeared Michael J. Ryan, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2022

SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Binghamton, County of Broome and State of New York more particularly described as follows:

Beginning at a mag nail set on the northerly street boundary of State Street at its intersection with the easterly street boundary of North Way Street;

Thence North 02° 10' 58" East along the easterly boundary of North Way Street a distance of 348.25 feet to rebar with cap stamped "Shumaker Engrs." set, herein after referred to as rebar set;

Thence North 52° 09' 06" East along the southerly boundary of the lands now or formerly of United Refining Company of Pennsylvania (L.1417 P.320) a distance of 47.27 feet to a rebar set;

Thence North 76° 58' 06" East continuing along the said southerly boundary of the lands now or formerly of United Refining Company of Pennsylvania, a distance of 155.94 feet to found rebar with cap marked "Southern Tier";

Thence South 37° 24' 46" East through the lands now or formerly of Binghamton Local Development Corporation (L.2467 P.517) a distance of 374.70 feet to a point on the northerly street boundary of State Street;

Thence along the said northerly street boundary of State Street the following three (3) courses and distances:

1) South 43° 42' 55" West a distance of 39.05 feet to a dock spike set;
2) South 62° 38' 15" West a distance of 162.19 feet to a dock spike set;
3) South 87° 23' 54" West a distance of 259.40 feet to the point or place of beginning.

Said parcel containing 124,437 square feet or 2.857 acres of land more or less.

APPENDIX 2

List of Site Contacts

APPENDIX 2– LIST OF SITE CONTACTS

Name	Phone/Email Address
Site Owner: Binghamton Northside Limited Partnership, Bruce Levine	716-839-0549, bruce@3ddevelopemnt.com
Remedial Party Binghamton Northside Limited Partnership, Bruce Levine	716-839-0549, bruce@3ddevelopemnt.com
Qualified Environmental Professional: Dan Noll, P.E.	585-295-6611, dnoll@labellapc.com
NYSDEC DER Project Manager Gary Priscott, P.G.	607-775-2545, gary.priscott@dec.ny.gov
NYSDEC Regional HW Engineer Harry Warner, P.E.	315-426-7551, harry.warner@dec.ny.gov
NYSDEC Site Control Kelly A. Lewandowski, P.E.	518-402-9547, kelly.lewandowski@dec.ny.gov

APPENDIX 3

Field Logs

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-01
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/9/2018 END DATE: 8/9/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				Top SAND and GRAVEL	0.0	
			1'		0.0	
2		0-5' / 2.6'		Grey-black SAND FILL, little MF to C GRAVEL, brick fragments, trace cinders, trace glass, trace wood debris	1.8	
	RISB-01 3-5'				2.7	
4					0.0	
			5'		0.7	
6		5-10' / 1.4'		Grey-black SAND FILL, little MF to C GRAVEL, brick fragments, trace cinders, trace glass, trace wood debris, moist, low recovery	1.4	
					0.0	
8	RISB-01 8-10'				2.3	
10					10.6	Decayed odor
			10'			
12		10-15' / 0		NO DATA - NO RECOVERY	NA	
14						VC GRAVEL in probe tip
			15'		0.0	
16					0.0	
		15-20' / 3.0'			0.0	
18					5.4	
				Grey to black SILT, some SAND, trace GRAVEL, moist to wet	19.0	
20					3.2	
		20-25' / 2.1'			1.9	
22					0.8	
					0.0	
24					0.0	
26				Boring Concluded -- Target Depth 25.0' BGS		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
			NA	25.0'		

GENERAL NOTES

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

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

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

BGS = Below Ground Surface
NA = Not Applicable
A = Angular R = Rounded
SA = Subangular SR = Subrounded

BORING: RISB-01

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-02
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/9/2018 END DATE: 8/9/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0					0.0	FILL
2		0-5' / 3.0'		Brown VC SAND and GRAVEL, dry, no odor	0.5	
4					0.0	
6	RISB-02 6-8'	5-10' / 3.8'	5.5'	Black SAND FILL, trace cinders, trace slag, rust-colored staining, brick, concrete, dry	0.0	
8					0.0	
10		10-15' / 2.7'	10'	Black SAND FILL, trace cinders, trace slag, rust-colored staining, brick, concrete, moist to wet	0.0	
12			12'	Grey SILT and VF SAND, greasy texture, decayed petroleum odor	12.1	APPARENT NATIVE
14					18.3	
16	RISB-02 16-18'	15-20' / 3.1'			47.4	
18					70.2	
20		20-25' / 1.0'	20'	Grey SILT and VF SAND, moist, no odor	55.1	
22					48.3	
24					50.2	
26				Boring Concluded -- Target Depth 25.0' BGS	94.2	
					71.1	
					15.3	
					2.5	
					2.0	
					0.0	
					0.0	
					0.0	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	25.0'	

NOTES:

GENERAL NOTES

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

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

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

BGS = Below Ground Surface
NA = Not Applicable
A = Angular R = Rounded
SA = Subangular SR = Subrounded

BORING: RISB-02

LaBella
Powered by partnership.

300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-03
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/9/2018 END DATE: 8/9/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		0-5' / 3.0'		Brown VC SAND and M to C R to SR GRAVEL, dry, no odor	0.0	FILL
2					0.0	
4					0.0	
6		5-10' / 3.3'	6.5'		0.0	
8				Brick FILL, little SAND, little concrete, trace cinders, dry, no odor	0.0	
10		10-15' / 3.1'			0.0	
12			13'		0.0	APPARENT NATIVE
14				Dark grey VF SAND, little SILT, little M R GRAVEL, moist, no odor	0.0	
16		15-20' / 3.5'			2.2	
18			18'		0.0	
20		20-25' / 1.2'		Dark grey VF SAND, little SILT, trace black organics, river bottom sediments, moist, no odor	0.0	
22					0.0	
24					0.0	
26				Boring Concluded -- Target Depth 25.0' BGS		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	25.0'	

NOTES:

GENERAL NOTES

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

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

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

BGS = Below Ground Surface
NA = Not Applicable
A = Angular R = Rounded
SA = Subangular SR = Subrounded

BORING: RISB-03

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-04
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/9/2018 END DATE: 8/9/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	RISB-11 9-11'	0-5' / 2.0'	0.5'	Topsoil, organics	0.0	FILL
2				Brown MC SAND and C to VC SA to R GRAVEL, dry, no odor, loose	0.0	
4					0.0	
					0.0	
		5-10' / 2.3'	5'		0.0	
6				Brown MC SAND and C to VC SA to R GRAVEL, trace cinders, trace concrete, trace bricks, dry, no odor, loose	0.0	
8					0.0	
			9'		0.0	
10				Black FILL SAND, trace cinders, trace concrete, trace bricks, no odor, dry	0.0	
					0.0	
		10-15' / 2.7'	11.5'		0.0	APPARENT NATIVE
12				Dark brown SILT, little VF SAND, tightly-packed, moist, trace organics, river bottom sediments	0.0	
14					0.0	
					0.0	
		15-20' / 3.1'	15'		0.0	
16				Dark brown SILT, little VF SAND, tightly-packed, wet, trace organics, river bottom sediments	0.0	
18			18'		0.0	
					0.0	
20					0.0	
		20-25' / 2.8'		Dark brown SILT, little VF SAND, tightly-packed, saturated, trace organics, river bottom sediments	0.0	
22					0.0	
					0.0	
24					0.0	
26				Boring Concluded -- Target Depth 25.0' BGS		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	25.0'	

NOTES:

GENERAL NOTES

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

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

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

BGS = Below Ground Surface
NA = Not Applicable
A = Angular R = Rounded
SA = Subangular SR = Subrounded

BORING: RISB-04

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-05
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/9/2018 END DATE: 8/9/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		0-5' / 2.4'		Brown SAND and C SA to R GRAVEL, dry, no odor, loose	0.0	RE-WORKED NATIVE
2					0.0	
					0.0	
4					0.0	
					0.0	
6		5-10' / 2.4'			0.0	
					0.0	
8					0.0	
					0.0	
10		10-15' / 2.9'	10'	Brown SAND and C SA to R GRAVEL, damp, no odor, loose	0.0	APPARENT NATIVE
					0.0	
12					0.0	
					0.0	
14					0.0	
					0.0	
16		15-20' / 0.8'	17'		0.0	
18				NO DATA - LIMITED RECOVERY	NA	
20		20-25' / 3.0'	20'	Brown SAND and C SA to R GRAVEL, saturated, no odor, loose, water flows from liner	0.0	VC GRAVEL IN SHOE
					0.0	
22					0.0	
					0.0	
24					0.0	
26				Boring Concluded -- Target Depth 25.0' BGS		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	25.0'	

NOTES:

GENERAL NOTES

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

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

C = Coarse
M = Medium
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SA = Subangular SR = Subrounded

BORING: RISB-05

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TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-06
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/9/2018 END DATE: 8/9/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	RISB-06 5-10'	0-5' / 2.5'	0.5'	Brown SAND and GRAVEL	0.0	FILL
			1.5'	Red concrete and GRAVEL	0.0	
2				Brown C SAND FILL, concrete, trace bricks, trace cinders	0.0	
					0.0	
4					0.0	
					0.0	
6		5-10' / 2.1'			0.0	
					0.0	
8					0.0	
					0.0	
10		10-15' / 2.3'	9.5'	Dark brown VC SAND and VC R to SR GRAVEL, damp, no odor	0.0	POSSIBLE NATIVE
					0.0	
12					0.0	
					0.0	
14					0.0	
					0.0	
16		15-20' / 1.7'			0.0	
					0.0	
18			18'	Dark brown VC SAND and VC R to SR GRAVEL, wet, no odor, river bottom sediments	0.0	
					0.0	
20		20-25' / 3.3'	20'	Dark brown VC SAND and VC R to SR GRAVEL, saturated, no odor, river bottom sediments	0.0	
					0.0	
22					0.0	
					0.0	
24					0.0	
26				Boring Concluded -- Target Depth 25.0' BGS		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	25.0'	

NOTES:

GENERAL NOTES

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

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

C = Coarse
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VF = Very Fine

BGS = Below Ground Surface
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A = Angular R = Rounded
SA = Subangular SR = Subrounded

BORING: RISB-06

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TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-07
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/9/2018 END DATE: 8/9/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	RISB-07 7-10'	0-5' / 2.8'	0.5'	Brown C SAND FILL, trace GRAVEL	0.0	
2				Grey-brown FILL SAND, dry, trace cinders, trace brick fragments, trace wood debris	0.0	
4					0.0	
6		5-10' / 1.8'	6'		0.0	
8				VC SAND and C R to SA GRAVEL, dry/damp, no odor	0.0	
10		10-15' / 1.3'	10'		0.0	
12				VC SAND and C R to SA GRAVEL,moist, no odor, trace wood debris	0.0	
14					0.0	
16		15-20' / 1.3'	15'		0.0	
18				VC SAND and C R to SA GRAVEL,moist, no odor	0.0	
20		20-25' / 3.0'	20'		0.0	
22				VC SAND and GRAVEL, dry, no odor	0.0	
24					0.0	
26				Boring Concluded -- Target Depth 25.0' BGS		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	25.0'	

NOTES:

GENERAL NOTES

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

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

C = Coarse
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VF = Very Fine

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

BORING: RISB-07

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-08
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/8/2018 END DATE: 8/8/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				Surface SAND and GRAVEL	0.0	
			0.7'			
2		0-5' / 2.5'		Brown C SAND FILL, trace bricks, trace cinders, trace concrete fragments, SA to SR GRAVEL, moist/damp	0.0	
					0.0	
4					0.0	
			4.5'	Bricks	0.0	
			5'			
6		5-10' / 1.7'		Brown C SAND FILL, trace bricks, trace cinders, trace concrete fragments, SA to SR GRAVEL, moist/damp	0.0	
					0.0	
8					0.0	
					0.0	
10			10'		0.0	
				Brown VC SAND and C R to SA GRAVEL, moist, no odor, trace bricks	0.0	
12		10-15' / 1.0'	12'		0.0	
				NO DATA - LIMITED RECOVERY	NL	
14						
			15'			
16				Brown VC SAND and C R to SA GRAVEL, moist, no odor, trace bricks	0.0	
		15-20' / 0.8'			0.0	
			17'			
18				NO DATA - LIMITED RECOVERY	NL	
20			20			APPARENT NATIVE
					0.0	
22		20-25' / 1.2'		VC SAND, flowing, saturated	0.0	
					0.0	
24					0.0	
					0.0	
26				Boring Concluded -- Target Depth 25.0' BGS		

WATER LEVEL DATA			DEPTH (FT)			NOTES:
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED	
			NA	25.0'		

GENERAL NOTES

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

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

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

BGS = Below Ground Surface
NA = Not Applicable
A = Angular R = Rounded
SA = Subangular SR = Subrounded

BORING: RISB-08

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TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-09
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/8/2018 END DATE: 8/8/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	RISB-09 7-13'	0-5' / 3.1'	1'	Brown FILL SAND	0.0	FILL
2					0.0	
					0.0	
4				FILL SAND and VC SA to R GRAVEL, dry, no odor, trace concrete	0.0	
					0.0	
6		5-10' / 3.6'	7'		0.0	
					1.2	
8				Black-stained FILL, no odor, VC SAND, cinders, trace slag, bricks, wood debris	3.4	
					4.6	
10		10-15' / 2.7'	10'		0.0	
				Black-stained FILL, no odor, VC SAND, cinders, bricks	15.2	
12					19.8	
					24.5	APPARENT NATIVE
14			13'		0.4	
				VF SILT, little SAND, tightly-packed native river bottom sediments, moist	0.0	
16		15-20' / 2.7'			0.0	
					0.0	
18			17'	VF SILT, little SAND, tightly-packed native river bottom sediments, wet	0.0	
					0.0	
20			20'		0.0	
		20-25' / 4.0'			0.0	
22				VF SILT, little SAND, tightly-packed native river bottom sediments, saturated	0.0	
					0.0	
24					0.0	
26				Boring Concluded -- Target Depth 25.0' BGS		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	25.0'	

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.
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trace = 1 - 10%

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SA = Subangular
SR = Subrounded

BORING: RISB-09

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-10
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/9/2018 END DATE: 8/9/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	RISB-10 3-5'	0-5' / 3.5'	0.5'	Brown SAND and GRAVEL	0.0	VC GRAVEL IN SHOE
2				FILL: cinders, ash, trace slag, trace concrete, no odor, trace glass, dry/damp	0.0	
4					0.0	
			5'		0.0	
6		5-10' / 0.8'		Apparent VC brown SAND, damp	0.0	
			7'		0.0	
8				NO DATA - LIMITED RECOVERY	NA	
10		10-15' / 3.1'	10'	Apparent VC brown SAND and GRAVEL, FILL: trace concrete, trace bricks, moist	0.0	
			11'		0.0	
12				Grey to black apparent native SILT, trace SAND, moist, organics, possible river bottom sediments, moist	0.0	
14					0.0	
			15'		0.0	
16		15-20' / 4.7'		Grey to black apparent native SILT, trace SAND, little CLAY, black organics, moist, organics, possible river bottom sediments, wet	0.0	
18					0.0	
					0.0	
20		20-25' / 4.3'	20'	Grey to black apparent native SILT, trace SAND, little CLAY, black organics, moist, organics, possible river bottom sediments, saturated	0.0	
22					0.0	
					0.0	
24					0.0	
26				Boring Concluded -- Target Depth 25.0' BGS		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	25.0'	

NOTES:

GENERAL NOTES

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

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

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VF = Very Fine

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NA = Not Applicable
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SA = Subangular SR = Subrounded

BORING: RISB-10

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-11
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/9/2018 END DATE: 8/9/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				Surface SAND and GRAVEL	0.0	FILL
			1'			
2		0-5' / 1.9'		VC R GRAVEL, little SAND, dry, no odor	0.0	
			3'		0.0	
4				Grey-black C SAND and GRAVEL FILL: trace bricks, trace concrete, damp, no odor	0.0	
			5'		0.0	
6		5-10' / 2.0'			0.0	
					0.0	
8				Grey-black C SAND and GRAVEL FILL: trace bricks, trace concrete, wet, no odor	0.0	
					0.0	
10					0.0	
		10-15' / 0.5'	11'		0.0	
12				NO DATA - LIMITED RECOVERY	NA	
14						
	RISB-11 15-17'		15'			APPARENT NATIVE
16		15-20' / 1.7'			0.0	
					0.0	
18					0.0	
					0.0	
20				Brown MF SAND, saturated, some VC R GRAVEL, no odor	0.0	
		20-25' / 3.8'			0.0	
22					0.0	
					0.0	
24					0.0	
					0.0	
26				Boring Concluded -- Target Depth 25.0' BGS		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	25.0'	

NOTES:

GENERAL NOTES

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

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

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

BGS = Below Ground Surface
NA = Not Applicable
A = Angular R = Rounded
SA = Subangular SR = Subrounded

BORING: RISB-11

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-12
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 8/9/2018 END DATE: 8/9/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		0-5' / 2.2'	1'	Top FILL SAND	0.0	
2					0.0	
4				Brown C SAND, bricks, concrete, trace wood debris, dry, no odor	0.0	
6		5-10' / 2.3'	7'		0.0	
8				Grey C SAND and VC C GRAVEL, dry, no odor	0.0	
10		10-15' / 1.3'	10'		0.0	
12					0.0	
14					0.0	
16		15-20' / 1.4'		FILL: dark brown SAND, trace cinders, trace brick fragments, moist	0.0	
18					0.0	
20		20-25' / 3.5'			0.0	
22					0.0	
24			23'	Brown C SAND, and VC R to SR GRAVEL, wet, no odor	0.0	
26				Boring Concluded -- Target Depth 25.0' BGS		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	25.0'	

