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PRE-DESIGN INVESTIGATION WORK PLAN

Denison Park - Site # 851066
Denison Park
Corning, New York 14830

Prepared For:

Contract# D009808, Work Assignment No. 57
New York State Department of Environmental Conservation
Division of Environmental Remediation
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PE Certification:

I ThomasBattlescertify that I am currently a NYS registered professional engineer and that this Remedial Design was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

Thomas Battles

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1.0 INTRODUCTION

On September 2, 2025, HRP Associates, Inc. (HRP) was authorized to complete New York State Department of Environmental Conservation (NYSDEC) Work Assignment (WA) No. 57 (D009808-57) for Remedial Investigation/Feasibility Study (RI/FS) at Denison Park (the Site), located at Denison Park, Corning, New York (**Figure 1 – Site Location Map**). The scope of work was developed based on HRP's review of documents detailing previous subsurface investigations completed at the property including a 2023 site characterization (SC) investigation (Parsons, 2023) at the Site and discussions with NYSDEC staff.

This Pre-Design Investigation Work Plan (PDI WP) describes the details of the scope of work for the pre-design field investigation, a brief description of the presumptive remedy and a project timeline.

Specific standards, criteria, and guidance values (SCGs) relevant to the design and implementation of the NYSDEC-selected remedy were identified by the NYSDEC based on current land use and zoning, and include the following:

- Residential Use (RU) Soil Cleanup Objectives (SCOs) for the Protection of Public Health and Protection of Groundwater based on NYSDEC's Title 6 of the New York Code of Rules and Regulations (NYCRR) Part 375-6 (6 NYCRR Part 375-6).
- Restricted Residential Use (RRU) SCOs for the Protection of Public Health and Protection of Groundwater based on NYSDEC's Title 6 of the New York Code of Rules and Regulations (NYCRR) Part 375-6 (6 NYCRR Part 375-6).

1.1 Site Description and Background Information

The Denison Park Site is located in the southeastern portion of the City of Corning. It is bounded by NYS flood control land and the Chemung River to the east, residential neighborhoods to the west and south, the Wastewater Treatment facility and Baseball Complex on the southeast, and commercial and industrial facilities to the north.

The Site is an active city park managed by the Corning Parks and Recreation Department, and is split into north and south sections by New York State Route 352, an elevated roadway and bridge that spans the Chemung River to connect the City of Corning with the City of Elmira, New York. The Site consists of two tax parcels including parcel ID 318.14-03-074.000 (majority of the park) and the southern portion of tax parcel 318.14-03-078.000 (includes three baseball diamonds). The Site is improved with a swimming pool, two tennis courts, two basketball courts, three picnic pavilions, a playground, a 1.8-acre pond, three baseball fields, and two buildings.

The Site is currently operated as Denison Park and owned by the City of Corning. According to the 2023 SC, the site was undeveloped with several low-lying areas representing floodplain ponds or drainages in 1857. In 1906, 33 acres were purchased by the Business Men's Association for a park, and Harold A. Caparn, a prominent Landscape Architect from New York City, was hired to design the park. Park construction began in 1907 and included a small zoo and a 10-15 foot high levee along the Chemung River floodplain that was wide enough to be used as a carriage path.

Ongoing construction in 1910 included a concrete children's wading pool, picnic pavilions, drinking fountains, a concrete bridge, a tower, a baseball field, a quarter mile running track and a playground. The original spatial organization of the park (1907-1910) indicated a U-shaped water feature which appears to correspond to the two original drainages (as arms of the U) and mill pond location from 1873. Additional Park features were added from 1916-1919, including sandboxes, a large open-air picnic pavilion, tennis courts, and Memorial Gate. A public swimming pool and bath house were built and opened in 1921. The 1972 flood destroyed much of Denison Park. When the park was rehabilitated and repaired, the original 1920s pool and bath house were demolished and replaced. Portions of the two arms of the lake were truncated and infilled south of the elevated roadway and a portion of the eastern arm north of the elevated roadway was isolated becoming a lagoon. Subsequently, the lagoon in the north park area was infilled and by 1973, the west arm was infilled and the west side of the lake was squared off in the south park area. Glass and brick were identified during a 2019 sewer right-of-way excavation and sewer replacement at Denison Park.

The Site is currently zoned as PC (Public Conservation) as a municipal park, and the surrounding parcels are currently zoned residential or commercial. The nearest residential areas are immediately to the east of the Site along Park Avenue and Mill Lane. The Site is serviced by a public water supply.

1.2 Site Geology and Hydrogeology

The Site is located in the Chemung River Valley and contains predominately sand and gravel deposits of glaciofluvial origin and more recent alluvia deposits. According to the 2023 SC, river valley deposits are on the order of 100 feet in thickness in the vicinity of the Site. These river deposits are underlain by low permeability shale/siltstone bedrock. Depth to bedrock has not been confirmed but is likely more than 80 feet below grade (ft bg) on published information. Depth to the water table is expected to be on the order of 20 ft bg. Groundwater generally flows north towards the Chemung River.

1.3 Nature and Extent of Environmental Impacts

This section summarizes the assessment of existing presented in the Site Characterization Report (SCR) dated October 2023 by Parsons. The SCR was completed to investigate potential impacts to the Site from the presence of glass manufacturing waste consisting of ash, brick, and glass (ABG) which was previously identified in the park right-of-way.

ABG was observed in subsurface soil borings and test pits installed across the Site during the 2023 site characterization investigation conducted by Parsons. Pesticides, semi-volatile organic compounds (SVOCs), and metals were detected at concentrations that exceed RRU SCOs from subsurface soil boring samples. ABG was not observed in surface soil samples, however two metals (arsenic and barium) were detected at concentrations that exceed RRU SCOs. **Appendix A** includes surface soil, subsurface soil, and test pit callout figures from the 2023 SC.

Metals such as arsenic, barium, cadmium, chromium, copper, lead, nickel, and mercury were detected above RRU SCOs in test pits soils across the Site.

Additional characterization of Site surface and subsurface soils to evaluate the nature and extent of contamination and observed ABG at the Site was recommended in the Site Characterization Report.

2.0 PRE-DESIGN INVESTIGATION

This scope of work has been designed to gather the details necessary for the construction, operation, and implementation of the interim remedial design (IRM). The following sections provide specifics regarding the scope of work developed under this NYSDEC-approved Work Assignment (D009808-57) in support of an IRM at the Denison Park Site.

2.1 Preliminary Activities

As part of the pre-design investigation, the following documents have been prepared under this Work Assignment:

- Project-specific pre-design work plan (this document); and
- Site-specific Health and Safety Plan (HASP) (included as **Appendix B** of this Work Plan), including a Community Air Monitoring Plan (CAMP) (included as **Appendix C** of this Work Plan).

The site-specific elements are provided below.

2.1.1 Pre-Design Investigation Field Activities Work Plan (FAP)

This work plan has been prepared for use in performing the pre-design investigation and will serve as the "site-specific FAP". This plan describes each task to be performed, including the specific methods and procedures that will be used to conduct field sampling. The results from field sampling will provide the details necessary for the construction, operation, and implementation of the remedial program. A proposed project schedule is included in **Section 4** of this PDI WP.

2.1.2 Health and Safety Plan (HASP)

A site-specific HASP was prepared as part of this Work Assignment and provides guidance to maximize health and safety of on-site workers during the field activities. Included in the site-specific HASP is a Community Air Monitoring Plan (CAMP) that details procedures for air monitoring during ground-intrusive activities. The site-specific HASP was prepared as a supplement to HRP's NYSDEC – approved generic HASP. The generic HASP provides guidelines for health and safety supervision, air monitoring, medical monitoring, personal protective equipment, site controls, safe work practices and decontamination, etc.

2.1.3 Quality Assurance Project Plan (QAPP)

A site-specific Quality Assurance Project Plan (QAPP) has been prepared and is included in **Section 2.3** of this PDI WP The site-specific QAPP was prepared as a supplement to the HRP's NYSDEC-approved Generic QAPP. Deviations from the protocols specified in the QAPP will be subject to the NYSDEC approval.

The Generic QAPP provides general information related to QA/QC procedures associated with the collection and analysis of samples of environmental media and includes specific representative

standard operating procedures (SOPs) applicable to sample handling and field instrumentation use. Information provided in the Generic QAPP includes definitions and generic goals for data quality and required types and quantities of QA/QC samples. The procedures address field documentation; sample handling, custody, and shipping; instrument calibration and maintenance; auditing; data reduction, validation, and reporting; corrective action requirements; and QA/QC reporting specific to the analyses performed by the laboratories that are used for analysis of environmental media collected under Standby Contract No. D009808.

All laboratory analytical work will be performed by a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) approved laboratory certified in all categories of Contract Laboratory Protocol (CLP) and Solid and Hazardous Waste analytical testing. A Data Usability Summary Report (DUSR) will be included in for each round of analytical data collected during the field sampling. Category B deliverables will be retained in the project files and available for full data validation by a qualified, independent third party.

2.2 Pre-Design Investigation

The pre-design investigation sampling will include the components described below and consist of characterizing and sampling surface soil and pond sediment to meet project objectives. The number and type of samples to be collected for laboratory analysis is discussed below. Field investigation tasks are listed below in the order that they will be completed:

1. Ground Penetrating Radar (GPR) and Utility Locate
2. GPS Survey of 75 x 75-foot grid
3. Soil Boring Installation and Surface Soil Sampling
4. Pond and River Sediment Sampling
5. Characterization and Disposal of Investigation Derived Waste (IDW)
6. Base Map Development and Site Survey

2.2.1 Geophysical Investigation/Ground Penetrating Radar (GPR)

Prior to the initiation of subsurface drilling activities completed during the pre-design investigation and in accordance with New York state law, the Site will be marked out for underground utilities by Dig Safely New York. In addition, since Dig Safe does not locate any on-site private utilities, a ground penetrating radar (GPR) survey of proposed sampling locations will be completed at the Site under HRP supervision in order to clear unmarked, underground utilities and identify subsurface anomalies, such as possible USTs, hydraulic lifts, septic tanks, etc. All identified subsurface anomalies will be painted and marked at the ground surface. Geophysical techniques include the use of GPR, radio frequency, and electromagnetic induction within each 75 x 75-foot cell and at specified residential properties. A map will be provided of identified Site utilities and subsurface anomalies to HRP by the geophysical contractor prior to any subsurface intrusive work. HRP will coordinate with the City of Corning Parks and Recreation department prior to mobilization to discuss known utilities and safely manage each work area.

2.2.2 GPS Survey

The proposed layout consists of a 75 x 75-foot grid, with one, 2-foot deep boring advanced towards the center of each grid cell. Specific sampling locations will be marked using a GPS unit to establish soil sampling coordinates prior to subsurface work. Any boring locations that were planned will be field-verified during the GPS survey to ensure that the proposed location can be accessed by a drill rig.

2.2.3 Soil Boring Installation and Surface Soil Sampling

2.2.3.1. Park Soil Borings

All installed soil borings will be named in accordance with the established grid (**Figure 2**). The grid is established to provide adequate distribution and coverage across the Site area. Subsurface anomalies and utilities as well as overhead utilities may affect planned soil boring locations prior to installation. A minimum 10-foot distance will be maintained for soil borings in close proximity to marked or observed utilities. A GPS unit will be used to locate the coordinates for each installed boring.

Shallow soil borings will be installed to evaluate for the presence of ABG and SCO exceedances to support and determine the footprint of any remedial actions. Soil borings will be advanced using a direct-push technique (DPT) drilling rig equipped with MacroCore samplers to confirm the degree and extent of surface soil impacts above the RRU SCO. Soil cores will be advanced continuously until a depth of two-feet below grade is achieved.

Each soil core will be examined for the presence of ABG. If ABG is observed during soil boring installation, field personnel will describe and document the location, depth, and photograph the material. All soil samples will be screened for organic vapors using a photoionization detector (PID) and any evidence of contamination will be noted and/or used for selection of soil samples for laboratory analysis. All samples will be submitted to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for analysis of Target Compound List (TCL) SVOCs by EPA Method 8270 and Target Analyte List metals by EPA Methods 6010D & 6020B. Quality control samples will be collected during soil sampling to ensure precision and accuracy of results. Duplicate and matrix/matrix spike duplicates will be collected at a frequency of 1 per 20 samples. A summary of soil sample collection and analysis is provided in **Table 2**.

Up to three soil sample samples from each boring will be collected from the depths intervals summarized below and results will be compared against the Part 375 Restricted Residential Use SCO. Soil samples will only be collected from native soils or fill that does not contain ABG. Any samples containing ABG will be considered to be contaminated in accordance with Commissioner Policy CP-51 Section G and do not require laboratory analysis. Soil boring samples will be collected from the following intervals and submitted for laboratory analysis:

- 0-2 inches (excludes sod/grass/organic)
- 2-12 inches
- 12-24 inches

Upon completion, each soil boring will be backfilled with soil cuttings, clean sand, and topped with topsoil. The area surrounding each soil boring will be returned to match previous existing conditions prior to soil boring installation.

2.2.3.2. Residential Soil Borings

Off-site residential properties surrounding the Site may be sampled during the PDI. Sampling will include up to four soil borings at each offsite residential property. Specific boring locations will be determined in coordination with the property owner. Access to the property will be coordinated with both the property owner and the NYSDEC. Accordingly, access agreements for the residential properties will be sent out prior to the commencement of field activities.

Shallow soil borings will be installed to evaluate for the presence of ABG and SCO exceedances to support and determine the footprint of any remedial actions. Soil borings will be advanced using a DPT drilling rig equipped with MacroCore samplers to confirm the degree and extent of surface soil impacts above the Residential Use SCO. Soil cores will be advanced continuously until a depth of four-feet below grade is achieved.

Each soil core will be examined for the presence of ABG. If ABG is observed during soil boring installation, field personnel will describe and document the location, depth, and photograph the material. All soil samples will be screened for organic vapors using a PID and any evidence of contamination will be noted and/or used for selection of soil samples for laboratory analysis. All samples will be submitted to a NYSDOH ELAP certified laboratory for analysis of TCL SVOCs by EPA Method 8270 and Target Analyte List metals by EPA Methods 6010D & 6020B. Quality control samples will be collected during soil sampling to ensure precision and accuracy of results. Duplicate and matrix/matrix spike duplicates will be collected at a frequency of 1 per 20 samples. A summary of soil sample collection and analysis is provided in **Table 2**.

Up to five soil sample samples from each boring will be collected from the depths intervals summarized below and results will be compared against the Part 375 Residential Use SCO. Soil samples will only be collected from native soils or fill that does not contain ABG. Any samples containing ABG will be considered to be contaminated in accordance with Commissioner Policy CP-51 Section G and do not require laboratory analysis. Soil boring samples will be collected from the following intervals and submitted for laboratory analysis:

- 0-2 inches (excludes sod/grass/organic)
- 2-12 inches
- 12-24 inches
- 24-36 inches
- 36-48 inches

Upon completion, each soil boring will be backfilled with soil cuttings, clean sand, and topped with topsoil. The area surrounding each soil boring will be returned to match previous existing conditions prior to soil boring installation.

2.2.4 Denison Park Pond and Chemung River Sediment Sampling

Sediment samples will be collected using a direct-push stainless steel hand auger or stainless steel trowel from the 1.3-acre on-site pond and along the western bank of the Chemung River located east of the park. Sediment samples will be collected to a depth of up to 2 ft bg from locations depicted on **Figure 2**. If a depth of 2 ft bg cannot be achieved due to poor recovery, additional sampling locations may be needed until a depth of 2 ft bg is achieved. Sediment samples will be evaluated against *the Screening and Assessment of Contaminated Sediments* guidance document (NYSDEC 2014). All sampling tools are to be decontaminated in between sampling locations using an Alconox-water spray, scrubbed, and rinsed with deionized water.

All sediment collected during sampling will be observed for the presence of ABG and will be recorded on each log. Photographs will be taken of any ABG identified during sediment sampling. Sediment samples will be screened with a PID and headspace VOC readings will be recorded on each log. One sample will be collected from up to eight locations across the pond and one sample will be collected from up to nine locations along the western bank of the Chemung River. Sediment samples will be submitted to a NYSDOH ELAP certified laboratory for analysis of TCL SVOCs by EPA Method 8270 and Target Analyte List metals by EPA Methods 6010D & 6020B as shown on **Table 1.**

QA/QC samples will be collected during sediment sampling for parameters listed in **Table 1** at a rate of one site of QA/QC samples for every 20 regular samples collected. Results from the analytical sampling will be compared to Class A Sediment Guidance Values.