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.
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trace = 1 - 10%

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BORING: RISB-12

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-13
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 9/6/2018 END DATE: 9/6/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		0-5' / 1.8'	1.8'	Brown surface SAND and GRAVEL, dry, no odor	0.0	
2					0.0	
				Grey FILL SAND, bricks, concrete, trace wood debris, dry, no odor	0.0	
4					0.0	
		5-10' / 1.1'	5.5'	Grey FILL SAND, bricks, concrete, trace wood debris, moist, faint petroleum odor	4.8	
6					1.0	
			7'	LIMITED RECOVERY - NO DATA	0.0	
8					0.0	
					0.0	
10		10-15' / 3.4'	10'		0.0	POSSIBLE NATIVE
					0.0	
12					0.0	
					0.0	
14				Black to very dark grey SILTY SAND, saturated, no odor, trace wood debris, greasy texture	0.0	
		15-20' / 1.6'			0.0	
16					0.0	
					0.0	
18					0.0	
					0.0	
20				Boring Concluded -- Target Depth 20.0' BGS		

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	20.0'	10.0'

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.
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trace = 1 - 10%

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BORING: RISB-13

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-14
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 9/6/2018 END DATE: 9/6/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	RISB-14 4-8'	0-5' / 2.4'	1'	Brown surface SAND, dry, no odor	0.0	
2				Brown-black SAND FILL, trace cinders, trace bricks, trace glass, moist, greasy texture	0.0	
4			3.5'		0.0	
6		5-10' / 2.0'		Grey-stained SAND, little GRAVEL, decayed petroleum odor, dry/damp	14.2	
8					39.8	
10		10-15' / 3.1'	10'		0.1	
12				Grey petroleum-stained SILTY SAND, moist/wet, faint decayed petroleum odor, smearing	5.5	
14					214.3	
16		15-20' / 3.2'	16'		29.0	
18				VC SAND and R GRAVEL, grey-black stain, saturated, decayed petroleum odor	11.4	
20				Boring Concluded -- Target Depth 20.0' BGS	4.0	
					30.4	
					32.6	
					5.5	
					4.0	
					3.7	
					299.3	
					104.1	
					5.3	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	20.0'	16'

NOTES:
Installed well LBA-MW-08R to 20.0' BGS, 10 ft pre-packed 2" well screen

GENERAL NOTES
1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.
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trace = 1 - 10%
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SA = Subangular
SR = Subrounded

BORING: RISB-14

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TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-15
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 9/6/2018 END DATE: 9/6/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0	RISB-15 6-8'	0-5' / 2.4'	2.5'	Surface SAND and GRAVEL, dry/damp, no odor	0.0	
2					0.0	
4				Black FILL SAND, trace cinders, trace glass, trace bricks, damp, no odor	0.0	
6		5-10' / 1.8'	6'	Grey SAND and GRAVEL, wood debris, faint decayed petroleum odor	69.8	
8			8'	Brown SILTY SAND, moist, no odor, trace wood debris	0.0	
10		10-15' / 0	10'	NO DATA - NO RECOVERY	0.0	
12					0.0	
14					0.0	
16		15-20' / 3.0'	15'	Brown SILTY SAND, moist, no odor, trace wood debris, greasy texture	5.8	
18			17'	Grey VC SAND and GRAVEL, greasy texture, no odor	0.0	
20				Boring Concluded -- Target Depth 20.0' BGS	10.3	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	20.0'	

NOTES:
Installed well LBA-MW-09R to 20.0' BGS, 10 ft pre-packed 2" well screen

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

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

C = Coarse
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BORING: RISB-15

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TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-16
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 9/6/2018 END DATE: 9/6/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		0-5' / 2.5'	2'	Brown SAND FILL and GRAVEL, dry, no odor	0.0	
2					0.0	
4				Black FILL, glass, cinders, faint decayed petroleum odor	0.0	
6		5-10' / 2.6'	6'		0.0	
8					0.0	
10		10-15' / 2.0'		River-bottom SILT and SAND, trace wood debris, no odor, moist to wet	0.0	
12					0.0	
14			13.5'	Light brown SAND and GRAVEL, no odor, wet	0.0	
16		15-20' / 3.5'	15'	River-bottom SILT and SAND, trace wood debris, faint organic odor, moist to wet	0.0	
18					0.0	
20				Boring Concluded -- Target Depth 20.0' BGS	0.0	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	20.0'	

NOTES:

GENERAL NOTES
1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.
3) ABBREVIATIONS:
and = 35 - 50%
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C = Coarse
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BORING: RISB-16

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-17
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 9/6/2018 END DATE: 9/6/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		0-5' / 3.1'	1.5'	Surface FILL, dry, no odor	0.4	
2					0.7	
4				Black FILL SAND, trace ash, trace glass, trace brick, damp, faint decayed petroleum odor	1.8 6.3 0.1	
6		5-10' / 1.8'	7'		0.4 0.4	
8					0.0 0.3	
10		10-15' / 3.5'			0.3 0.0	
12					0.0 0.0	
14				Brown to grey SILTY SAND, damp/moist, no odor	0.0 0.0	
16		15-20' / 3.8'			0.0 0.0	
18					0.0 0.0	
20				Boring Concluded -- Target Depth 20.0' BGS	0.0	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	20.0'	

NOTES:

GENERAL NOTES
1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.
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some = 20 - 35%
little = 10 - 20%
trace = 1 - 10%
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SR = Subrounded

BORING: RISB-17

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ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-18
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 9/6/2018 END DATE: 9/6/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6620 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0		0-5' / 2.3'	3'	Surface SAND and GRAVEL, dry, no odor	0.0	
2					0.0	
4				Black SAND FILL, cinders, glass, concrete, decayed odor	0.4	
6		5-10' / 3.1'	8'		1.2	
8				Black SAND FILL, cinders, wood debris, glass, concrete, decayed odor	2.4	
10		10-15' / 2.5'	10'	Grey to black SILT, little SAND, no odor, wood debris, river-bottom sediments	0.0	
12					0.0	
14					0.2	
16		15-20' / 4.6'			0.2	
18			18'	Grey to black SILT, little SAND, little GRAVEL, no odor, wood debris, river-bottom sediments, faint decayed petro odor	0.1	
20				Boring Concluded -- Target Depth 20.0' BGS	0.0	
					0.0	
					0.0	
					0.0	
					0.0	
					0.0	
					0.0	
					1.0	
					1.4	

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	20.0'	

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.
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BORING: RISB-18

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TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-10-S
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 10/22/2018 END DATE: 10/22/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0			0.5'	Brown surface SAND and GRAVEL	0.0	
2		0-5' / 3.2'		FILL: Black SAND, cinders, ash, trace slag, brick fragments, concrete fragments, no odor, trace glass, dry/damp	0.0	
4	RISB-10-S 3-5'				0.0	
					0.0	
6				Refusal 5.2' BGS - Apparent concrete slab Macro core sampler unable to be removed from concrete/obstrution		
8						
10						
12						
14						
16						
18						
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	5.2'	

NOTES:

GENERAL NOTES

1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE.
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BORING: RISB-10-S

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-10-S-1
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 10/22/2018 END DATE: 10/22/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				Brown surface SAND and GRAVEL	0.0	
			1.0'		0.0	
2		0-5' / 3.5'		FILL: Black SAND, cinders, ash, trace slag, brick fragments, concrete fragments, no odor, trace glass, dry/damp	0.0	
	RISB-10-S-1 3-5'				0.0	
4					0.0	
			5.0'		0.0	
6	RISB-10-S-1 5-7'	5-10' / 2.0'		Grey SILT and SAND, moist, trace bricks, trace concrete fragments	0.0	
					0.0	
8	RISB-10-S-1 7-10'				0.0	
			9'	Brown SAND and GRAVEL, moist, no odor	0.0	POSSIBLE NATIVE
10			10'	Boring Concluded - Target Depth 10.0' BGS		
12						
14						
16						
18						
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	10.0'	

NOTES:

GENERAL NOTES

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

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

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

BGS = Below Ground Surface
NA = Not Applicable
A = Angular
R = Rounded
SA = Subangular
SR = Subrounded

BORING: RISB-10-S-1

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-10-S-2
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 10/22/2018 END DATE: 10/22/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				Brown surface SAND and GRAVEL	0.0	
			1.0'		0.0	
2		0-5' / 3.0'		FILL: Black SAND, cinders, ash, trace slag, brick fragments, concrete fragments, no odor, trace glass, dry/damp	0.0	
	RISB-10-S-2 3-5'				1.8	
4					0.8	
			5.0'		0.0	
	RISB-10-S-2 5-7'				0.0	
6				Brown SAND and GRAVEL, brick fragments, damp, no odor		
		5-10' / 2.6'			3.4	
8	RISB-10-S-2 7-10'				0.0	
			8.5'	Brown SAND and GRAVEL, trace SILT, trace organics (possible river bottom sediments)	0.0	POSSIBLE NATIVE
10			10'	Boring Concluded - Target Depth 10.0' BGS		
12						
14						
16						
18						
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	10.0'	

NOTES:

GENERAL NOTES

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

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

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

BGS = Below Ground Surface
NA = Not Applicable
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R = Rounded
SA = Subangular
SR = Subrounded

BORING: RISB-10-S-2

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-10-S-3
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 10/22/2018 END DATE: 10/22/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				Brown surface SAND and GRAVEL, damp, no odor	1.4	
					1.2	
2		0-5' / 4.0'	2.0'		0.0	
					0.0	
4	RISB-10-S-3 3-5'			FILL: Black SAND, cinders, ash, trace slag, brick fragments, concrete fragments, no odor, trace glass, dry/damp	1.0	
					0.8	
6	RISB-10-S-3 5-7'				0.0	
		5-10' / 2.9'	7'		0.0	
8	RISB-10-S-3 7-10'			Brown SAND and GRAVEL, bricks, trace concrete fragments, trace metal debris	0.0	
					0.0	
10			10'	Boring Concluded - Target Depth 10.0' BGS		
12						
14						
16						
18						
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	10.0'	

NOTES:

GENERAL NOTES

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

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SA = Subangular
SR = Subrounded

BORING: RISB-10-S-3

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-10-S-4
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 10/22/2018 END DATE: 10/22/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				Brown surface SAND and GRAVEL	0.0	
			1.5'		0.0	
2		0-5' / 3.5'			2.2	
	RISB-10-S-4 3-5'			FILL: Black SAND, cinders, brick fragments, concrete fragments, no odor, trace metal debris, dry/damp	1.2	
4					0.0	
	RISB-10-S-4 5-7'				0.0	
6			6'		0.0	
		5-10' / 1.9'			0.0	
8	RISB-10-S-4 7-10'			Grey SILT and SAND, moist, trace bricks, trace concrete fragments	0.0	
					0.0	
10			10'	Boring Concluded - Target Depth 10.0' BGS		
12						
14						
16						
18						
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	10.0'	

NOTES:

GENERAL NOTES

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

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

C = Coarse
M = Medium
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BGS = Below Ground Surface
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A = Angular
R = Rounded
SA = Subangular
SR = Subrounded

BORING: RISB-10-S-4

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

TEST BORING LOG

Phase II Environmental Site Assessment
Geoprobe® Overburden Soil Sampling
435 State Street, Binghamton, New York
Client: Binghamton Northside, Ltd.

BORING: RISB-10-S-5
SHEET 1 OF 1
JOB: 2182159
CHKD BY: SMR

CONTRACTOR: LaBella Environmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION: NA
START DATE: 10/22/2018 END DATE: 10/22/2018

TIME: TO
DATUM: NA
WEATHER:

TYPE OF DRILL RIG: Geoprobe® 6610 DT
AUGER SIZE AND TYPE: NA
OVERBURDEN SAMPING METHOD: Direct Push

DRIVE SAMPLER TYPE:
INSIDE DIAMETER: ~1.8"
OTHER:

DEPTH (FT)	SAMPLE DATA: SAMPLE NO. AND DEPTH	SAMPLE DATA: SAMPLE RUN/RECOVERY	SAMPLE DATA: STRATA CHANGE	VISUAL MATERIALS CLASSIFICATION	PID FIELD SCREEN (PPM)	REMARKS
0				Brown surface SAND and GRAVEL, wet, no odor	0.0	
			1.0'		0.0	
2		0-5' / 3.8'			0.0	
					0.0	
4	RISB-10-S-5 3-5'			FILL: Black SAND, cinders, ash, brick fragments, concrete fragments, trace metal debris, no odor, dry/damp	0.0	
					0.0	
6	RISB-10-S-5 5-7'				0.0	
		5-10' / 2.4'	7'		0.0	
8	RISB-10-S-5 7-10'			Brown SAND and GRAVEL, moist, trace bricks, trace concrete fragments	0.0	
					0.0	
10			10'	Boring Concluded - Target Depth 10.0' BGS		
12						
14						
16						
18						
20						

WATER LEVEL DATA			DEPTH (FT)		
DATE	TIME	ELAPSED TIME	BOTTOM OF CASING	BOTTOM OF BORING	GROUNDWATER ENCOUNTERED
			NA	10.0'	

NOTES:

GENERAL NOTES

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

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

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M = Medium
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VF = Very Fine

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NA = Not Applicable
A = Angular
R = Rounded
SA = Subangular
SR = Subrounded

BORING: RISB-10-S-5

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

REMEDIAL INVESTIGATION
435 STATE STREET, BINGHAMTON, NEW YORK
CLIENT: BINGHAMTON NORTHSIDE, LTD.

MONITORING WELL : LBA-MW-01R

SHEET 1 OF 1
JOB # 2182159

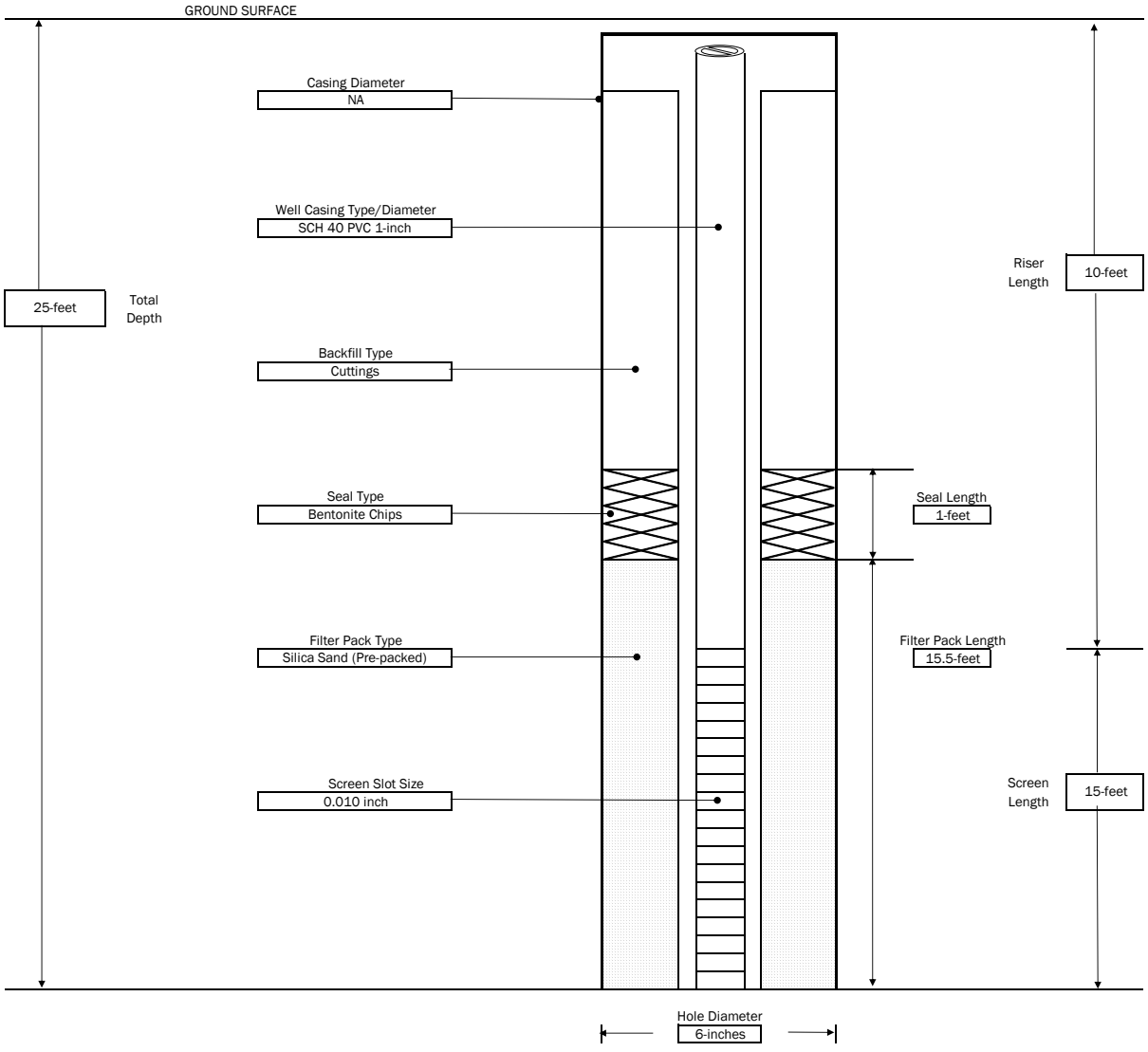
CONTRACTOR: LaBella Envrionmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION:
START DATE: 8/13/2018 END DATE: 8/13/2018

TYPE OF DRILL RIG: Geoprobe 6610DT
DRIVE SAMPLER TYPE: Macro Core
OVERBURDEN SAMPLING METHOD: Direct Push

WATER LEVEL DATA

DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR
4) BGS = BELOW GROUND SURFACE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** REMEDIAL INVESTIGATION 435 STATE STREET, BINGHAMTON, NEW YORK CLIENT: BINGHAMTON NORTHSIDE, LTD.	**MONITORING WELL :** LBA-MW-02R **SHEET** 1 OF 1 **JOB #** 2182159

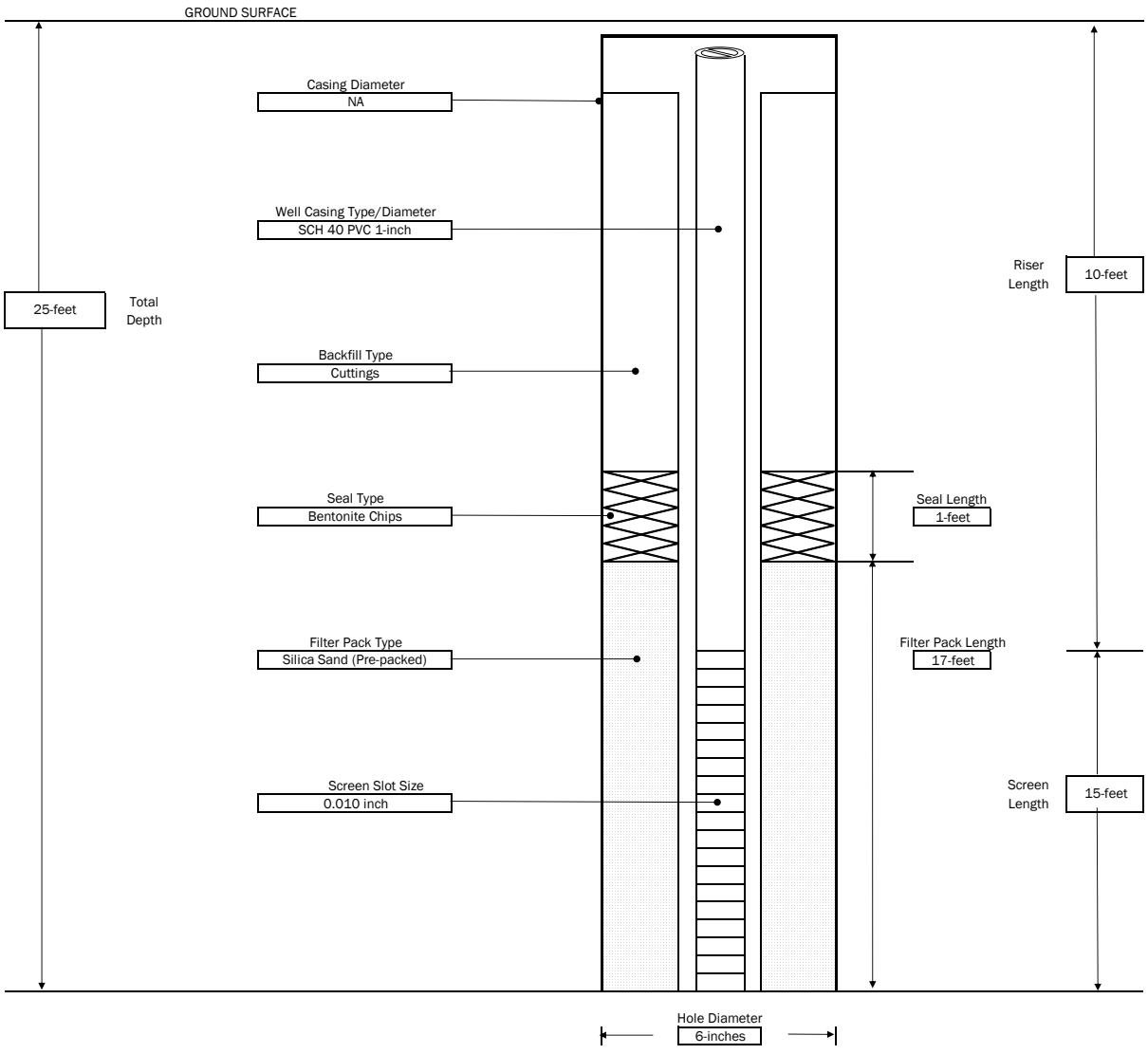
CONTRACTOR: LaBella Envrionmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION:
START DATE: 8/13/2018 END DATE: 8/13/2018

TYPE OF DRILL RIG: Geoprobe 6610DT
DRIVE SAMPLER TYPE: Macro Core
OVERBURDEN SAMPLING METHOD: Direct Push

WATER LEVEL DATA

DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR
4) BGS = BELOW GROUND SURFACE

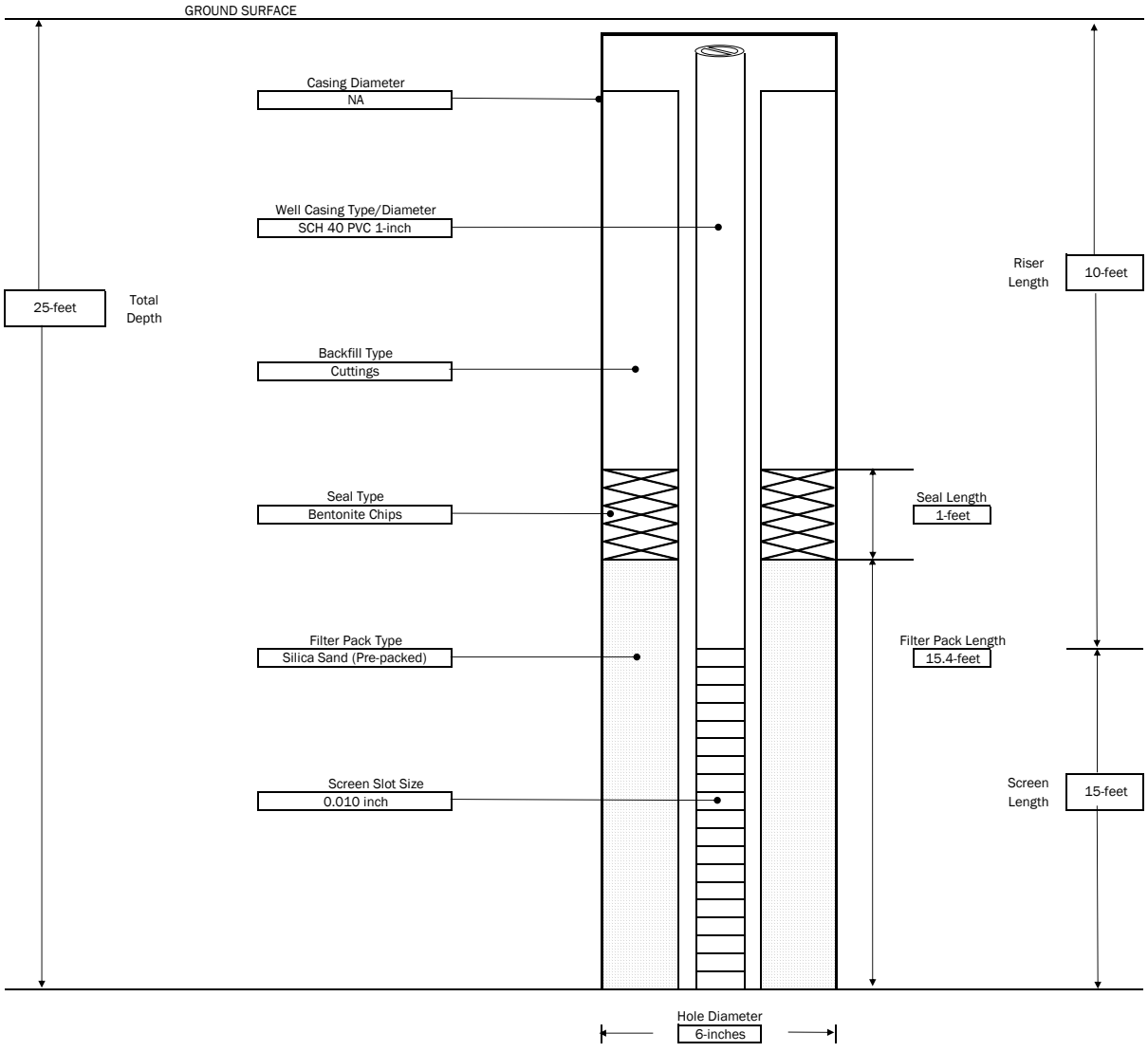
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** REMEDIAL INVESTIGATION 435 STATE STREET, BINGHAMTON, NEW YORK CLIENT: BINGHAMTON NORTHSIDE, LTD.	**MONITORING WELL :** LBA-MW-03R **SHEET** 1 OF 1 **JOB #** 2182159

CONTRACTOR: LaBella Envrionmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION:
START DATE: 8/13/2018 END DATE: 8/13/2018

TYPE OF DRILL RIG: Geoprobe 6610DT
DRIVE SAMPLER TYPE: Macro Core
OVERBURDEN SAMPLING METHOD: Direct Push

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR
4) BGS = BELOW GROUND SURFACE

LaBella
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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

REMEDIAL INVESTIGATION
435 STATE STREET, BINGHAMTON, NEW YORK
CLIENT: BINGHAMTON NORTHSIDE, LTD.

MONITORING WELL : **LBA-MW-04R**

SHEET 1 OF 1
JOB # 2182159

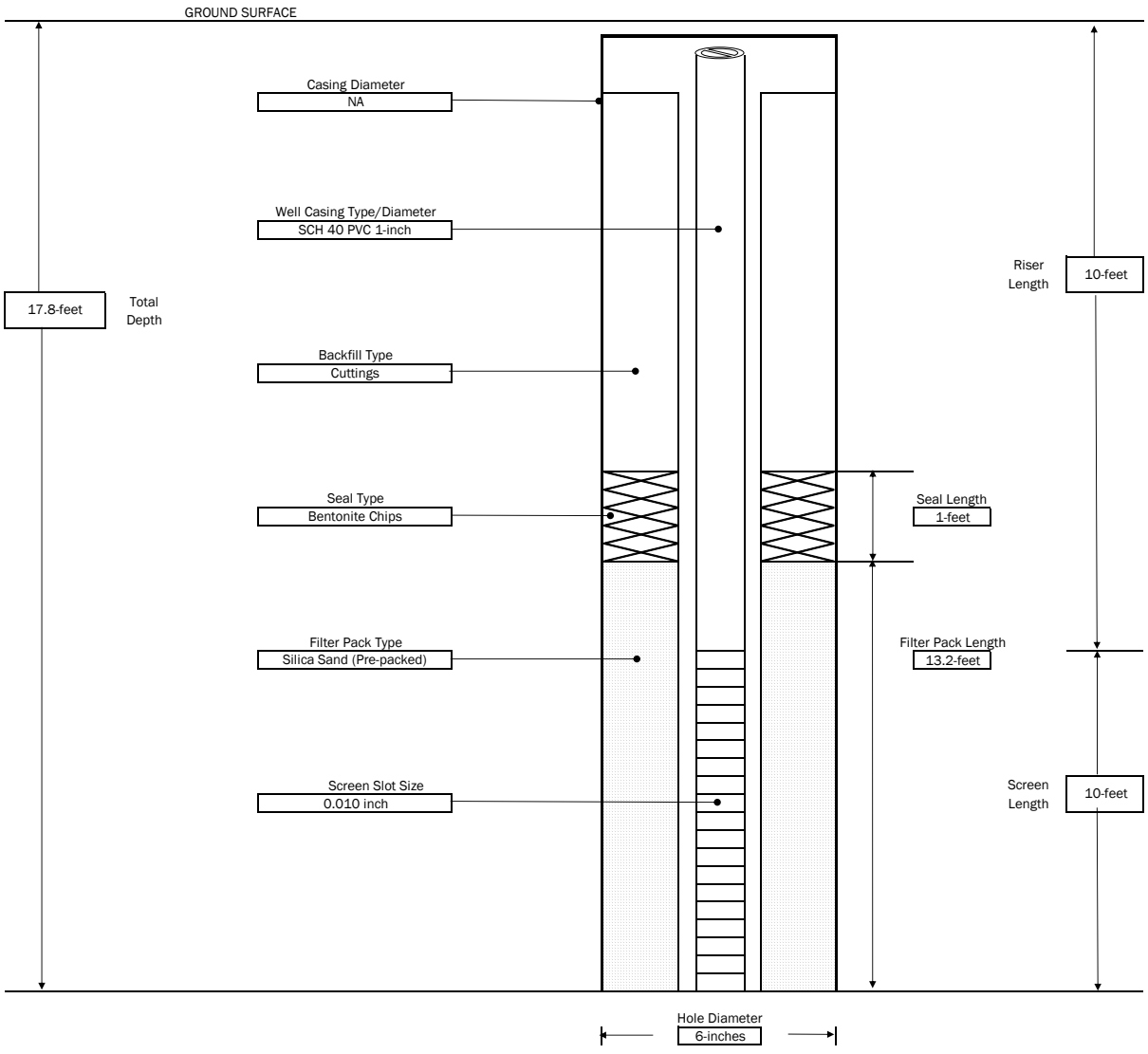
CONTRACTOR: LaBella Envrionmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION:
START DATE: 8/13/2018 END DATE: 8/13/2018

TYPE OF DRILL RIG: Geoprobe 6610DT
DRIVE SAMPLER TYPE: Macro Core
OVERBURDEN SAMPLING METHOD: Direct Push

WATER LEVEL DATA

DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR
4) BGS = BELOW GROUND SURFACE

LaBella
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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

REMEDIAL INVESTIGATION
435 STATE STREET, BINGHAMTON, NEW YORK
CLIENT: BINGHAMTON NORTHSIDE, LTD.

MONITORING WELL : **LBA-MW-05R**

SHEET 1 OF 1
JOB # 2182159

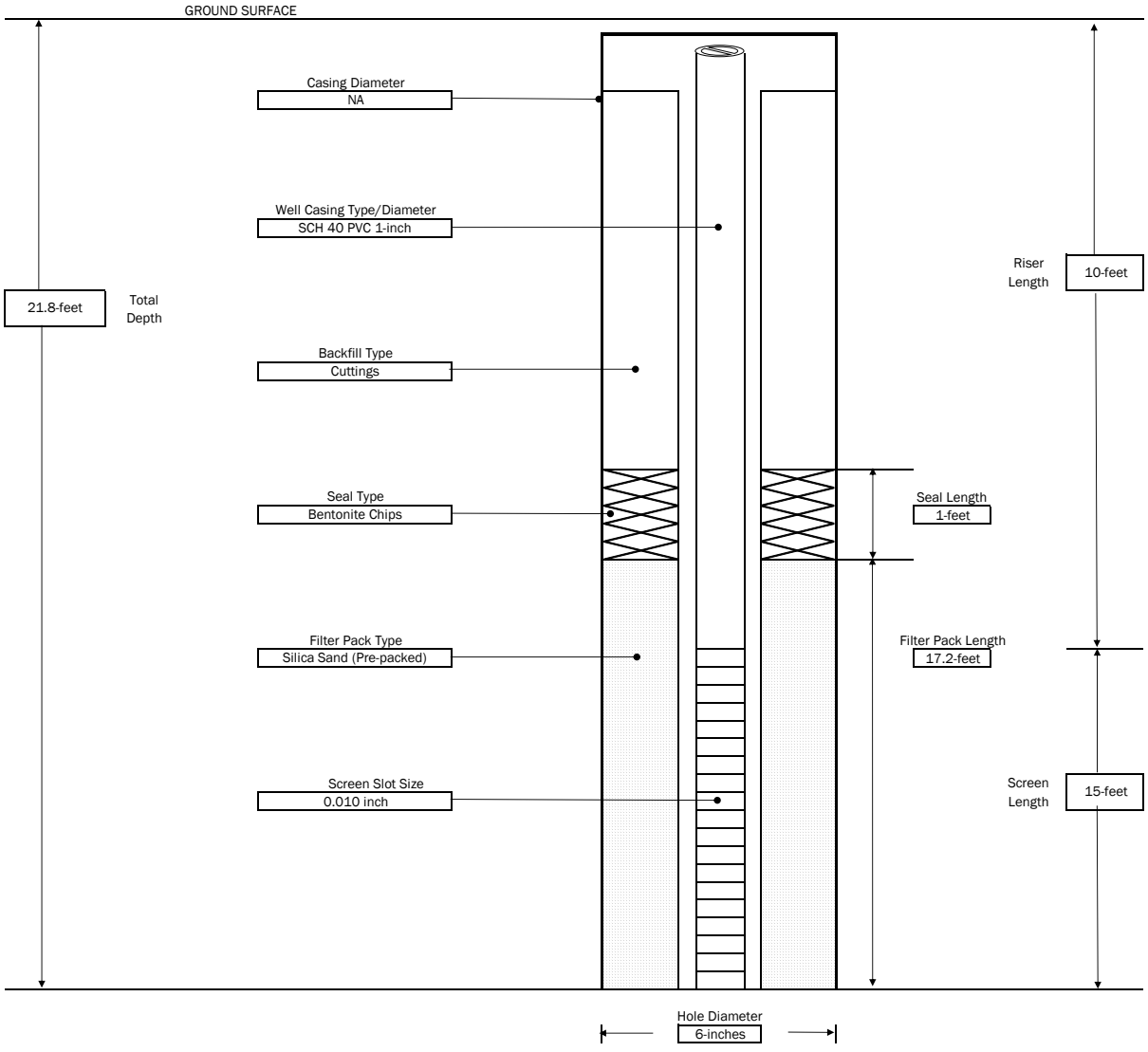
CONTRACTOR: LaBella Envrionmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION:
START DATE: 8/13/2018 END DATE: 8/13/2018