2.2.5 Soil and Sediment Sampling Collection and Handling Procedures

Soil and sediment sampling equipment to be used includes stainless steel trowels, bowls, spoons, or scoops, hand auger, sample containers, sampling zip lock bags, and coolers with ice. Nitrile gloves will be worn by personnel collecting and handling the samples. All non-disposable equipment and tooling used for sampling will be properly decontaminated as described in **Section 2.3.2** between sampling locations and intervals. Soil samples will be collected using clean laboratory-supplied appropriate containers (as listed in **Table 2** of this work plan) and will be preserved on ice in coolers during field sampling activities. Target samples will then be submitted for laboratory analysis, and contingency samples will be stored at proper temperatures, as listed in **Table 2**, pending follow-up analysis, as necessary.

2.2.6 Disposal of Investigation Derived Waste (IDW)

Soils from the PDI may be disposed within the direct push hole (cuttings may be used to backfill holes resulting from soil sampling), the direct push hole did not penetrate an aquitard nor an aquiclude, and backfilling the hole with cuttings will not create a significant path for vertical movement of contaminants. Material that is visually stained, creates high PID measurements, or

exhibits strong odors shall be sampled and analyzed to ensure chemical compatibility with other cuttings before placing the materials in a common storage/disposal area if staining is present in the cuttings.

Investigation-derived waste (IDW) generated during the PDI will be containerized in NYSDOT-approved 55-gallon drums or roll-off container, labeled as IDW, and temporarily staged in a secure area. One composite sample of soil will be collected, if needed, for waste disposal profiling. The specific parameters to be analyzed for soil waste disposal were determined in consultation with a potential disposal facility, the Steuben County Landfill (Bath Landfill) and include the following analyses:

- Corrosivity (pH)
- Ignitability
- TCLP VOCs
- TCLP SVOCs
- TCLP RCRA 8 Metals
- Total sulfide
- Total cyanide
- Total PCBs
- Percent Solids

Upon receipt of laboratory results, HRP will arrange for disposal of the wastes. Data validation will not be required for the waste characterization samples.

Decontamination fluids will be containerized separately from other IDW, and any decontamination fluids that do not exhibit evidence of contamination will be containerized separately from those exhibiting evidence of contamination, if present.

An IDW storage area will be established at the Site at the start of field work. The IDW storage area will include plastic sheeting and silt sock to prevent rainwater runoff. IDW will be stored in 55-gallon steel drums in the designated storage area until waste characterization analytical results are received and sent to the disposal facility for approval. IDW will be disposed of in accordance with DER-10 as well as local, State, and Federal regulations.

Although not expected, any intrusive ground work that involves the transport and disposal of large quantities of IDW will be performed by licensed waste haulers and in accordance with local, State, and Federal regulations. Haulers will be appropriately licensed and trucks placarded. Materials to be transported by haulers will be secured using covers or tarps. If wet materials are being transported, truck liners will be used prior to leaving the Site.

2.2.7 Base Map Development and Site Survey

Following the completion of the geophysical survey and utility mark out, the surveyor contractor will collect and incorporate all previously identified utilities and subsurface anomalies as a part of the Site survey. The corners of existing hardscapes (such as paved asphalt parking lots, pools, courts, sidewalks, and buildings) will be surveyed at the Site.

A comprehensive topographic and American Land Tile Association (ALTA) survey will be performed to provide base maps for developing the remedial design. A New York State licensed professional land surveyor will perform the survey and collect ground surface point elevation data to construct a Site contour map with 1-foot intervals. The surveyor will provide Computer-Aided Design (CAD) and PDF survey files for all collected Site data. The survey will be referenced horizontally to the North American Datum 1983, 2011 adjustment (NAD83/2011), and vertically to the North American Vertical Datum of 1988 (NAVD88).

The Site and surrounding areas will be surveyed by a New York State licensed land surveyor. The field survey will include establishing project horizontal control and the collection of planimetric features for the development of 2D mapping. Only the exterior Site features will be recorded on the survey. Subsequently, a base map of the Site will be developed using CAD software that will be utilized to place all PDI soil borings and previous on-site investigations. The sample locations will be placed on the base map by geo-referencing previous figures into the local CAD coordinate system, and will include all Geoprobe® boring locations.

2.2.8 Analytical Data Quality Evaluation

This work plan describes the data quality objectives and analytical requirements needed for this WA.

To achieve these objectives, QA/QC measures will be implemented throughout the pre-design investigation to provide input as to the validity and usability of data generated through soil sampling. The procedures for data QA/QC management includes field documentation, sample handling, chain of custody, shipping, instrument calibration, auditing, data reduction, validation, corrective action requirements, and QA/QC reporting specific to the analyses performed by the laboratory under subcontract to HRP. **Table 2** provides a list of the sample containers, preservation, and holding time requirements for the parameters specific to this Site. These tables will be referenced by field personnel.

During the final PDI WP review period, the site-specific QAPP work plan elements will be reviewed and modified according to NYSDEC requirements and comments. Once the plans are finalized, deviations from protocols specified in the plans, if required, will be approved in advance by NYSDEC. As required, the selected analytical laboratory will maintain NYSDOH ELAP certification in all categories of CLP and Solid and Hazardous Waste analytical testing for the duration of the project.

For all data generated during the PDI, a Category B Data package and DUSR will be prepared to provide a thorough evaluation of analytical data utilizing third-party data validation.

The selected laboratory will supply all required data deliverables (EPA CLP and NYSDEC Analytical Services Protocols [ASP] deliverable format) to enable the data to be validated. All environmental data will be submitted electronically in a specified format named 'NYSDEC' in accordance with the data submission procedures outlined on the NYSDEC's website (http://www.dec.ny.gov/chemical/62440.html).

Upon receipt of the sample data, a data validation contractor will quantitatively and qualitatively validate the laboratory data. The validation of the analytical data will be performed according to the protocols and quality control requirements of the analytical methods, the USEPA CLP National Functional Guidelines for Organic and Inorganic Data Review (February 1994), the USEPA Region II CLP Data Review SOP, and the reviewer's professional judgment.

2.3 Site-specific Quality Assurance Project Plan (QAPP)

This site-specific QAPP has been prepared as a companion Section to accompany the Generic QAPP for the standby subcontract prepared by HRP for NYSDEC. The QAPP will be used to specify QA/QC procedures for the collection, analysis, and evaluation of data.

2.3.1 Sample Handling

Detailed sampling procedures for collection of soil samples are detailed in Section 4.0 of the Generic QAPP. Matrix types, number of samples (including QA/QC) and analytical details are summarized in **Table 1** (follows text). Proposed sample locations are depicted in **Figure 2**.

2.3.2 Decontamination Procedures

Non-dedicated sampling equipment (i.e., submersible pumps, water level indicators, drilling tooling, etc.) will be subject to decontamination procedures prior to each sample collected to reduce the potential for cross-contamination. The decontamination procedures will include the use of a scrub wash with a solution consisting of Alconox® detergent and potable water followed by a rinse with deionized water (DI) water. The decontaminated equipment will be stored in clean environments (i.e., the manufacturer's storage case). Decontamination fluids will be properly labeled and securely stored in the designated waste-container staging area.

2.4 Pre-Design Investigation Report

A Pre-Design Investigation (PDI) Report will be prepared following completion of the pre-design field activities. The report will provide a description of the field activities, data collected during this investigation, a physical description of the Site including geology and hydrogeology, and an evaluation of the available data in the context of existing Site conditions.

The PDI report prepared as part of this assignment will also provide an analytical data validation/usability evaluation and description of sampling results. The results of the report will be used to prepare the remedial design.

2.4.1 Electronic Data Delivery

In addition to appropriate data summary tables included in the report, all environmental data will be submitted electronically in a specified Electronic Data Deliverable (EDD) format named in accordance with the data submission procedures outlined by the NYSDEC.