TYPE OF DRILL RIG: Geoprobe 6610DT
DRIVE SAMPLER TYPE: Macro Core
OVERBURDEN SAMPLING METHOD: Direct Push

WATER LEVEL DATA

DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR
4) BGS = BELOW GROUND SURFACE

LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** REMEDIAL INVESTIGATION 435 STATE STREET, BINGHAMTON, NEW YORK CLIENT: BINGHAMTON NORTHSIDE, LTD.	**MONITORING WELL :** LBA-MW-06R **SHEET** 1 OF 1 **JOB #** 2182159

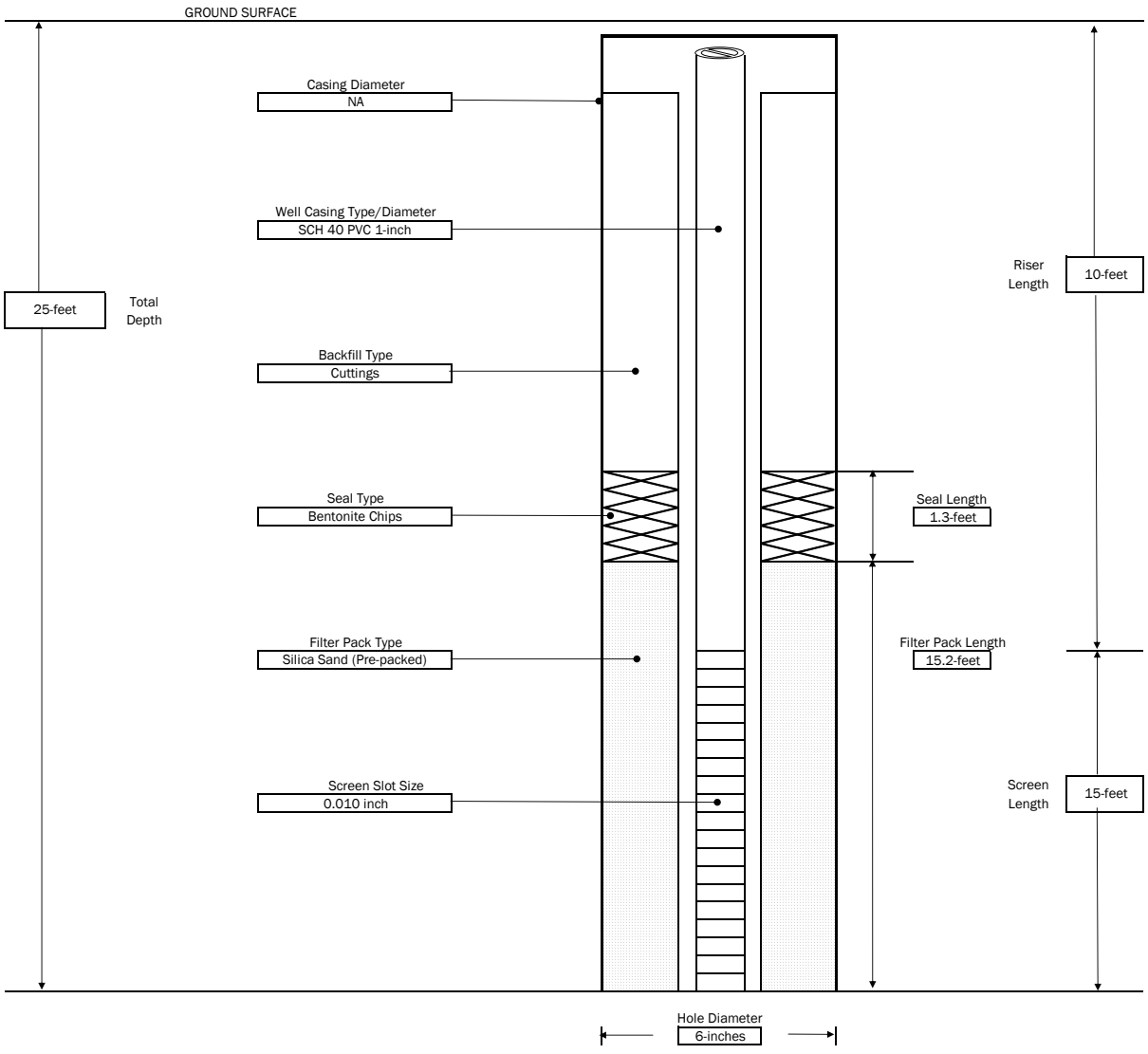
CONTRACTOR: LaBella Envrionmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION:
START DATE: 8/14/2018 END DATE: 8/14/2018

TYPE OF DRILL RIG: Geoprobe 6610DT
DRIVE SAMPLER TYPE: Macro Core
OVERBURDEN SAMPLING METHOD: Direct Push

WATER LEVEL DATA

DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR
4) BGS = BELOW GROUND SURFACE

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

REMEDIAL INVESTIGATION
435 STATE STREET, BINGHAMTON, NEW YORK
CLIENT: BINGHAMTON NORTHSIDE, LTD.

MONITORING WELL : LBA-MW-07R

SHEET 1 OF 1

JOB # 2182159

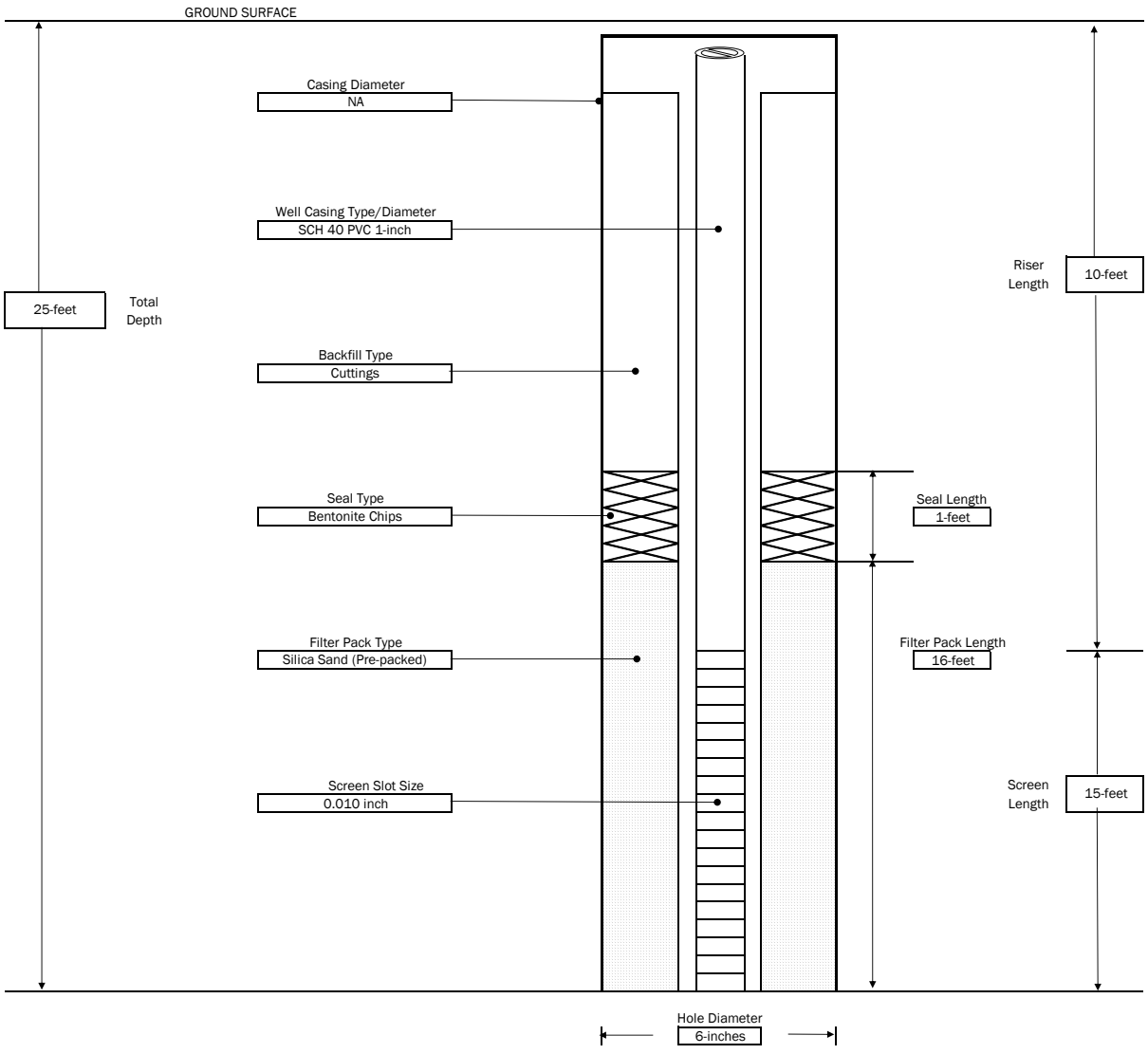
CONTRACTOR: LaBella Envrionmental, LLC
DRILLER: P. Walsh
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION:
START DATE: 8/14/2018 END DATE: 8/14/2018

TYPE OF DRILL RIG: Geoprobe 6610DT
DRIVE SAMPLER TYPE: Macro Core
OVERBURDEN SAMPLING METHOD: Direct Push

WATER LEVEL DATA

DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR
4) BGS = BELOW GROUND SURFACE

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300 STATE STREET, ROCHESTER, NEW YORK
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

REMEDIAL INVESTIGATION
435 STATE STREET, BINGHAMTON, NEW YORK
CLIENT: BINGHAMTON NORTHSIDE, LTD.

MONITORING WELL : **LBA-MW-08R**

SHEET 1 OF 1
JOB # 2182159

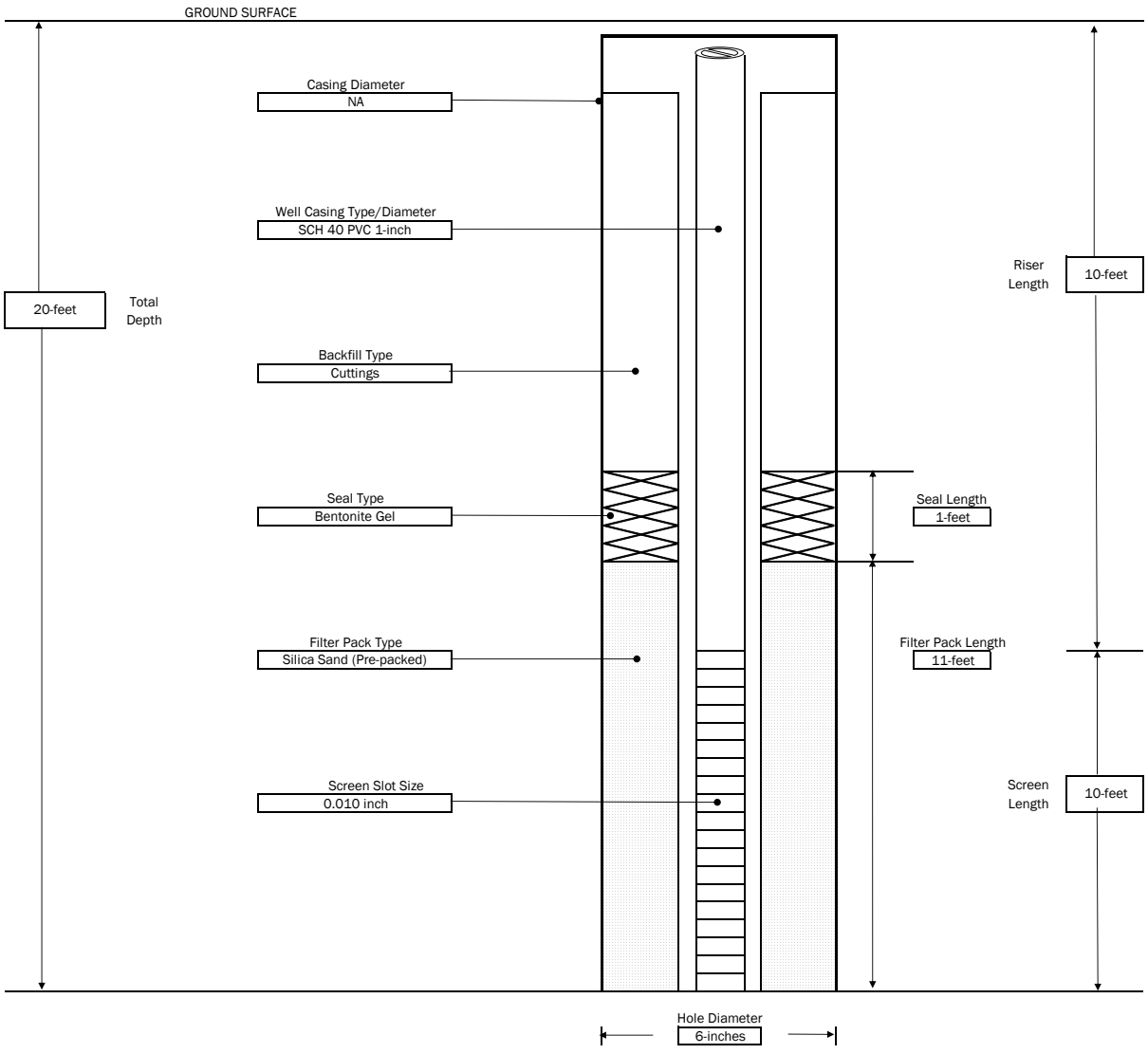
CONTRACTOR: LaBella Envrionmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION:
START DATE: 9/6/2018 END DATE: 9/6/2018

TYPE OF DRILL RIG: Geoprobe 6620DT
DRIVE SAMPLER TYPE: Macro Core
OVERBURDEN SAMPLING METHOD: Direct Push

WATER LEVEL DATA

DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR
4) BGS = BELOW GROUND SURFACE

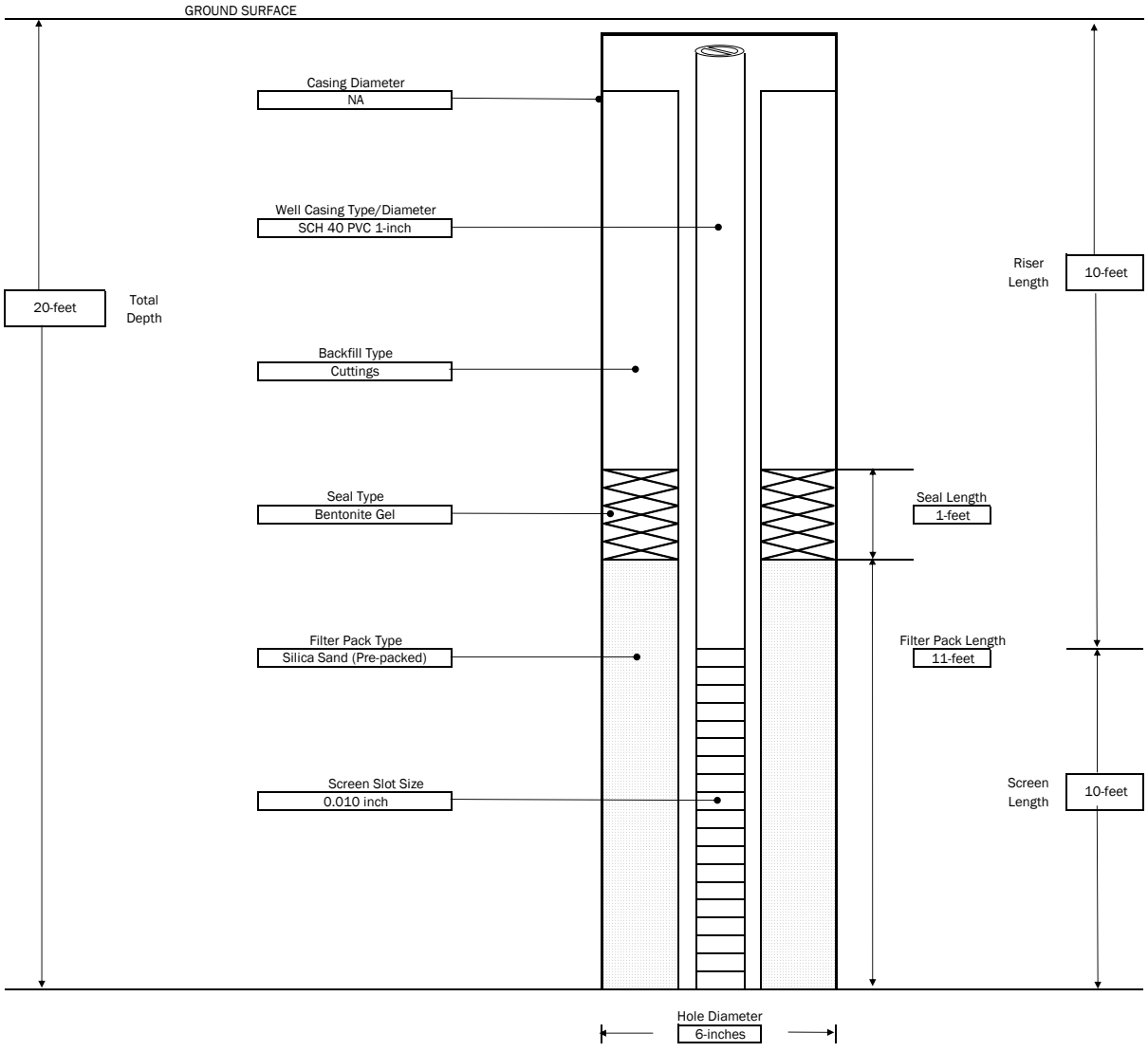
LaBella Powered by partnership. 300 STATE STREET, ROCHESTER, NEW YORK ENVIRONMENTAL ENGINEERING CONSULTANTS	**PROJECT** REMEDIAL INVESTIGATION 435 STATE STREET, BINGHAMTON, NEW YORK CLIENT: BINGHAMTON NORTHSIDE, LTD.	**MONITORING WELL :** LBA-MW-09R **SHEET** 1 OF 1 **JOB #** 2182159