3.0 GREEN AND SUSTAINABLE REMEDIATION BEST MANAGEMENT PRACTICES

Through the course of the pre-design investigation, HRP will implement Green and Sustainable Best Management Practices (BMPs) to reduce negative impacts to air, water, solid waste, etc. (presented in Section 17.0 and Appendix C of the NYSDEC-approved Revised FAP, dated February 2, 2022). **Table 3** summarizes BMPs to be implemented as part of the Denison Park PDI and will be used to assess and track environmental impact reductions versus traditional field activity approaches.

In consultation with NYSDEC, quantifiable impact reductions achieved by green and sustainable remediation BMPs implemented during the PDI (e.g. tons of carbon reduced, gallons of fuel saved, pounds of waste reduced) may be included in Site fact sheets to promote public awareness of NYSDEC green and sustainable BMPs.

Green and Sustainable Remediation BMPs to be implemented as part of this project are summarized below, organized by BMPs implemented in project planning and field work phases of work.

Project Planning BMPs

BMP 1) A well-conceived dynamic sampling plan has been developed for the Site to assure that the data collected at project on-set adequately addresses Site data gaps, consequently reducing remobilization of field crews and equipment. A conceptual site model (CSM) will be developed for the Site, incorporating the Site sampling data, Site history, and current and historical land use to identify data gaps and allows for refinement as additional data becomes available. Data visualization techniques such as concentration "heat maps" for contaminants of concern will be utilized to refine the CSM and project SOW. No alterations will be made to the SOW without NYSDEC approval. Refinement of the CSM and SOW will be performed with the primary goal of achieving the purposes and objectives of the PDI as described in **Section 1.3**. Green and sustainable impact reductions will be a secondary goal of CSM/SOW refinement and care will be taken to ensure SOW changes do not impact the efficacy of the PDI.

BMP 2) Efforts will be made to schedule Site visits and field work to reduce energy consumption and air emissions associated with mobilizations to and from the Site. The following BMPs will be implemented related to HRP mobilization:

- BMP 2a) Field work schedules will be consolidated by coordinating with contractors. Specifically, the Site walkthrough and GPR work will be completed within the same mobilization.
- BMP 2b) When two or more HRP personnel are involved in a trip to and from the Site which requires a passenger vehicle (i.e., cannot be completed by mass-transit), personnel will "car-pool" by sharing a vehicle, reducing energy consumption and emissions associated with taking multiple vehicles to the Site.

Field Work BMPs

BMP 3) All soil borings will be installed with direct push drilling methods instead of hollow stem auger methods to reduce the generation of waste drill cuttings and reduce drill rig operation time.

BMP 4) When not in use, vehicles, trucks, drill rigs, and other equipment will be shut off to reduce energy consumption and emissions related to engine idling.

BMP 5) Waste cardboard generated from labware (sample jars, bottle ware, and summa cannisters) will be reused or recycled to reduce waste.

BMP 6) Soil samples collected for any VOC analysis will be collected in soil jars, reducing material and waste associated with terrorcore kits (additional glassware and plastic sample plungers).

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed using a NYSDEC-accepted environmental footprint analysis tool.

Additionally, the remedial design program will include a NYSDEC climate screening checklist to evaluate the impact of climate change on the Site and the proposed remedy. Potential vulnerabilities associated with extreme weather events, flooding, and sea level rise will be identified and the remedial program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

4.0 PROJECT SCHEDULE

The scope of work for this task includes preparation of PDI documents consistent with the requirements of NYSDEC DER-10. Following approval of this work plan by the NYSDEC, the schedule below will be implemented. Specific technical design elements to be developed during the design process will include detailed engineering designs that provide quantities, locations, and construction details for the implementation of the remedy.

5.1 Pre-Design Investigation Schedule

The anticipated schedule for completing the preliminary design investigation activities identified in this PDI WP and a preliminary schedule for completion of the remedial design and construction of the selected remedy for the site is presented in the table below.

Preliminary Project Schedule

CATEGORY	TASK	Start	End
Task 1 – Preliminary Activities	File Review	9/2/2025	9/5/2025
	Development of 2.11's	9/8/2025	9/15/2025
	Preparation of Pre-Design Investigation Work Plan (PDI WP)	9/8/2025	9/26/2025
	DEC Review of PDI WP	9/26/2025	10/10/2025
	Development of Fact Sheet	10/10/2025	10/24/2025
Task 2 – Field Work/Field Investigation	Geophysical Investigation and Survey	12/1/2025	12/2/2025
	Drilling Mobilization	12/1/2025	12/1/2025
	Drilling/Soil Boring Installation/Sample Collection	12/1/2025	12/18/2025
	Pond and Chemung River Sediment Sampling	12/18/2025	12/19/2025
	Topography/Boundary Survey	1/5/2026	1/6/2026
	Investigation Derived Waste Transport and Disposal	12/19/2025	1/2/2026
	Laboratory Analysis	12/2/2025	1/2/2026
Task 3: Reporting	Draft PDI Report/Data Review	12/19/2025	1/22/2026
	DUSR Preparation	1/10/2026	1/22/2026
Task 4 – Engineering Services in Support of Interim Remedial Measure	Green Remediation Footprint Analysis and Climate Change Vulnerability Assessment Draft Interim Remedial Measure Designs under NYSDEC review Excavate, Transport/Dispose of Contaminated Surface Soils, Install Site Cover	4/2026	10/31/2026

5.0 KEY PROJECT PERSONNEL

A list of the project personnel of the prime consultant and subcontractors responsible for performance of the investigation has been submitted to the NYSDEC for approval. Primary project staffs are listed below:

Personnel	Company	Title for this Work Assignment	Responsibility
Mark Wright PG, (DEC Contracts Manager)	HRP Associates, Inc. (Prime Consultant)	Contracts Manager	Overall management of the WA
John Gorman (Project Manager)	HRP Associates, Inc. (Prime Consultant)	Project Manager	Overall management of the WA
Bryan Sherman, CSP (Project Manager)	HRP Associates, Inc.	Office Health & Safety Manager	Approval of HASP and responsible for overall health and safety issues with the WA
Michael Varni, PG (Senior Project Geologist)	HRP Associates, Inc.	Corporate QA/QC Officer	Responsible for QA/QC on the WA
Stephanie Pascual (Consultant)	HRP Associates, Inc.	Field Manager and Site Health & Safety Officer	Responsible for oversight and implementation the on-site sampling and investigative tasks
Elaine Yu (Consultant)	HRP Associates, Inc.	Field Oversight and Sampling	Responsible for the on-site sampling and investigative tasks

6.0 REFERENCES

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FIGURES

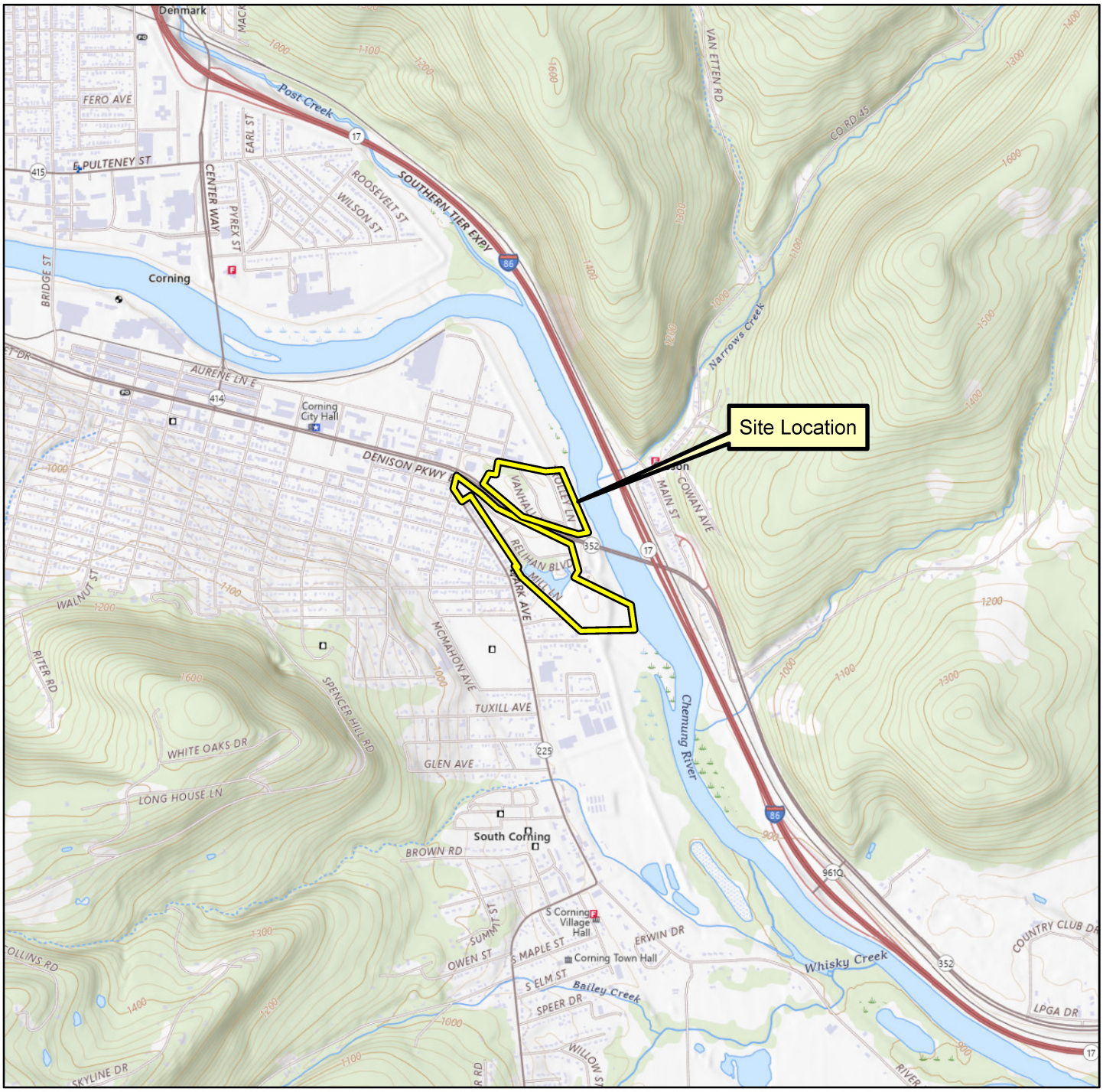

Figure 1
Site Location
Denison Park
Corning New York
HRP # DEC1057.P3

USGS Quadrangle Information
Quad ID: 42077-B1
Name: Corning, New York
Date Rev: 2016
Date Pub: 2019

MOVE YOUR ENVIRONMENT FORWARD
ONE FAIRCHILD SQUARE
SUITE 110
CLIFTON PARK, NY 12065
(518) 877-7101
HRPASSOCIATES.COM

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Sampling Labels omitted from areas with 100% hardscape

Legend

- Property Boundary
- Proposed Soil Sampling Grid (75 X 75 ft)
- Onsite Pond
- US Army Corps of Engineers (USACE) Flood Control Levee
- Proposed Pond Sediment Samples
- Proposed River Sediment Samples
- Subsurface Locations with Observed ABG
- Proposed Soil Sampling Grids Near Flood Control Levee - Field Verification Required Prior to Sampling
- DS-3 60" Diameter Flood Control Pipe

Figure No. **2**	Site Plan Proposed Sediment and Soil Sampling Grid Denison Park Site ID 851066 Corning, New York 14830	Issue Date: 10/31/2025 Project No: DEC1057.P3 Sheet Size: 11x17	Designed By: CMS Drawn By: CMS Reviewed By: MEW	Revisions No. / Date	North 0 105 210 Feet	HRP MOVE YOUR ENVIRONMENT FORWARD ONE FAIRCHILD SQUARE SUITE 110 CLIFTON PARK, NY 12065 (518) 877-7101 HRPASSOCIATES.COM

TABLES

Table 1
Remedial Design Sample Summary
Denison Park - Site # 851066
Denison Park
Corning, New York

Activity/ Matrix	Number of Sample Locations	Location	Samples to be Collected	Analyses
Surface Soil 0-2 inches below grade (Including MS/MSD 1 per 20 samples Trip blank- 1/cooler Duplicate 1 per 20 samples)	Up to 381*	See Figure 2 Sampling Locations	Up to 1,143* (Including QA/QC)	Target Compound List SVOCs +20 by EPA Method 8270 Target Analyte List Metals by EPA Method 6010B including Mercury and Boron
Surface Soil 2-12 inches below grade (Including MS/MSD 1 per 20 samples Trip blank- 1/cooler Duplicate 1 per 20 samples)	Up to 381*	See Figure 2 Sampling Locations	Up to 1,143* (Including QA/QC)	Target Compound List SVOCs +20 by EPA Method 8270 Target Analyte List Metals by EPA Method 6010B including Mercury and Boron
Surface Soil 12-24 inches below grade (Including MS/MSD 1 per 20 samples Trip blank- 1/cooler Duplicate 1 per 20 samples)	Up to 381*	See Figure 2 Sampling Locations	Up to 1,143* (Including QA/QC)	Target Compound List SVOCs +20 by EPA Method 8270 Target Analyte List Metals by EPA Method 6010B including Mercury and Boron
24-36 inches below grade (Including MS/MSD 1 per 20 samples Trip blank- 1/cooler Duplicate 1 per 20 samples)	Up to 4	Residential Locations	Up to 7* (Including QA/QC)	Target Compound List SVOCs +20 by EPA Method 8270 Target Analyte List Metals by EPA Method 6010B including Mercury and Boron
36-48 inches below grade (Including MS/MSD 1 per 20 samples Trip blank- 1/cooler Duplicate 1 per 20 samples)	Up to 4	Residential Locations	Up to 7* (Including QA/QC)	Target Compound List SVOCs +20 by EPA Method 8270 Target Analyte List Metals by EPA Method 6010B including Mercury and Boron
Surface Soil Waste Characterization Sampling	Up to 400	See Figure 2 Sampling Locations	Up to 400 (No QA/QC required)	Toxicity Characteristic Leaching Procedure (TCLP) VOCs TCLP SVOCs TCLP RCRA 8 Metals Ignitability Corrosivity (pH) Total Cyanide Total Sulfide

Table 1
Remedial Design Sample Summary
Denison Park - Site # 851066
Denison Park
Corning, New York

				Total PCBs Percent Solids
Chemung River and Pond Sediment	Up to 17	See Figure 2 Sampling Locations	Up to 20* (Including QA/QC)	Target Compound List SVOCs +20 by EPA Method 8270 Target Analyte List Metals by EPA Method 6010B including Mercury and Boron

* The total number of samples collected is dependent on the observation of ash, brick, and glass in each boring. Samples will not be collected if ash, brick, or glass are observed in the sample interval.

Acronym List:
PCBs: Polychlorinated biphenyls
VOCs: Volatile Organic Compounds
SVOCs: Semi-Volatile Organic Compounds
TAL: Target Analyte List
QA: Quality Assurance
QC: Quality Control

Table 2
Analytical Methods/Quality Assurance Summary
Denison Park - Site # 851066
Denison Park
Corning, New York

					Containers per Sample			Preservation Requirements			
Parameter	**Matrix**	**Number of Samples (including Field QC)**	**Preparation Method**	**Analytical Method***	**No.**	**Size**	**Type**	**Temp.**	**Light Sensitive**	**Chemical**	**Maximum Holding Time**
Surface Soil, Sediment											
TCL SVOCs by GC/MS	Soil	Up to 1,176*	3546	SW-846 Method 8270C	1	4 oz	amber glass jar	2-6º C	Yes	NA	14 days
TAL Metals (including Mercury and Boron) by ICP	Soil	Up to 1,176*	3050B	SW-846 Method 6010B	1	4 oz	clear glass jar	NA	No	NA	6 months
Waste Characterization Soil											
TCLP VOCs	Soil	Up to 400	1311	8260	1	4 oz	amber glass jar	2-6º C	Yes	NA	14 days
TCLP SVOCs	Soil	Up to 400	1311	8270	1	4 oz	amber glass jar	2-6º C	Yes	NA	14 days
TCLP RCRA 8 Metals	Soil	Up to 400	1311	6010D	1	16 oz	clear glass jar	2-6º C	No	NA	28 days for mercury, otherwise 6 months
Ignitability	Soil	Up to 400	NA	1030	1	16 oz	clear glass jar	2-6º C	No	NA	28 days
Corrosivity/pH	Soil	Up to 400	NA	1110/9045D	1	16 oz	clear glass jar	2-6º C	No	NA	Immediate
Total PCBs	Soil	Up to 400	6003A	8082A	1	16 oz	clear glass jar	2-6º C	No	NA	14 days
Total Sulfide	Soil	Up to 400	NA	9030A	1	8 oz	clear glass jar	2-6º C	No	NA	7 days
Total Cyanide	Soil	Up to 400	9012	9012B	1	8 oz	clear glass jar	2-6º C	No	NA	14 days

* The total number of samples collected is dependent on the observation of ash, brick, and glass in each boring. Samples will not be collected if ash, brick, or glass are observed in the sample interval.