CONTRACTOR: LaBella Envrionmental, LLC
DRILLER: M. Pepe
LABELLA REPRESENTATIVE: S. Rife

BORING LOCATION:
GROUND SURFACE ELEVATION:
START DATE: 9/6/2018 END DATE: 9/6/2018

TYPE OF DRILL RIG: Geoprobe 6620DT
DRIVE SAMPLER TYPE: Macro Core
OVERBURDEN SAMPLING METHOD: Direct Push

WATER LEVEL DATA				
DATE	TIME	WATER	CASING	REMARKS



GENERAL NOTES:

1) NOT TO SCALE
2) DEPTHS ARE APPROXIMATE
3) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCUR
4) BGS = BELOW GROUND SURFACE

LaBella
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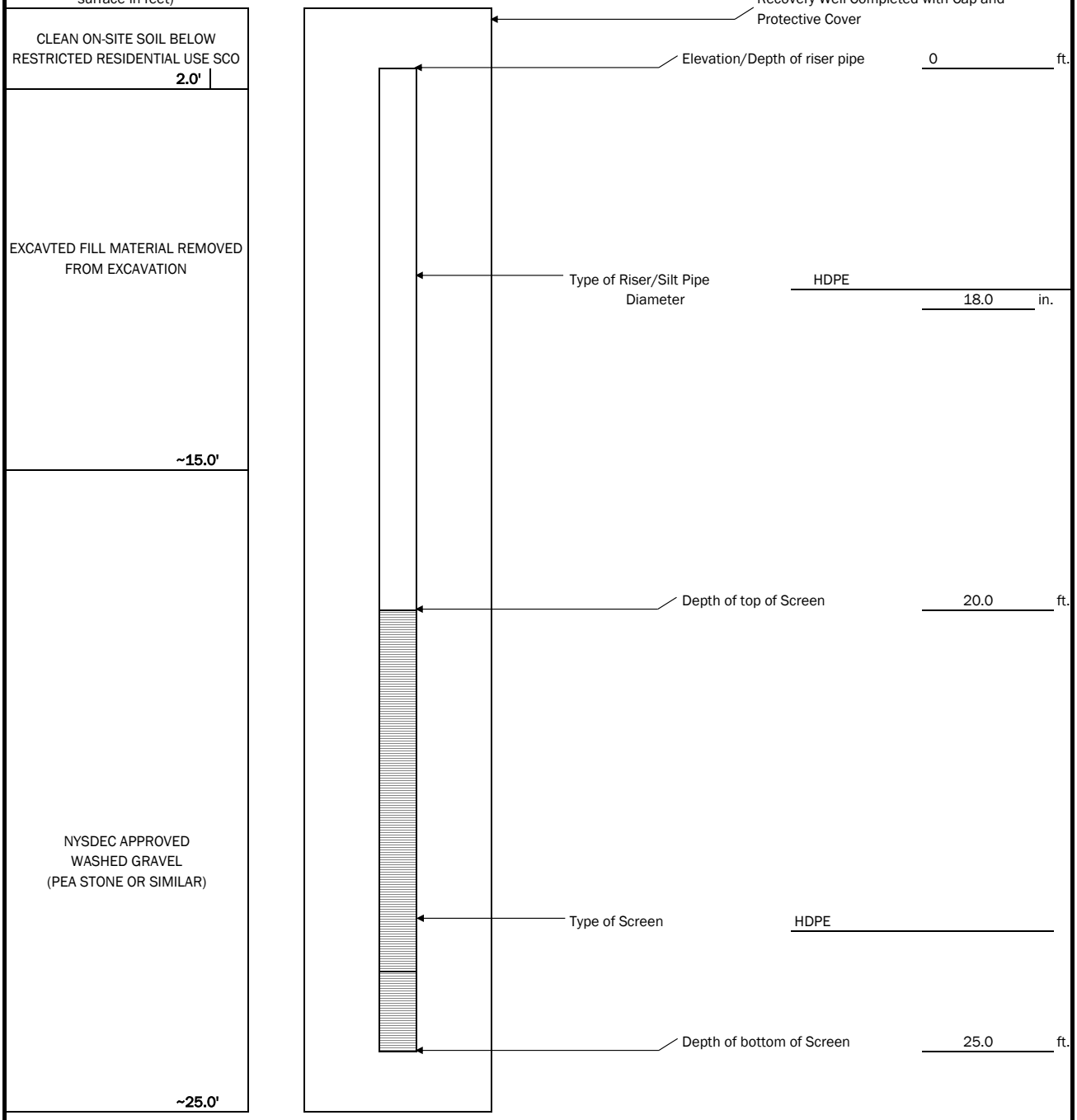
RECOVERY WELL INSTALLATION SPECIFICATION

RECOVERY WELL ID
RW-1

Project: Former Stow Manufacturing, NYSDEC BCP C704058
LaBella Project No.: 2190179
Location: 435 State Street, Binghamton, NY
Client: Binghamton Northside Limited Partnership

(Numbers refer to depth from ground surface in feet)



NOTES:
All Depths should be considered approximate. Well screen will be installed to intersect the top of the shallow overburden groundwater table.

APPENDIX 4

Excavation Work Plan

APPENDIX 4 – EXCAVATION WORK PLAN (EWP)

4-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the site owner or their representative will notify the NYSDEC. Table 4-1 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 2.

Table 4-1: Notifications*

NYSDEC Project Manager, Gary Priscott, P.G.	607-775-2545, gary.priscott@dec.ny.gov
NYSDEC Regional HW Engineer, Harry Warner, P.E.	315-426-7551, harry.warner@dec.ny.gov
NYSDEC Site Control; Kelly A. Lewandowski, P.E.	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 5 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.

4-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed by a qualified environmental professional during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil. Further discussion of off-site disposal of materials and on-site reuse is provided in Section 4-6 of this Appendix.

4-3 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.

4-4 MATERIALS EXCAVATION AND LOAD-OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP 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.

4-5 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 as follows: trucks are anticipated to exit the Site from State Street or North Way Street and head northwest to Chenango Street. Once on Chenango Street a right will be made onto Frederick Street. Frederick Street will be followed to the intersection of Route 363 (Brandywine Highway), which will then be taken to the disposal destination (to be determined). All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate route and takes 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.

4-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of material from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

4-7 MATERIALS REUSE ON-SITE

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP 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.

4-8 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.

4-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the NYSDEC. The existing cover system is comprised of a minimum of 24 inches of clean soil, asphalt pavement, concrete covered sidewalks and concrete building, etc. The demarcation layer, consisting of orange snow fencing material, white geotextile or equivalent material, etc. will be replaced to provide a visual reference to the top of the remaining contamination zone, the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this SMP. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP.

4-10 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 SMP prior to receipt at the site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards are listed in 6NYCRR Part 375. 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.

4-11 STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the 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.

4-12 EXCAVATION CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC’s Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

4-13 COMMUNITY AIR MONITORING PLAN

Air sampling locations are to be determined. A figure showing the location of air sampling stations based on generally prevailing wind conditions will be provided in the final SMP and on the fifteen (15) day notification. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and downwind monitoring stations.

Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

4-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors on and off-site. Specific odor control methods to be used on a routine basis is not anticipated to be necessary. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

4-15 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 though the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

4-16 OTHER NUISANCES

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

APPENDIX 5

Health and Safety Plan and Community Air Monitoring Plan

Health and Safety Plan
NYSDEC BCP Site #C704058

LOCATION:

Former Stow Manufacturing
435 State Street
Binghamton, New York 13901

LaBella Project No. 2190179

January 21, 2019

LaBella
Powered by partnership.

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

Table of Contents

SITE HEALTH AND SAFETY PLAN

Project Title:	435 State Street RIWP
Project Number:	2161856
Project Location (Site):	435 State Street, Binghamton, NY
Environmental Director:	Gregory Senecal, CHMM
Project Manager:	Dan Noll, P.E.
Plan Review Date:	_____
Plan Approval Date:	_____
Plan Approved By:	_____ Mr. Richard Rote, CIH
Site Safety Supervisor:	To Be Determined
Site Contact:	To Be Determined
Safety Director:	Rick Rote, CIH
Proposed Date(s) of Field Activities:	To Be Determined
Site Conditions:	Generally level land
Site Environmental Information Provided By:	LaBella Associates, D.P.C. Phase II Environmental Site Assessments
Air Monitoring Provided By:	LaBella Associates, D.P.C.
Site Control Provided By:	Contractor(s)

EMERGENCY CONTACTS

	Name	Phone Number
Ambulance:	As Per Emergency Service	911
Hospital Emergency:	Our Lady of Lourdes	607-798-5111
Poison Control Center:	Finger Lakes Poison Control	585-273-4621
Police (local, state):	Broome County Sheriff	911
Fire Department:	Binghamton Fire Department	911
Site Contact:	To Be determined	
Agency Contact:	NYSDEC – Gary Priscott, PG Finger Lakes Poison Control	607-775-2545 518-402-7860 1-800-222-1222
Environmental Director:	Greg Senecal, CHMM	Direct: 585-295-6243 Cell: 585-752-6480 Home: 585-323-2142
Project Manager:	Dan Noll, P.E.	Direct: 585-295-6611 Cell: 585-301-8458
Site Safety Supervisor:	To Be Determined	
Safety Director	Rick Rote, CIH	Direct: 704-941-2123

MAP AND DIRECTIONS TO THE MEDICAL FACILITY - OUR LADY OF LOURDES HOSPITAL

Estimated Total Time: 9 minutes
Estimated Total Distance: 3.4 miles

Start: 435 State Street, Binghamton, NY 13901

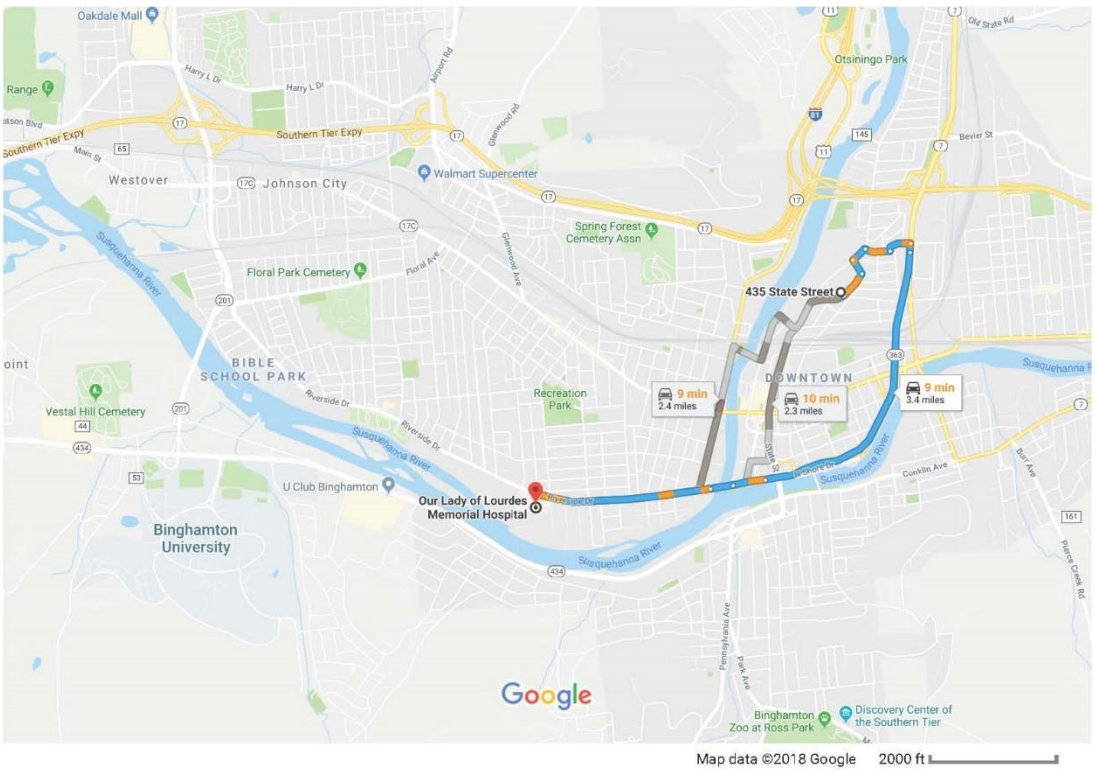
Follow State St, Chenango St and Frederick St to NY-7 S

1. Head northeast on State St toward Chenango St
2. Turn left onto Chenango St
3. Turn right to stay on Chenango St
4. Turn right onto Frederick St
5. Turn left to stay on Frederick St

Follow N Shore Dr to Riverside Dr

6. Turn right onto NY-7 S
7. Continue onto NY-363 S/N Shore Dr
8. Continue onto N Shore Dr
9. Continue onto Memorial Bridge
10. Continue onto Riverside Dr

End: Our Lady of Lourdes Memorial Hospital, 169 Riverside Dr, Binghamton, NY 13905



1.0 INTRODUCTION

The purpose of this Health and Safety Plan (HASP) it to provide guidelines for responding to potential health and safety issues that may be encountered during the Remedial Investigation at 435 State Street, City of Binghamton, Broome County, New York, herein after referred to as the "Site." The Site was entered into the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) in April 18, 2017 as Site #C704058 and is considered a Volunteer. 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 were developed in general accordance with 29 CFR 1910 and 29 CFR 1926 and do not replace or supersede any regulatory requirements of the USEPA, NYSDEC, OSHA or and other regulatory body.

2.0 RESPONSIBILITIES

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

3.0 ACTIVITIES COVERED

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

- Management of environmental investigation 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. However, a minimum requirement for work area designation and control will consist of:

- Drilling (Geoprobe/Rotary) – Orange cones to establish at least a 10-foot by 10-foot work area
- Test Pitting – Orange cones and orange temporary fencing to establish at least 10-feet of distance between test pit and fencing.
- Surface soil and soil gas sampling - Orange cones to establish at least a 10-foot by 10-foot work area

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 or her instructions must be followed.

5.1 Hazards Due to Heavy Machinery

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

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

5.2 Excavation Hazards

Potential Hazard:
Excavations and trenches can collapse, causing injury or death. Edges of excavations can be unstable and collapse. Toxic and asphyxiant gases can accumulate in confined spaces and trenches. 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. All excavations will be backfilled by the end of each day. Additionally, no test pit will be left unattended during the day.

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

5.3 *Cuts, Punctures and Other Injuries*

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

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

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

5.5 *Injuries Due to Extreme Hot or Cold Weather Conditions*

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

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

5.6 Potential Exposure to Asbestos

Potential Hazards:
During ground intrusive activities (e.g., test pitting or drilling) soil containing asbestos may be encountered. Asbestos is friable when dry and can be inhaled when exposed to air.

Protective Action:
The presence of asbestos can be identified through visual observation of a white magnesium silicate material. If encountered, work should be halted and a sample of the suspected asbestos should be collected and placed in a plastic sealable bag. This sample should be sent to the asbestos laboratory at LaBella Associates for analysis.

6.0 WORK ZONES

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

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

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

7.0 DECONTAMINATION PROCEDRUES

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 PROTECTECTIVE EQUIPMENT (PPE)

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 identified in this HASP is only intended to monitor air for workers involved with the RI. Please refer to the Site Specific CAMP for further details on air monitoring at the Site required for protection of the Site occupants and neighboring properties.

The Air Monitor will utilize a photoionization Detector (PID) to screen the ambient air in the work areas for total Volatile Organic Compounds (VOCs), a DustTrak tm Model 8520 aerosol monitor or equivalent for measuring particulates. [*Note: Radiation monitoring requirements are identified in 5.7 above.*] Air monitoring of the work areas will be performed at least every 15 minutes or more often using a PID, and the DustTrak meter.

If sustained PID readings of greater than 10 ppm are recorded in the breathing zone, then 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-hours of use or more frequently, if necessary. If PID readings are sustained, in the work area, at levels above 10 ppm for a 5 minute average, work will be stopped immediately until safe levels of VOCs are encountered or additional PPE will be required (i.e., Level B).

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

10.0 EMERGENCY ACTION PLAN

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

Compound	PEL-TWA (ppm)(b)(d)	TLV-TWA (ppm)(c)(d)	STEL	LEL (%)(e)	UEL (%)(f)	IDLH (ppm)(g)(d)	Odor	Odor Threshold (ppm)	Ionization Potential	^{232}Thorium Action Level
Acetone	750	500	NA	2.15	13.2	20,000	Sweet	4.58	9.69	NA
Anthracene	0.2	0.2	NA	NA	NA	NA	Faint aromatic	NA	NA	NA
Benzene	1	0.5	5	1.3	7.9	3000	Pleasant	8.65	9.24	NA
Benzo (a) pyrene (coal tar pitch volatiles)	0.2	0.1	NA	NA	NA	700	NA	NA	NA	NA
Benzo (a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b) Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (k) Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	10.88	NA
Carbon Disulfide	20	1	NA	1.3	50	500	Odorless or strong garlic type	0.096	10.07	NA
Chlorobenzene	75	10	NA	1.3	9.6	2,400	Faint almond	0.741	9.07	NA
Chloroform	50	2	NA	NA	NA	1,000	ethereal odor	11.7	11.42	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethylene	200	200	NA	9.7	12.8	400	Acrid	NA	9.65	NA
1,2-Dichlorobenzene	50	25	NA	2.2	9.2		Pleasant		9.07	NA
Ethylbenzene	100	100	NA	1	6.7	2,000	Ether	2.3	8.76	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	500	50	NA	12	23	5,000	Chloroform-like	10.2	11.35	NA
Naphthalene	10, Skin	10	NA	0.9	5.9	250	Moth Balls	0.3	8.12	NA
n-propylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethane	NA	NA	NA	NA	NA	NA	Sweet	NA	NA	NA
Toluene	100	100	NA	0.9	9.5	2,000	Sweet	2.1	8.82	NA
Trichloroethylene	100	50	NA	8	12.5	1,000	Chloroform	1.36	9.45	NA
1,2,4-Trimethylbenzene	NA	25	NA	0.9	6.4	NA	Distinct	2.4	NA	NA
1,3,5-Trimethylbenzene	NA	25	NA	NA	NA	NA	Distinct	2.4	NA	NA
Vinyl Chloride	1	1	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (o,m,p)	100	100	NA	1	7	1,000	Sweet	1.1	8.56	NA
Metals										
Arsenic	0.01	0.2	NA	NA	NA	100, Ca	Almond	NA	NA	NA
Cadmium	0.2	0.5	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	1	0.5	NA	NA	NA	NA	NA	NA	NA	NA
Lead	0.05	0.15	NA	NA	NA	700	NA	NA	NA	NA
Mercury	0.05	0.05	NA	NA	NA	28	Odorless	NA	NA	NA
Selenium	0.2	0.02	NA	NA	NA	Unknown	NA	NA	NA	NA
Other										
Asbestos	0.1 (f/cc)	NA	1.0 (f/cc)	NA	NA	NA	NA	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.
(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 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

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

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

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

Community Air Monitoring Plan

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

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

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

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

VOC Monitoring, Response Levels, and Actions

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

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

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

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

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

Particulate Monitoring, Response Levels, and Actions

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

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

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

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

December 2009

APPENDIX 6

Site Management Forms

LNAPL INSPECTION FORM

PROJECT NAME: FORMER STOW MANUFACTURING , NYSDEC BCP SITE NO. C704058

LOCATION: 435 STATE STREET, BINGHAMTON, NEW YORK

PROJECT NO.:

INSPECTED BY:

DATE:

WEATHER:

INSPECTION EVENT		WELL ID	DEVICE USED TO MEASURE LNAPL	LNAPL OBSERVED	ESTIMATED THICKNESS OF LNAPL LAYER [INCHES]	ABSORBENT SOCK INSTALLED	COMMENTS
QUARTERLY	OTHER						
		RW-1	BAILER / OIL-WATER PROBE	YES / NO		YES / NO	
		MW-08R	BAILER / OIL-WATER PROBE	YES / NO		YES / NO	

CONSTRUCTED SOIL COVER INSPECTION FORM

PROJECT NAME: FORMER STOW MANUFACTURING , NYSDEC BCP SITE NO. C704058

LOCATION: 435 STATE STREET, BINGHAMTON, NEW YORK

PROJECT NO.:

INSPECTED BY:

DATE:

WEATHER:

COVER TYPE	OVERALL CONDITION	ANY LOCATIONS REQUIRE REPAIR OR MAINTENANCE	PHOTOS TAKEN	COMMENTS
SOIL CAP		YES / NO	YES / NO	

APPENDIX 7

Quality Control Plan

Quality Control Plan (QCP)
NYSDEC BCP Site #C704058

LOCATION:

435 State Street
Binghamton, New York
13901

LaBella Project No. 2190179

January 21, 2019

LaBella
Powered by partnership.

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

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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 Quality Control program contains procedures, which provide for collected data to be properly evaluated, and which document that quality control procedures have been followed in the collection of samples. The quality control program represents 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 practices.

Procedures used in the firm's Quality Control 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 the Soil Gas Sampling Work Plan (SGS) Work Plan may have project specific details that will differ from the procedures in this QC program. In such cases, the SGS 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 SGS 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 µg/L and mg/L for aqueous samples, and µg/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 GC or GC/MS analyses, solutions of surrogate compounds, which can be spiked into every sample and are designed to mimic the behavior of target analytes without interfering with their determination, are used.

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 sometimes not known to ASC and usually not known to bench analysts, so their usefulness for monitoring analytical precision at bench level is limited. 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 (see Section 9), 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 QC 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 SOIL BORING ADVANCEMENT & MONITORING WELL INSTALLATION PROCEDURES

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

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

5.1 Drilling Equipment and Techniques

Direct Push Geoprobe Advanced Borings:

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

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

Test borings will be advanced with 2-inch (or larger) inside diameter (ID) direct push Macrocore through overburden soils. Drilling fluids, other than potable water will not be allowed without special consideration and agreement from NYSDEC. The use of lubricants is also not allowed unless approved by the NYSDEC representative.

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

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

Hollow-Stem Auger Advanced Borings:

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

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

During the drilling, a (PID) will be used to screen soils retrieved from the split spoons or Macrocores.

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

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

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

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

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

5.2 Artificial Sand Pack

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

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

5.3 Bentonite Seal

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

5.4 Grout Mixture

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

5.5 Surface Protection

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

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

5.6 Surveying

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

5.7 Well Development

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

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

The development process will continue until removal of a minimum of 110% of the water lost during drilling, three well volumes; whichever is greater, or as specified in the work plan. In the event that limited recharge does not allow for the recovery of all drilling water lost in the well or three (3) well volumes, the well will be allowed to stabilize to conditions deemed representative of groundwater conditions. Stabilization periods will vary by project but will be confirmed with the NYSDEC prior to sampling.

6.0 GEOLOGIC LOGGING AND SAMPLING

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

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

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

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

7.0 GROUNDWATER SAMPLING PROCEDURES

The groundwater in all new monitoring wells will be allowed to stabilize for at least 24-hours following development prior to sampling. Water levels will be measured to within 0.01 feet prior to purging and sampling. Sampling of each well will typically be accomplished in one of two ways; active or passive.

Active Sampling:

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

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

In general, wells will be purged until the pH, conductivity, temperature, dissolved oxygen, redox, and turbidity of the water being pumped from the well have stabilized with a turbidity goal of 50 NTU (may be lower for metals analysis).

Passive Sampling:

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

- Samples will be collected via passive diffusion bag (PDB) samplers. PDB samplers are made of low-density polyethylene plastic tubing (typically 4 mil), filled with laboratory grade (ASTM Type II) deionized water and sealed at both ends.
- Pre-filled PDBs will not be stored for longer than 30 days and will be kept stored at room temperature in a sealed plastic bag until ready to use.
- PDBs filled in the field will be used immediately and not stored for future use.
- PDB samplers will only be used to collect groundwater samples which will be analyzed for VOCs.
- Mesh covers will be utilized for open rock holes as to not puncture the PDB and will be secured to the bag using zip-ties.
- PDB samplers will be deployed by hanging in the well at the depth(s) specified in the project-specific work plan. The PDB samplers will be deployed at least 14 days prior to sampling;
- When transferring water from the PDB to sample containers, care will be taken to avoid agitating the sample, since agitation promotes the loss of volatile constituents;
- Gloves will be changed between collection of each PDB and tools used to open the PDB will be decontaminated with an alconox and potable water solution between each PDB;
- Any volume not used will be treated as investigation derived waste;
- Any observable physical characteristics of the groundwater (e.g., color, sheen, odor, turbidity) at the time of sampling will be recorded; and
- Weather conditions (i.e., air temperature, sky condition, recent heavy rainfall, drought conditions) at the time of sampling will be recorded.

8.0 SOIL VAPOR INTRUSION SAMPLING PROCEDURES

Soil vapor intrusion (SVI) sampling is to be conducted in accordance with the *NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006 and subsequent updates. Tracer gas testing is to be conducted for sub-slab sampling points to ensure concentrations of the tracer gas are not detected in the sub-slab at greater than 10% of the concentration detected in the atmosphere. An outdoor air sample is to be collected at an upwind direction as a control. A building inventory should be completed to document building construction information and identify products that may be contributing to the levels in indoor air.

9.0 FIELD DOCUMENTATION

9.1 Daily Logs/ Field Notebook

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

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

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

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

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

9.2 Photographs

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

10.0 INVESTIGATION DERIVED WASTE

Purpose:

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

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

Procedure:

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

11.0 DECONTAMINATION PROCEDURES

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

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

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

OR

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

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

12.0 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 12.1
Groundwater Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Holding Time Until Extraction/ Analysis
VOCs	40-ml glass vial with Teflon-backed septum	Two (2); fill completely, no headspace	Cool to 4° C (ice in cooler), Hydrochloric acid to pH <2	14 days
Semi-volatile Organic Compounds (SVOCs)	1,000 or 200-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Pesticides	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Polychlorinated biphenyls (PCBs)	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Metals	250-ml HDPE	One (1); fill completely	Cool to 4° C (ice in cooler) Nitric acid to pH <2	180 days (28 for mercury)
Cyanide	1,000-mL HDPE		Cool to 4° C (ice in cooler) Nitric acid to pH <2	14 days

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

TABLE 12.2
Soil Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Holding Time Until Extraction/ Analysis
VOCs	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	14 days
VOCs via EPA 5035	40 mL vials with sodium bisulfate, methanol, and/or DI water	Three (3), 5 grams each	Cool to 4° C (ice in cooler)	2 days
SVOCs	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	7/40 days
PCBs	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	7/40 days
Pesticides	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	14/40 days
Metals	4-oz. glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	180 days (28 for mercury)
Cyanide	4-oz, glass jar with Teflon-lined cap	One (1), fill as completely as possible	Cool to 4° C (ice in cooler)	14 days

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

Table 12.3
Air Samples

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

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

13.0 SAMPLE CUSTODY AND SHIPMENT

13.1 Sample Identification

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

AA-BB-CC-DD-EE

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

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

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

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

13.2 Chain of Custody

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

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

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

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

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

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

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

13.3 Transfer of Custody and Shipment

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

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

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

13.4 Custody Seals

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

13.5 Sample Packaging

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

- Sample bottle lids must never be mixed. All sample lids must stay with the original containers.
- The label should not cover any bottle preparation QC lot numbers.
- All sample bottles are placed in a plastic bag and/or individual bubble wrap sleeves to

minimize the potential for cross-contamination and breaking.

- Shipping coolers must be partially filled with packing materials and ice when required, to prevent the bottles from moving during shipment.
- The sample bottles must be placed in the cooler in such a way as to ensure that they do not directly come in contact with other samples. Ice will be added to the cooler to ensure that the samples reach the laboratory at temperatures no greater than 4°C.
- Any remaining space in the cooler should be filled with inert packing material. Under no circumstances should material such as sawdust, sand, etc., be used.
- A chain of custody record must be placed in a plastic bag inside the cooler. Custody seals must be affixed to the sample cooler.

13.6 Sample Shipment

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

Field personnel will make arrangements for transportation of samples to the lab. The lab must be notified as early as possible regarding samples intended for Saturday delivery. The transportation and handling of samples must be accomplished in a manner that not only protects the integrity of the sample, but also prevents any detrimental effects due to the possible hazardous nature of samples. Regulations for packaging, marking, labeling, and shipping hazardous materials are promulgated by the United States DOT in the Code of Federal Regulation, 49 CFR 171 through 177. All samples will be delivered to the laboratory and analyzed within the holding times specified by the analytical method for that particular analyte.

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

13.7 Laboratory Custody Procedures

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

14.0 DELIVERABLES

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

technologies analyzed by an ELAP-certified laboratory to determine correlation to field results. Data Usability Summary Reports will be completed by a third party for samples requiring ASP Category B format reports. Electronic data deliverables (EDDs) will also be generated by the laboratory in EQUIS format for samples requiring ASP Category B format reports.

NYSDEC DER-10 DUSR requirements are as follows:

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

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

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

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

b) Personnel Requirements. The person preparing the DUSR must be pre-approved by DER. The person must submit their qualifications to DER documenting experience in analysis and data validation. Data validator qualifications are available on DEC's website identified in the table of contents.
c) Preparation of a DUSR. The DUSR is developed by reviewing and evaluating the analytical data package. In order for the DUSR to be acceptable, during the course of this review the following questions applicable to the analysis being reviewed must be answered in the affirmative.

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

d) Documenting the validation process in the DUSR. Once the data package has been reviewed and the above questions asked and answered the DUSR proceeds to describe the samples

and the analytical parameters, including data deficiencies, analytical protocol deviations and quality control problems are identified and their effect on the data is discussed.

15.0 EQUIPMENT CALIBRATION

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

15.1 Photovac/MiniRae Photoionization Detector (PID)

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

15.2 Conductance, Temperature, and pH Tester

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

15.3 O_2/Explosimeter

The specific meter used at the time of work shall be calibrated in accordance with manufacturer recommendations. The model 260 O_2/ Explosimeter is described below.

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

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

Recommended charging time is 16 hours.

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

1. Attach the flow control to the recommended calibration gas tank.
2. Connect the adapter-hose to the flow control.
3. Open flow control valve.
4. Connect the adapter-hose fitting to the inlet of the instrument; after about 15 seconds the LEL meter pointer should be stable and within the range specified on the calibration sheet accompanying the calibration equipment. If the meter pointer is not in the correct

range, stop the flow; remove the right hand side cover. Turn on the flow and adjust the "S" control with a small screwdriver to obtain a reading as specified on the calibration sheet.

5. Disconnect the adapter-hose fitting from the instrument.
6. Close the flow control valve.
7. Remove the adapter-hose from the flow control.
8. Remove the flow control from the calibration gas tank.
9. Replace the side cover on the Model 260.

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

15.4 Nephelometer (Turbidity Meter)

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

TABLE 15.4
List of Major Instruments
for Sampling and Analysis

- MSA 360 0_2 /Explosimeter
- Geotech Geopump II AC/DC Peristaltic Pump
- QED MP50 Controller and QED Sample Pro MicroPurge Bladder Pimp
- Horiba U-53 Multi-Parameter Water Quality Meter
- LaMotte 2020WE Turbidity Meter
- EM-31 Geomics Electromagnetic Induction Device
- Mini Rae Photoionization Detectors (3,000, ppbRAE, etc.)

16.0 INTERNAL QUALITY CONTROL CHECKS

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

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

16.1 Field Blanks

Various types of blanks are used to check the cleanliness of field handling methods. The following types of blanks may be used: the trip blank, the routine field blank, and the field equipment blank. They are analyzed in the laboratory as samples, and their purpose is to assess the sampling and transport procedures as possible sources of sample contamination. Field staff may add blanks if field circumstances are such that they consider normal procedures are not sufficient to prevent or control sample contamination, or at the direction of the project manager. Rigorous documentation of all blanks in the site logbooks is mandatory.

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

16.2 Duplicates

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

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

APPENDIX 8

Operations & Maintenance Plan

Operation & Maintenance Plan
NYSDEC BCP Site #C704058

Location:

Former Stow Manufacturing
435 State Street
Binghamton, New York 13901

Prepared for:

Binghamton Northside Limited Partnership
3D Development Group, LLC
Community Potential, Inc.
4549 Main Street
Suite 100
Amherst, New York 14226

LaBella Project No. 2190179

November 4, 2018

LaBella
Powered by partnership.

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

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FIGURES

APPENDICES

1.0 INTRODUCTION

This Operation and Maintenance (O&M) Plan is designed to assist the system operators in operating, maintaining and monitoring the Soil Cap and AOC #2 LNAPL recovery system for the property located at 435 State Street, City of Binghamton, Broome County, New York. A Site Location Map is included as Figures 1 and 2. This plan was developed in accordance with the requirements of the Site Management Plan (SMP) that is associated with the New York State (NYS) Brownfield Cleanup Program (BCP) Site No. C704058 which is administered by the New York State Department of Environmental Conservation (NYSDEC).