Acronym List:

GC: Gas Chromatography
ICP: Inductively Coupled Plasma
HCL: Hydrochloric Acid
TAL: Target Analyte List
CV: Cold Vapor
VOCs: Volatile Organic Compounds
SVOCs: Semi-Volatile Organic Compounds
NA: Not Applicable
PCBs: Polychlorinated Biphenyls
Oz: ounce
RCRA: Resource Conservation and Recovery Act

Table 3
Site Investigation Green and Sustainable Remediation Calculation Sheet
Denison Park - Site #851066
Denison Park
Corning, New York

BMP No.	Activity	Negative Impact	Green Remediation Option/ Best Management Practice (BMP)	Comments and Assumptions	Impact Reduction						
					Material & Waste	Water	Energy	Air	Sustainable Transportation	Species & Habitat Protection	Educational Programing and Outreach
PROJECT PLANNING BMPs											
1	Various Investigation Activities	* Drill cuttings (soil) IDW generated during soil boring installation *Combustion emissions associated with site mobilizations and drill rig operation	Reduce sampling locations by using data visualization techniques to refine CSM/SOW	TBD							BMPs and impact reductions to be included on fact sheet †
2a	HRP Mobilization to and from Site	Fuel consumption and combustion emissions associated with HRP travel	* Reduce mobilizations by consolidating schedules by conducting the Site walkthrough and GPR work will be completed within the same mobilization.	* 440 miles per round trip from HRP office in Clifton Park, NY to Site. * Light duty truck, 22.9 miles/gallon[1] * 8,774 grams (19.34 lbs.) CO2 emitted per gallon, light duty truck[3]							BMPs and impact reductions to be included on fact sheet †
2b	HRP Mobilization to and from Site	Fuel consumption and combustion emissions associated with HRP travel	Car-pool using a single vehicle whenever two or more HRP personnel are required for a site visit.	* 440 miles per round trip from HRP office in Clifton Park, NY to Site. * Crew of two HRP personnel will car-pool for soil sampling/drilling mobilization, saving one round trip. * Light duty vehicle, 22.9 miles/gallon[1] * 8,774 grams (19.34 lbs.) CO2 emitted per gallon, light duty truck[3]							BMPs and impact reductions to be included on fact sheet †

Table 3
Site Investigation Green and Sustainable Remediation Calculation Sheet
Denison Park - Site #851066
Denison Park
Corning, New York

BMP No.	Activity	Negative Impact	Green Remediation Option/ Best Management Practice (BMP)	Comments and Assumptions	Impact Reduction						
					Material & Waste	Water	Energy	Air	Sustainable Transportation	Species & Habitat Protection	Educational Programing and Outreach
FIELD WORK BMPs											
3	Drilling (Soil Borings)	Drill cuttings (soil) IDW generated during soil boring installation	Reduce drill cutting generation by installing soil borings using the direct push method instead of hollow stem auger method	*Soil borings will be installed using direct push/2-inch macrocores instead of 4-inch hollow stem auger. * Soil from all borings will be removed as IDW. * Soil weighs 1.5 tons per cu yd.							BMPs and impact reductions to be included on fact sheet †
4	Drilling (Soil Boring Installation)	Fuel consumption and combustion emissions associated with drill rig operation	Shut off drill rig when not in use.	* Geoprobe 7822 DT, Kubota 03 Series 4-cylinder engine, 0.5 gallons of diesel/hour operating at 15% engine output (when idling)[2]. * 10,217 grams (22.53 lbs.) CO2 emitted per gallon, construction equipment[3]							BMPs and impact reductions to be included on fact sheet †

Table 3
Site Investigation Green and Sustainable Remediation Calculation Sheet
Denison Park - Site #851066
Denison Park
Corning, New York

BMP No.	Activity	Negative Impact	Green Remediation Option/ Best Management Practice (BMP)	Comments and Assumptions	Impact Reduction						
					Material & Waste	Water	Energy	Air	Sustainable Transportation	Species & Habitat Protection	Educational Programing and Outreach
5	Soil Sampling	Waste cardboard generated from delivery of sample-ware	Re-use or recycle cardboard generated by sample-ware delivery	* 1 cardboard box generated from groundwater sample containers. * 1 cardboard boxes used per summa cannister. * Each box is equivalent to 0.0067 cu ft of cardboard. * 1 cu ft cardboard weighs 43 lbs.							BMPs and impact reductions to be included on fact sheet †
6	Soil Sampling	Waste plastic and glass associated with terrorcore kits	Use soil jars instead of terrorcore kits for VOC sample collection	* 2-ounce glass soil jars will be used in place of terrorcore kits. * Each terrorcore kit consists of 2.8 oz glass, 0.8 oz plastic, 0.2 oz Styrofoam.							BMPs and impact reductions to be included on fact sheet †
Totals											**BMPs and impact reductions to be included on fact sheet †**

Notes:

Activity – Describe the field activity including duration, amount material consumed.
Negative Impact- describe and quantify the negative impact on material and waste, water, energy air emissions (i.e. 300 ft of plastic tubing consumed, amount of fuel used on-site and to mobilize to the site, etc.)
Green and Sustainable Remediation Option/ Best Management Practice (BMP) – see partial list included in Appendix C of Field Activity Plan
Impact Reduction- quantify the reduction of material, air emissions, energy consumption etc.
Comment and Assumptions- list basis of calculations.
1 - Bureau of Transportation Statistics, Average Fuel Efficiency of Light Duty Vehicles, Light Duty Vehicle, Short Wheel Base
2- Kubota Corporation, Kubota 03 Series (4 -Cylinder) V2403-M-DIE3B Specification Sheet
3 - United States Environmental Protection Agency, Office of Transportation and Air Quality, U.S. Transportation Sector Greenhouse Gas Emissions 1990-2020, May 2022
4 - U.S. Energy Information Administration Heavy-Duty Trucks Fuel Economy, Annual 2020
† - Quantifiable impact reductions achieved by green and sustainable remediation BMPs may be included in site fact sheets to promote public awareness of NYSDEC green and sustainable BMPs.