1.1 Systems Overview

The two (2) remedial systems at the Site were constructed and operated to address free-phase petroleum related compounds identified in the overburden groundwater (i.e. LNAPL recovery system) and prevent direct contact with fill material potentially containing residual contaminated soil (i.e. soil cap). Each remedial system is summarized below:

- **LNAPL Recovery System** – The LNAPL recovery system consists of monitoring a network of one recovery well RW-1 and 1 groundwater monitoring well (MW-08R) for the presence of LNAPL. The presence of LNAPL is monitored with a bailer and oil-water interface meter, combined with the installation of absorbent well sock (*PIG® Monitoring Well Skimming Sock*, or similar) as needed to recover any identified LNAPL present in the wells.
- **Constructed Soil Cover System –** A constructed soil cover system is monitored annually at the Site, and is designed to prevent direct contact exposure to potentially contaminated soil. The soil cap consists of two foot clean soil cap that is vegetated and/or landscaped.

1.2 Plan Organization

The O&M Plan is divided into the following sections:

- **Section 2** provides a general description of each remedial system;
- **Section 3** includes recommended preventative maintenance and checks; and
- **Section 4** includes a summary of operational monitoring of each remedial system.

Appendices for this O&M Plan are attached to this document and include the manufacture's equipment manuals for the remedial systems, as applicable.

2.0 SYSTEM DESCRIPTIONS

The descriptions of each remedial system is described below.

2.1 LNAPL Recovery System

The LNAPL recovery system consists of quarterly monitoring a network of one 18 inch diameter recovery well RW-1 and one (12) inch diameter groundwater monitoring wells (i.e. MW-08R) for the presence of LNAPL that are shown on Figure 3. The presence of LNAPL is monitored with a bailer and oil-water interface meter, combined with the installation of absorbent well sock (*PIG® Monitoring Well Skimming Sock*, or similar) as needed to recover any identified LNAPL present in the wells. The sock installation manual and specification is included in Appendix A.

If LNAPL is present in the bailer, an absorbent monitoring well sock (*PIG® Monitoring Well Skimming Sock*, or similar) will be lowered into the well and placed so the oil-water interface is near the middle of the sock to account for fluctuations in the water table. Each *PIG® Monitoring Well Skimming Sock* is 3-inch in diameter, 42-inches in length and is capable of absorbing up to 0.5 gallons of product (equivalent to approximately 0.5-inches of product in a 18-inch diameter well). [*Note: To date LNAPL has not been identified in well MW-08R. Both of these wells are 2 inches in diameter, therefore, a smaller diameter absorbent sock will be deployed in these wells if LNAPL is observed.*]

The absorbent sock(s) it to be removed one (1) month prior to the next scheduled quarterly monitoring event. If measureable or visible LNAPL is still present in the well, a new absorbent sock will be placed in the well. Impacted absorbent socks will be placed in plastic garbage bags (or similar) and placed in a secure, clearly labeled 55-gallon drum. This drum will be properly disposed of off-site and replaced with a new drum on an as-needed basis.

2.2 Constructed Soil Cover System

The constructed soil cover consists of a 2 foot thick clean layer of soil that is vegetated and/or landscaped over fill material removed from the site subsurface during development of the new building at the Site and placed in a berm at the north end of the site. The constructed soil cover is to remain intact to prevent direct contact with the fill material that may contain contaminated soil. The approximate location of the berm is shown in the area on Figure 3. This constructed soil cover/ber, will be monitored for overall conditions to determine of weathering and deterioration has occurred that would require maintenance.

3.0 PREVENTIVE MAINTENANCE

It is important that the systems be checked frequently so that any operating problems can be identified and corrected in a timely manner. Operational monitoring, discussed in Section 4.0 should also be performed as part of this inspection, when necessary.

3.1 LNAPL Recovery System Preventive Maintenance

Preventive maintenance of the LNAPL recovery system includes storing the absorbent socks in a dry place away from UV rays to limit wear of the absorbent socks. Once the absorbent sock is installed no maintenance, only monitoring will be required.

3.2 Constructed Soil Cover Preventive Maintenance

Vegetated soil covers should maintain a grass or landscaped layer, with no bare spots or erosion. Top layers of gravel or landscaped cover materials should be maintained to minimize deterioration by promptly replacing the material when those problems are noted.

4.0 OPERATIONAL MONITORING

Operational monitoring allows for measuring the performance of the remedial system and identifies potential problems is the system operation.

4.1 LNAPL Recovery System Monitoring

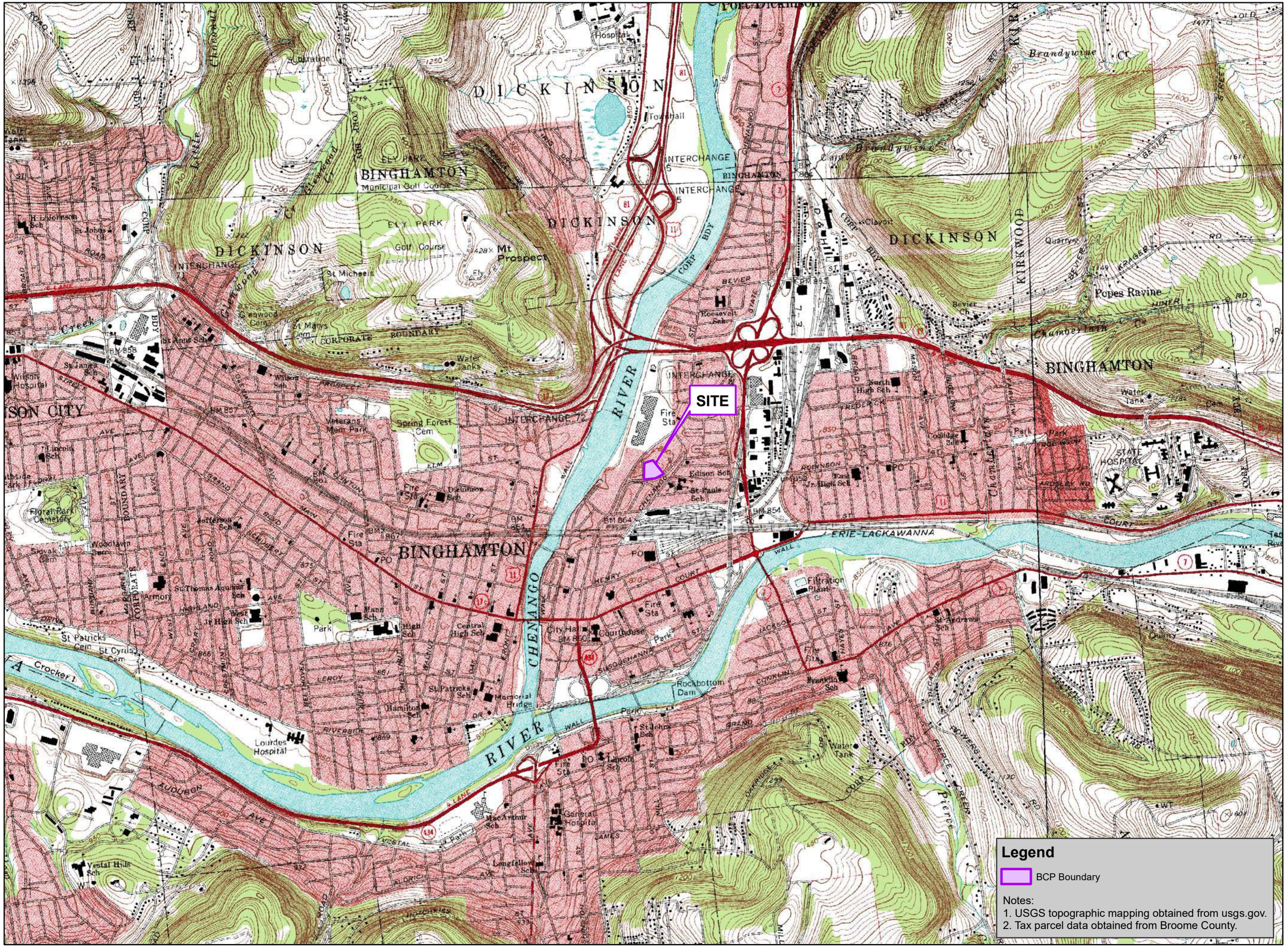
Monitoring for LNAPL will be conducted quarterly at wells RW-1 and MW-08R. The quarterly inspection log is included in Appendix A.

4.2 Constructed Soil Cover Monitoring

The constructed soil cover/berm should be inspected at least annually during the non-winter months when there is no snow cover. Photographs and notes of the condition, and whether preventative maintenance is required of the soil cover shall be recorded in the annual site inspection form included in Appendix B.

I:\Binghamton Northside Ltd\2190179 - 435 State St Env. Monitoring\Reports\SMP\Appendices\8 - OandM Plan\RPT.2019-07-27.Former Stow Manufacturing OandMPlan.docx

FIGURES



Path: I:\Binghamton Northside Ltd\2190179 - 435 State St Env. Monitoring\Drawings\O&M Plan\Figure 1 - Topo Map.mxd

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PROJECT:
OPERATIONS AND MAINTENANCE PLAN

FORMER STOW MANUFACTURING
NYSDEC BCP SITE #C704058
435 STATE STREET
BINGHAMTON, NEW YORK

CLIENT:
BINGHAMTON NORTHSIDE LIMITED PARTNERSHIP

TITLE:
SITE LOCATION MAP

N
W E
S

0 1,000 2,000 Feet

1 inch = 2,000 feet

Intended to print as 11" x 17"

Saturday, July 27, 2019

2190179

FIGURE 1

Notes:
1. All locations are approximate.
2. Aerial Image obtain from Pictometry International, Inc.
3. Aerial image may not represent current site features.

Path: I:\Binghamton Northside Ltd\2190179 - 435 State St Env. Monitoring\Drawings\O&M Plan\Figure 2 - BCP Site Map.mxd

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TITLE:
SITE MAP

OPERATION AND MAINTENANCE PLAN

FORMER STOW MANUFACTURING
NYSDEC BCP SITE #C704058
435 STATE STREET
BINGHAMTON, NEW YORK

VOLUNTEER:
BINGHAMTON NORTHSIDE LIMITED PARTNERSHIP

N
W E
S

0 25 50 100 Feet

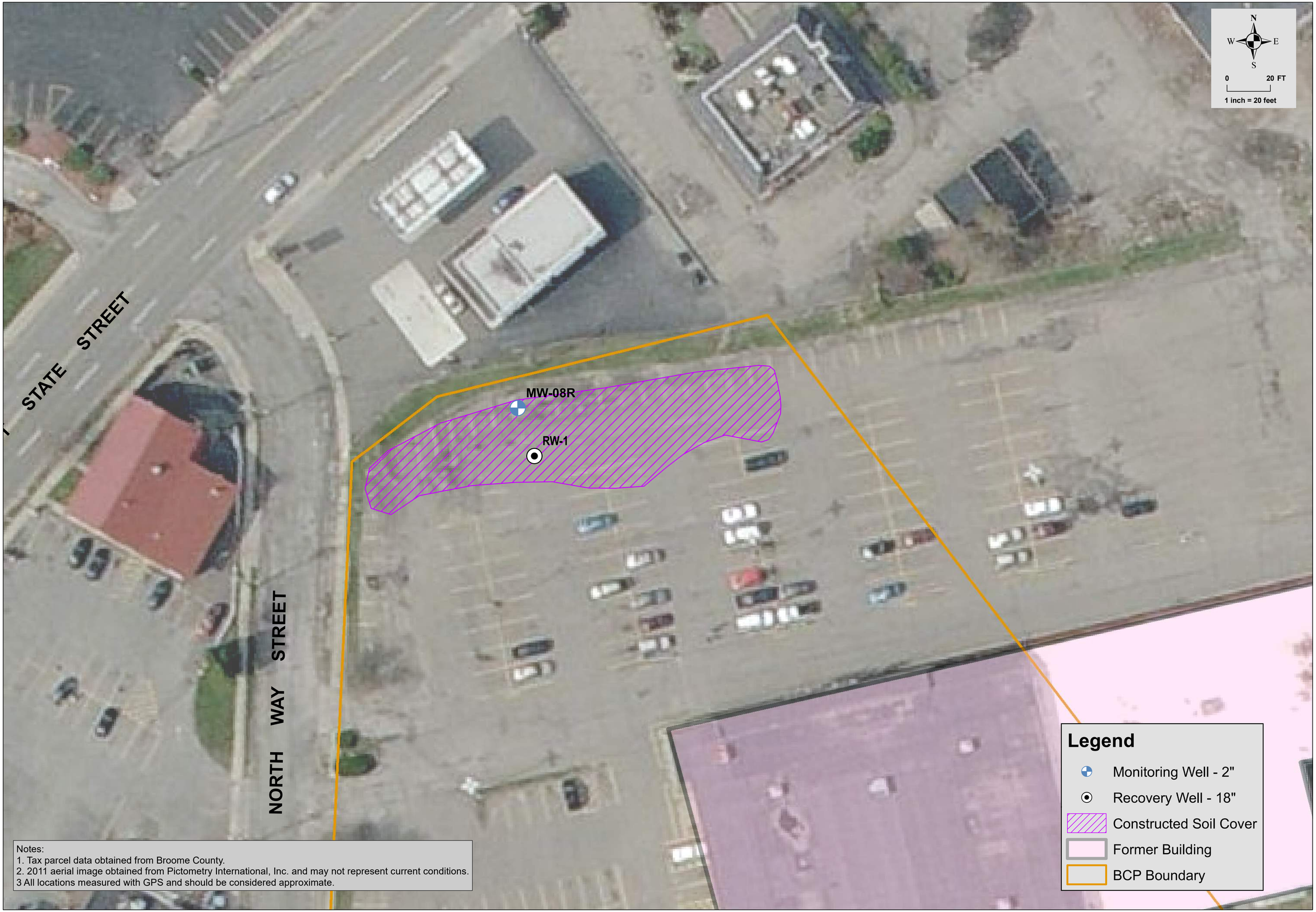
1 inch = 100 feet

INTENDED TO PRINT 11" X 17"

DATE; 7/31/2017

2190179

FIGURE 2



Notes:
1. Tax parcel data obtained from Broome County.
2. 2011 aerial image obtained from Pictometry International, Inc. and may not represent current conditions.
3 All locations measured with GPS and should be considered approximate.

Path: I:\Binghamton Northside Ltd\2190179 - 435 State St Env. Monitoring\Drawings\O&M Plan\Figure 3 - Engineering Controls.mxd

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PROJECT / CLIENT

OPERATIONS AND MONITORING PLAN
NYSDEC BCP SITE #C704058
FORMER STOW MANUFACTURING
435 STATE STREET
BINGHAMTON, NEW YORK

BINGHAMTON NORTHSIDE LIMITED PARTNSERSHIP

DRAWING TITLE

LNAPL MONITORING WELLS
AND CONSTRUCTED SOIL COVER
SYSTEM

DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: MFP

ISSUED FOR
FINAL
Tuesday, November 5, 2019

PROJECT/DRAWING NUMBER

[2190179]

[FIGURE 3]

APPENDIX A

LNAPL Monitoring Form and Absorbent Sock Manufacturer Information

LNAPL INSPECTION FORM

PROJECT NAME: FORMER STOW MANUFACTURING , NYSDEC BCP SITE NO. C704058

LOCATION: 435 STATE STREET, BINGHAMTON, NEW YORK

PROJECT NO.:

INSPECTED BY:

DATE:

WEATHER:

INSPECTION EVENT		WELL ID	DEVICE USED TO MEASURE LNAPL	LNAPL OBSERVED	ESTIMATED THICKNESS OF LNAPL LAYER [INCHES]	ABSORBENT SOCK INSTALLED	COMMENTS
QUARTERLY	OTHER						
		RW-1	BAILER / OIL-WATER PROBE	YES / NO		YES / NO	
		MW-08R	BAILER / OIL-WATER PROBE	YES / NO		YES / NO	

Safety Data Sheet

1. Product And Company Identification

Product Identifier: Oil-Only PIG Absorbents (MSD-016)
General Use: Oil-Only PIG Absorbents are designed to confine and absorb oil-based chemicals such as oil, gasoline, kerosene, diesel fuel, vegetable oil, etc., while repelling water and water-based products from machinery, leaks, drips, over-spray and spills.
Specific Product Identifier: PIG Oil-Only Absorbent Mat, PIG FAT MAT Oil-Only Absorbent Mat, PIG Rip-n-Fit Oil-Only Absorbent Mat, PIG 4-in-1 Oil-Only Absorbent Mat, PIG Brown Oil-Only Absorbent Mat, PIG Ham-O Oil-Only Absorbent Mat, PIG Oil-Only UV-Resistant Absorbent Mat, PIG Oil-Only Railroad Absorbent Mat, PIG Absorbent Ground Tarp System, PIG Leak and Drip Pad, PIG Coolant Skimming Pad, PIG Oil-Only Barrel Top Absorbent Mat, PIG UV-Resistant Oil-Only Barrel Top Absorbent Mat, PIG Oil-Only Absorbent Diaper Mat, Oil-Only Mop System, PIG Oil-Only Absorbent Sock, PIG Skimmer Sock, PIG Spaghetti Boom, PIG Oil-Only Absorbent Boom, PIG Dark Oil-Only Absorbent Boom, PIG Skimming Sweep, PIG Sump Skimmer, PIG Monitoring Well Skimming Sock, PIG Rigid Monitoring Well Sock, PIG Skimmer Pillow, PIG Spaghetti Pillow, PIG Printer's Pillow, PIG Poly-Back Oil-Only Absorbent Pillow, PIG Outdoor Pan, PIG PomPom Oil-Mops, PIG Oil-Only Absorbent Valve Wrap, PIG Oil Only Pulp, PIG LeakTrapper Absorbent Bag, PIG LeakTrapper Absorbent Valve Wrap, PIG Oil only heavy Fluids Mat, PIG SunSafe™ UV-Resistant Mat, STAT-MAT Absorbents, Static Dissipative Skimming PIG Mat, PIG Brown Oil Only Poly Back Mat, PIG Oil Only Brown Mat.
Product Description: These white, yellow, blue, green, brown, black, or Multi-Colored absorbents are provided in many forms such as a mat (pad or rolls), spaghetti strips (pads cut into thin strips), pom-pom, pulp (mat ground into a particulate) or may come in a pan.