APPENDIX A

2023 Parsons Site Characterization Callout Figures

Figure 4A

NEW YORK STATE Department of Environmental Conservation

Denison Park (North) -
Observations of Target Fill Material

Corning, NY

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 * 315-451-9560

Plotted By: CS

Plot Date: 6/20/2023

Document Path: Q:\GIS\NYSDEC\Corning\MXDs\Additional Properties\Denison Park\Denison Park Fig 3A.mxd

TP4
6" Glass layer at 1.5ft bgs throughout pit
DP-TP-04
SS-03
TP9
Glass/brick to 4.5ft bgs, overlain by 6" ash layer at 1.5ft bgs
DP-TP-09
Concrete, asphalt, slag, ash fill found during hand clearing
DP-PB-03
PB-3
TP6
Asphalt, slag, ash, fire brick, trace glass fill found during hand clearing
DP-MW-05
MW-3
TP7
SS-02
MW-5
TP5
MW-4
SED-01
4 bricks found at east wall of pit
DP-TP-05
SWS-01
TP8
PB-4
Discarded wire mesh fencing found 1ft bgs
DP-TP-08
Small amount of coal/slag/ash/brick fill from 0.5 to 1.5ft bgs
DP-PB-04
SED-02
SS-04
SWS-02
MW-6
PB-5

0 125 250 500
Feet

Sample Locations with Fill Material
Sample Locations with no Fill Material
Sewer ROW Site
Areas of Disturbed Lands
Tax Parcel Boundaries

Figure 4B

NEW YORK STATE | Department of Environmental Conservation

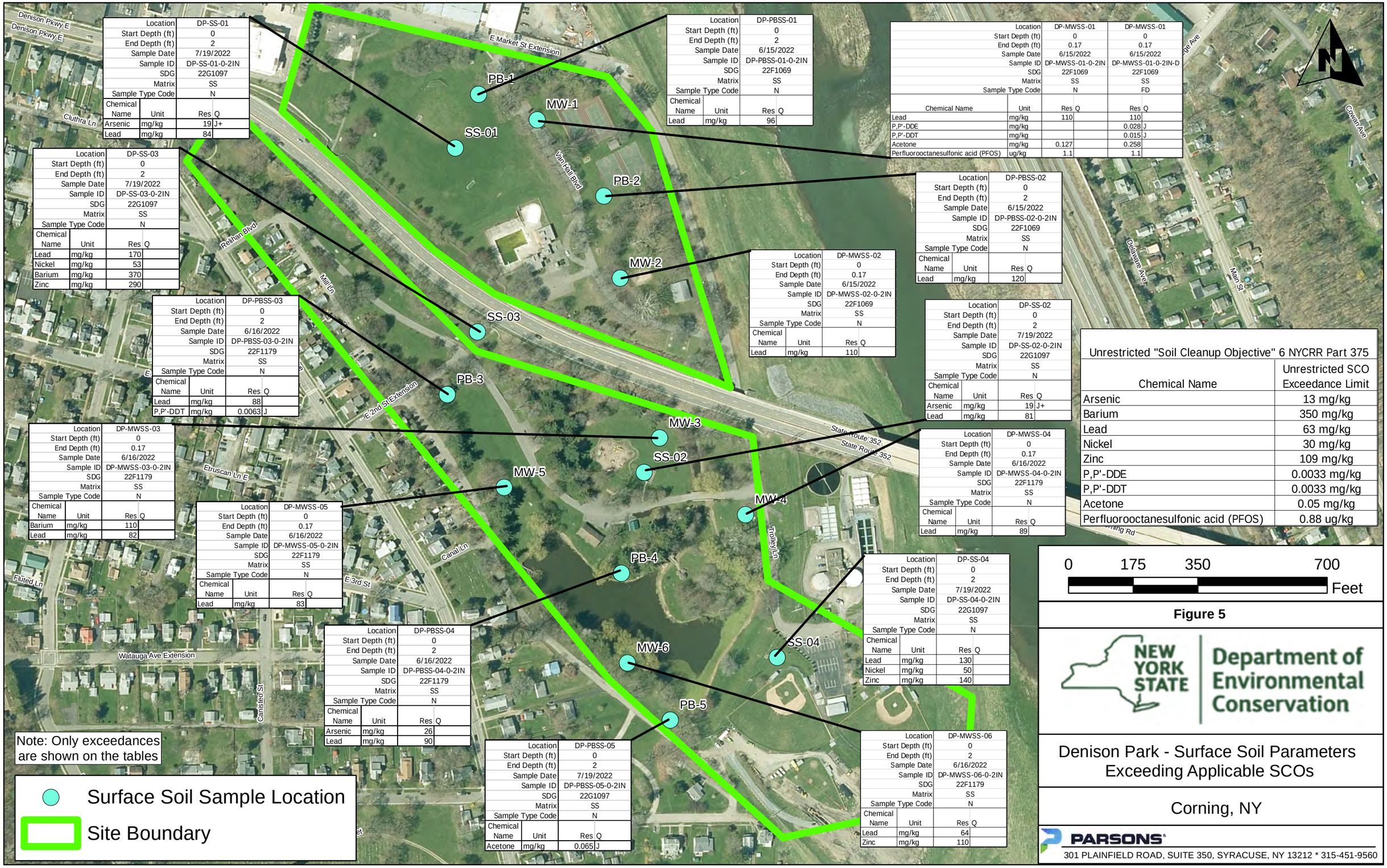
Denison Park (South) -
Observations of Target Fill Material

Corning, NY

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 * 315-451-9560

Plotted By: CS
Plot Date: 6/20/2023

Document Path: Q:\GIS\NYSDEC\Corning\MXDs\Additional Properties\Denison Park\Denison Park Fig 3B.mxd



Location	DP-SS-01
Start Depth (ft)	0
End Depth (ft)	2
Sample Date	7/19/2022
Sample ID	DP-SS-01-0-2IN
SDG	22G1097
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Arsenic	mg/kg	19	J+
Lead	mg/kg	84	

Location	DP-PBSS-01
Start Depth (ft)	0
End Depth (ft)	2
Sample Date	6/15/2022
Sample ID	DP-PBSS-01-0-2IN
SDG	22F1069
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	96	

Location	DP-MWSS-01	DP-MWSS-01
Start Depth (ft)	0	0
End Depth (ft)	0.17	0.17
Sample Date	6/15/2022	6/15/2022
Sample ID	DP-MWSS-01-0-2IN	DP-MWSS-01-0-2IN-D
SDG	22F1069	22F1069
Matrix	SS	SS
Sample Type Code	N	FD

Chemical Name	Unit	Res	Q	Res	Q
Lead	mg/kg	110		110	
P,P'-DDE	mg/kg			0.028	J
P,P'-DDT	mg/kg			0.015	J
Acetone	mg/kg	0.127		0.258	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	1.1		1.1	

Location	DP-SS-03
Start Depth (ft)	0
End Depth (ft)	2
Sample Date	7/19/2022
Sample ID	DP-SS-03-0-2IN
SDG	22G1097
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	170	
Nickel	mg/kg	53	
Barium	mg/kg	370	
Zinc	mg/kg	290	

Location	DP-PBSS-02
Start Depth (ft)	0
End Depth (ft)	2
Sample Date	6/15/2022
Sample ID	DP-PBSS-02-0-2IN
SDG	22F1069
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	120	

Location	DP-MWSS-02
Start Depth (ft)	0
End Depth (ft)	0.17
Sample Date	6/15/2022
Sample ID	DP-MWSS-02-0-2IN
SDG	22F1069
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	110	

Location	DP-PBSS-03
Start Depth (ft)	0
End Depth (ft)	2
Sample Date	6/16/2022
Sample ID	DP-PBSS-03-0-2IN
SDG	22F1179
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	88	
P,P'-DDT	mg/kg	0.0063	J

Location	DP-SS-02
Start Depth (ft)	0
End Depth (ft)	2
Sample Date	7/19/2022
Sample ID	DP-SS-02-0-2IN
SDG	22G1097
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Arsenic	mg/kg	19	J+
Lead	mg/kg	81	

Location	DP-MWSS-03
Start Depth (ft)	0
End Depth (ft)	0.17
Sample Date	6/16/2022
Sample ID	DP-MWSS-03-0-2IN
SDG	22F1179
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Barium	mg/kg	110	
Lead	mg/kg	82	

Location	DP-MWSS-04
Start Depth (ft)	0
End Depth (ft)	0.17
Sample Date	6/16/2022
Sample ID	DP-MWSS-04-0-2IN
SDG	22F1179
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	89	

Location	DP-MWSS-05
Start Depth (ft)	0
End Depth (ft)	0.17
Sample Date	6/16/2022
Sample ID	DP-MWSS-05-0-2IN
SDG	22F1179
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	83	

Location	DP-SS-04
Start Depth (ft)	0
End Depth (ft)	2
Sample Date	7/19/2022
Sample ID	DP-SS-04-0-2IN
SDG	22G1097
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	130	
Nickel	mg/kg	50	
Zinc	mg/kg	140	

Location	DP-PBSS-04
Start Depth (ft)	0
End Depth (ft)	2
Sample Date	6/16/2022
Sample ID	DP-PBSS-04-0-2IN
SDG	22F1179
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Arsenic	mg/kg	26	
Lead	mg/kg	90	