COMPANY PROFILE:
New Pig Corporation
One Pork Avenue
Tipton, PA 16684-0304
Information Number
1-800-468-4647

EMERGENCY TELEPHONE:
INFOTRAC
200 North Palmetto Street
Leesburg, FL 34748
24 hrs, 7 days/week
1-800-535-5053

Website: www.newpig.com, **Email:** hothogs@newpig.com

2. Hazards Identification

GHS Classification: Not a dangerous substance according to GHS

POTENTIAL HEALTH EFFECTS:
Eye Contact: May cause irritation
Ingestion: No hazard in normal use of product
Inhalation: No hazard in normal use of product
Skin Contact: Not applicable
Chronic: Not applicable

3. Composition/Information on Ingredients

CAS: 9003-07-0	Polypropylene	>97%

May contain one or more of the following:

CAS: None	Brown pigment	<0.3%
CAS: None	Zelec-Anti Static Agent	
CAS: 9003-07-0	Polypropylene: Film, Tywrap, Rope Mesh	
CAS: 9002-88-4	Polyethylene Film, Cord	
CAS: Not Avail.	Grommets, Steel Wire Tie, Aluminum Clip	
CAS: 25038-59-9	Polyester Fleece or Mesh	
CAS: 9003-07-0	Pan: Polypropylene	
CAS: 9002-86-2	Pan: PVC	
Ink		
CAS: 1336-21-6 EC: 215-647-6	Aqua Ammonia	1-1.5%
CAS: 108-01-0 EC: 203-542-8	Dimethylethanolamine	1-1.5%

4. First Aid Measures

Eye Contact: Flush with water for 15 minutes. If irritation persists, consult a physician.
Ingestion: Not applicable
Inhalation: Not applicable
Skin Contact: Not applicable

5. Fire Fighting Measures

Extinguishing Media: Unused form: Not applicable Used form: that which is compatible to liquid(s) absorbed.
Special Fire Fighting Procedures: Wear a self-contained breathing apparatus and refer to absorbed liquid(s) SDS(s).
Hazardous Combustion Products: When heated above the melting point: carbon monoxide, carbon dioxide, acrolein, ketones, aldehydes and other unidentified organic compounds.
Unusual Hazards: Refer to absorbed liquid(s) SDS(s). The Oil-Only PIG Absorbents do not render liquids nonflammable, neutral or less hazardous.

6. Accidental Release Measures

Spill or Leak Procedures: If material is unused, sweep or pick up and dispose of as a non-hazardous material.

7. Handling and Storage

Handling Precautions: Camouflage pig pattern not recommended for use with solvents or aggressive liquids that may affect printed pattern.
Storage Precautions: Store in a cool, dry place. Shelf Life: Indefinitely - as long as product is kept in a clean, dry place away from direct sunlight.
General: Refer to absorbed liquid(s) SDS(s). The container can be hazardous when empty. Follow label cautions even after the container is empty. Do not re-use empty containers for food, clothing or products for human or animal consumption, or where skin contact can occur.

Safety Data Sheet

8. Exposure Controls/Personal Protection

Engineering Controls: None required
PERSONAL PROTECTION
Eyes: Safety glasses with side shields is a good industrial practice
Respirator: Not required.
Gloves: Not normally required. However, use of cloth, canvas or leather gloves is a good industrial practice.
Other: None required.
OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

	EXPOSURE LIMITS 8 hrs. TWA (ppm)	
	OSHA PEL	ACGIH TLV
None		

9. Physical and Chemical Properties

Appearance: White, yellow, blue, green, brown, black or multi-colored polymer material in a variety of shapes, may also be in a black pan. Interior color may vary.
Odor: No odor **Odor Threshold:** Not applicable
pH: Not applicable
MELTING POINT/Freezing Point**:** >320° F (>160° C)
Initial Boiling Point and Range: Not applicable
Flash Point: Not applicable **Method:** Not applicable
Evaporation Rate: Not applicable
Flammable Limits: Not applicable
Conditions of Flammability: Not established
Explosive Properties: Not applicable
Vapor Pressure: Not applicable
Vapor Density: Not applicable
Relative Density (H_20 = 1): 0.9
Solubility in Water: Insoluble
Auto Ignition Temperature: 675° F (357° C)
Coefficient of Water/Oil Distribution: Not available

10. Stability and Reactivity

General: This is a stable material.
Conditions of Reactivity: Not established
Incompatible Materials: Strong oxidizing agents may degrade product over an extended period of time.
Conditions to Avoid: Not applicable
Hazardous Decomposition: When heated, it may emit toxic fumes.
Hazardous Polymerization: Will not occur

11. Toxicological Information

LD50: Not available
LC50: Not available
Carcinogenicity: IARC: Not established
National Toxicology Program: Not established
OSHA: Not established
California Prop 65: No listed ingredient

11. Toxicological Information (Cont'd)

Reproduction Toxicity: Not available
Teratogenicity: Not available
Mutagenicity: Not available
Synergistic Products: Not available
Irritancy of Product: See Section 2.
Sensitization to Product: Not available

12. Ecological Information

No data available

13. Disposal Considerations

Waste Disposal Method: If unused, no special precautions are necessary. Dispose of in accordance with federal, state and local regulations. In certain types of cleanup applications the nature of the material recovered will classify the resulting spent material as a hazardous component. In such instances the material should be disposed of via an approved hazardous waste disposal service and the appropriate manifesting obtained.

14. Transport Information

DOT (Department of Transportation):
Proper Shipping Name: Not regulated
Hazard Class: Not regulated
Identification Number: Not applicable

15. Regulatory Information

CERCLA (Comprehensive Environmental Response Compensation and Liability Act): No Reportable Quantity
OSHA Hazard Communication Standard, 29 CFR 1910.1200: No listed ingredient
SARA Title III (Superfund Amendments and Reauthorization Act): No listed ingredient
TSCA (Toxic Substances Control Act): Ingredients of this product are on the Inventory list.

16. Other Information

WHMIS Classification: Not a controlled product.

Reason for Issue: Reviewed, changes to Sections 4 & 16.
Prepared by: Dale Gatehouse, Entreprises Krenda Inc.
Approved by: Lisa Baxter, New Pig Corporation
Previous Date of Issue: 04/14/2015
Revised Date: 02/03/2016
SDS Number: MSD-016

The following is in lieu of all warranties, expressed or implied: All information provided is based on testing and data believed to be accurate.

PIG® Original Absorbent Sock

404 3" x 42", Absorbs up to 64 oz. per sock, 40 socks

Control your everyday leaks with our most shape-hugging sock.

- Tough and economical, the Original is your best choice for everyday leak protection to keep your floors safe.
- Formable socks hug corners and surround machine bases to absorb machine leaks, contain puddles and help keep workers safe
- Contained corncob filler pulls liquids from the floor for maximum absorbency while making cleanup quick and easy
- Polypropylene skin resists tearing; reduces dust and holds in liquid, even when saturated
- Absorbs most common industrial liquids - oils, water, solvents, coolants and more
- Corncob filler is light-weight and economical to handle general, everyday tasks
- Can be incinerated after use to reduce waste or for fuels blending

pig EXCLUSIVE · RECYCLED CONTENT · Autoship Eligible

Specifications

Fluid Absorbed	Oils, Coolants, Solvents, Water – Universal
Color	Gray
Dimensions	ext. dia. 3" x 42" L
Recycled Content	99% Pre-Consumer Recycled Cellulose Filler
Absorbency	Up to 20 gal. per box
Absorbency per	Up to 64 oz. per sock
Filler	Corn Cob
Skin/Outer Mesh	Skin - Polypropylene
Sold as	40 socks per box
Weight	47 lbs.
NSN (National Stock Number)	7930-01-301-2646
# per Pallet	16
Application	Leaks & Drips, Maintenance
UNSPSC	47131904
Pigalog® Page Number	Page 34

Metric Equivalent

Absorbency per	Up to 1.9 L per sock
Absorbency	Up to 75.7 L per box
Dimensions	ext. dia. 7.6cm x 106.7cm L
Weight	21.3 kg

Technical Information

Technical Documents

White paper – Slip & Fall Prevention Secrets

ORIGINAL PIG® Absorbents

29 CFR 1910.22(a)(2)

New Pig
World's best stuff for leaks, drips and spills.

One Pork Avenue • Tipton, PA 16684-0304
1-855-493-4647 • Fax: 1-800-621-7447• newpig.com • hothogs@newpig.com

How to use the PIG® SUMP SKIMMER

PIG® Sump Skimmers remove oily contaminants from water in sumps. Attach a rope to lower and raise Skimmer from the water's surface.

Follow these easy steps to assure maximum effectiveness:

1. Choose the size that best suits your needs.

PIG® Sump Skimmers come in two diameters: 3" x 18" • 8" x 18".

2. Attach rope to loop in Skimmer.

Choose a length that will let you lower sock to surface of water in sump and raise it after saturation.

3. Place Skimmer in sump.

Let it float on water while absorbing oily contaminants. As the Skimmer absorbs, it gradually floats lower in the water. Oil is pulled into fresh absorbent.

4. Replace as necessary.

When completely saturated, the Skimmer bobs at the water's surface. Just pull it out with your rope.

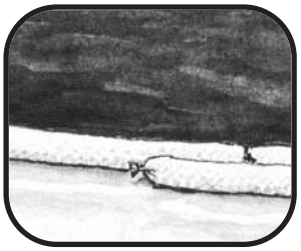
5. Dispose of Skimmer properly.

WHERE TO USE

- Sumps
- Bilges
- Sludge Tanks
- Sludge Ponds

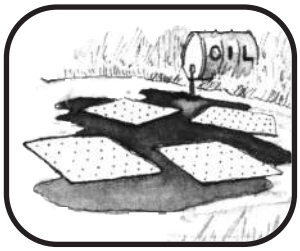
Other PIG® products for you

Block, contain, absorb oils from water



High volume SPAGHETTI booms

Absorbs oil repels water:



Skimming PIG® mat sheets and rolls

Contingency Planner's Dream:

Spill Kit for accidental spills

You want to know more about these products?

GREAT! Just call our toll-free number and we'll send you a **FREE PIGALOG®** catalog filled with information on all PIG® products.

In North America Phone:

1-800-HOT-HOGS®

www.newpig.com

New Pig • One Pork Ave.
Tipton, PA 16684-0304

APPENDIX B

Soil COVER System Monitoring Form

CONSTRUCTED SOIL COVER INSPECTION FORM

PROJECT NAME: FORMER STOW MANUFACTURING , NYSDEC BCP SITE NO. C704058

LOCATION: 435 STATE STREET, BINGHAMTON, NEW YORK

PROJECT NO.:

INSPECTED BY:

DATE:

WEATHER:

COVER TYPE	OVERALL CONDITION	ANY LOCATIONS REQUIRE REPAIR OR MAINTENANCE	PHOTOS TAKEN	COMMENTS
SOIL CAP		YES / NO	YES / NO	

APPENDIX 9

Remedial Site Optimization Table of Contents

REMEDIAL SYSTEM OPTIMIZATION FOR FORMER STOW MANUFACTURING SITE

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APPENDIX 10

Responsibilities of Owner and Remedial Party

Responsibilities

The responsibilities for implementing the Site Management Plan ("SMP") for the Former Stow Manufacturing site (the "site"), number C704058, are divided between the site owner(s) and a Remedial Party, as defined below. The owner(s) is/are currently listed as (the "owner"): Binghamton Northside Housing Development Fund Company, Inc.

Contact:
Bruce Levine
4549 Main Street, Suite 201
Amherst, NY 14226
716-839-0549

Solely for the purposes of this document and based upon the facts related to a particular site and the remedial program being carried out, the term Remedial Party ("RP") refers to any of the following: certificate of completion holder, volunteer, applicant, responsible party, and, in the event the New York State Department of Environmental Conservation ("NYSDEC") is carrying out remediation or site management, the NYSDEC and/or an agent acting on its behalf. The RP is: Binghamton Northside Limited Partnership, 3D Development, LLC, and Community Potential, Inc.

Contact:
Bruce Levine
4549 Main Street, Suite 201
Amherst, NY 14226
716-839-0549

Nothing on this page shall supersede the provisions of an Environmental Easement, Consent Order, Consent Decree, agreement, or other legally binding document that affects rights and obligations relating to the site.

Site Owner's Responsibilities:

1) The owner shall follow the provisions of the SMP as they relate to future construction and excavation at the site.

2) In accordance with a periodic time frame determined by the NYSDEC, the owner shall periodically certify, in writing, that all Institutional Controls set forth in a(n) Environmental Easement remain in place and continue to be complied with. The owner shall provide a written certification to the RP, upon the RP's request, in order to allow the RP to include the certification in the site's Periodic Review Report (PRR) certification to the NYSDEC.

3) In the event the site is delisted, the owner remains bound by the Environmental Easement and shall submit, upon request by the NYSDEC, a written certification that the Environmental Easement is still in place and has been complied with.

4) The owner shall grant access to the site to the RP and the NYSDEC and its agents for the purposes of performing activities required under the SMP and assuring compliance with the SMP.

5) The owner is responsible for assuring the security of the remedial components located on its property to the best of its ability. In the event that damage to the remedial components or vandalism is evident, the owner shall notify the site's RP and the NYSDEC in accordance with the timeframes indicated in Section 1.3-Notifications.

6) In the event some action or inaction by the owner adversely impacts the site, the owner must notify the site's RP and the NYSDEC in accordance with the time frame indicated in Section 1.3- Notifications and (ii) coordinate the performance of necessary corrective actions with the RP.

7) The owner must notify the RP and the NYSDEC of any change in ownership of the site property (identifying the tax map numbers in any correspondence) and provide contact information for the new owner of the site property. 6 NYCRR Part contains notification requirements applicable to any construction or activity changes and changes in ownership. Among the notification requirements is the following: Sixty days prior written notification must be made to the NYSDEC. Notification is to be submitted to the NYSDEC Division of Environmental Remediation's Site Control Section. Notification requirements for a change in use are detailed in Section 2.4 of the SMP. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html.

8) In accordance with the tenant notification law, within 15 days of receipt, the owner must supply a copy of any vapor intrusion data, that is produced with respect to structures and that exceeds NYSDOH or OSHA guidelines on the site, whether produced by the NYSDEC, RP, or owner, to the tenants on the property. The owner must otherwise comply with the tenant and occupant notification provisions of Environmental Conservation Law Article 27, Title 24.

Remedial Party Responsibilities

1) The RP must follow the SMP provisions regarding any construction and/or excavation it undertakes at the site.

2) The RP shall report to the NYSDEC all activities required for remediation, operation, maintenance, monitoring, and reporting. Such reporting includes, but is not limited to, periodic review reports and certifications, electronic data deliverables, corrective action work plans and reports, and updated SMPs.

3) Before accessing the site property to undertake a specific activity, the RP shall provide the owner advance notification that shall include an explanation of the work expected to be completed. The RP shall provide to (i) the owner, upon the owner's request, (ii) the NYSDEC, and (iii) other entities, if required by the SMP, a copy of any data generated during the site visit and/or any final report produced.

4) If the NYSDEC determines that an update of the SMP is necessary, the RP shall update the SMP and obtain final approval from the NYSDEC. Within 5 business days after NYSDEC approval, the RP shall submit a copy of the approved SMP to the owner(s).

5) The RP shall notify the NYSDEC and the owner of any changes in RP ownership and/or control and of any changes in the party/entity responsible for the operation, maintenance, and monitoring of and reporting with respect to any remedial system (Engineering Controls). The RP shall provide contact information for the new party/entity. Such activity constitutes a Change of Use pursuant to 375-1.11(d) and requires 60-days prior notice to the NYSDEC. A 60-Day Advance Notification Form and Instructions are found at http://www.dec.ny.gov/chemical/76250.html .

6) The RP shall notify the NYSDEC of any damage to or modification of the systems as required under Section 1.3- Notifications] of the SMP.

7) Prior to a change in use that impacts the remedial system or requirements and/or responsibilities for implementing the SMP, the RP shall submit to the NYSDEC for approval an amended SMP.

8) Any change in use, change in ownership, change in site classification (*e.g.*, delisting), reduction or expansion of remediation, and other significant changes related to the site may result in a change in responsibilities and, therefore, necessitate an update to the SMP and/or updated legal documents. The RP shall contact the Department to discuss the need to update such documents.

Change in RP ownership and/or control and/or site ownership does not affect the RP's obligations with respect to the site unless a legally binding document executed by the NYSDEC releases the RP of its obligations.

Future site owners and RPs and their successors and assigns are required to carry out the activities set forth above.