Location	DP-PBSS-05
Start Depth (ft)	0
End Depth (ft)	2
Sample Date	7/19/2022
Sample ID	DP-PBSS-05-0-2IN
SDG	22G1097
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Acetone	mg/kg	0.065	J

Location	DP-MWSS-06
Start Depth (ft)	0
End Depth (ft)	2
Sample Date	6/16/2022
Sample ID	DP-MWSS-06-0-2IN
SDG	22F1179
Matrix	SS
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	64	
Zinc	mg/kg	110	

Unrestricted "Soil Cleanup Objective" 6 NYCRR Part 375

Chemical Name	Unrestricted SCO Exceedance Limit
Arsenic	13 mg/kg
Barium	350 mg/kg
Lead	63 mg/kg
Nickel	30 mg/kg
Zinc	109 mg/kg
P,P'-DDE	0.0033 mg/kg
P,P'-DDT	0.0033 mg/kg
Acetone	0.05 mg/kg
Perfluorooctanesulfonic acid (PFOS)	0.88 ug/kg

Note: Only exceedances are shown on the tables

Surface Soil Sample Location

Site Boundary

Plotted By: CS

Plot Date: 6/20/2023

Figure 5

NEW YORK STATE | Department of Environmental Conservation

Denison Park - Surface Soil Parameters Exceeding Applicable SCOs

Corning, NY

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 * 315-451-9560

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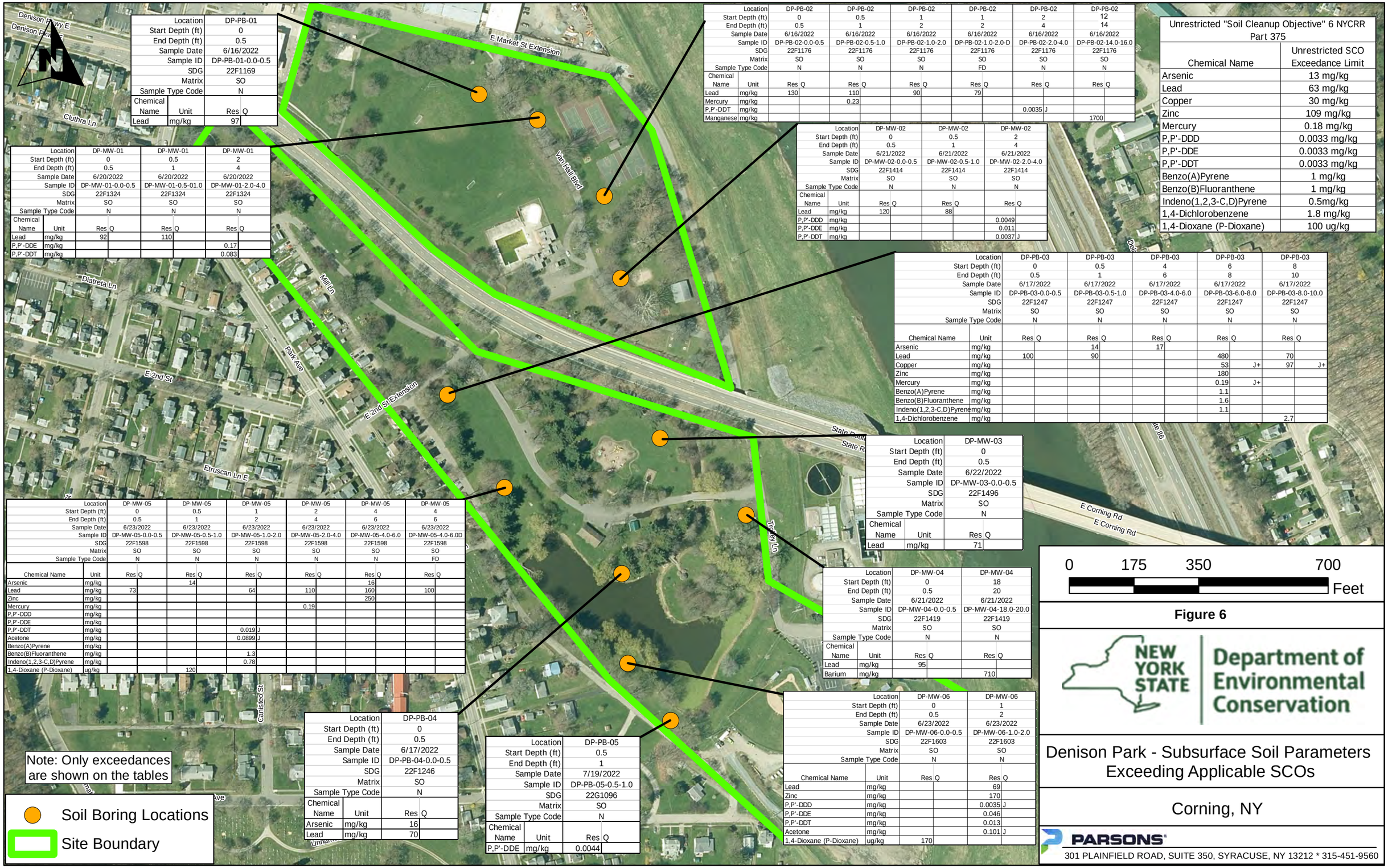


Location	DP-PB-01
Start Depth (ft)	0
End Depth (ft)	0.5
Sample Date	6/16/2022
Sample ID	DP-PB-01-0.0-0.5
SDG	22F1169
Matrix	SO
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	97	

Location	DP-MW-01	DP-MW-01	DP-MW-01
Start Depth (ft)	0	0.5	2
End Depth (ft)	0.5	1	4
Sample Date	6/20/2022	6/20/2022	6/20/2022
Sample ID	DP-MW-01-0.0-0.5	DP-MW-01-0.5-01.0	DP-MW-01-2.0-4.0
SDG	22F1324	22F1324	22F1324
Matrix	SO	SO	SO
Sample Type Code	N	N	N

Chemical Name	Unit	Res	Q	Res	Q	Res	Q
Lead	mg/kg	92		110			
P,P'-DDE	mg/kg					0.17	
P,P'-DDT	mg/kg					0.083	

Location	DP-PB-02	DP-PB-02	DP-PB-02	DP-PB-02	DP-PB-02	DP-PB-02
Start Depth (ft)	0	0.5	1	1	2	12
End Depth (ft)	0.5	1	2	2	4	14
Sample Date	6/16/2022	6/16/2022	6/16/2022	6/16/2022	6/16/2022	6/16/2022
Sample ID	DP-PB-02-0.0-0.5	DP-PB-02-0.5-1.0	DP-PB-02-1.0-2.0	DP-PB-02-1.0-2.0-D	DP-PB-02-2.0-4.0	DP-PB-02-14.0-16.0
SDG	22F1176	22F1176	22F1176	22F1176	22F1176	22F1176
Matrix	SO	SO	SO	SO	SO	SO
Sample Type Code	N	N	N	FD	N	N

Chemical Name	Unit	Res	Q	Res	Q	Res	Q	Res	Q	Res	Q	Res	Q
Lead	mg/kg	130		110		90		79					
Mercury	mg/kg			0.23									
P,P'-DDT	mg/kg									0.0035	J		
Manganese	mg/kg											1700	

Location	DP-MW-02	DP-MW-02	DP-MW-02
Start Depth (ft)	0	0.5	2
End Depth (ft)	0.5	1	4
Sample Date	6/21/2022	6/21/2022	6/21/2022
Sample ID	DP-MW-02-0.0-0.5	DP-MW-02-0.5-1.0	DP-MW-02-2.0-4.0
SDG	22F1414	22F1414	22F1414
Matrix	SO	SO	SO
Sample Type Code	N	N	N

Chemical Name	Unit	Res	Q	Res	Q	Res	Q
Lead	mg/kg	120		88			
P,P'-DDD	mg/kg					0.0049	
P,P'-DDE	mg/kg					0.011	
P,P'-DDT	mg/kg					0.0037	J

Unrestricted "Soil Cleanup Objective" 6 NYCRR Part 375	
Chemical Name	Unrestricted SCO Exceedance Limit
Arsenic	13 mg/kg
Lead	63 mg/kg
Copper	30 mg/kg
Zinc	109 mg/kg
Mercury	0.18 mg/kg
P,P'-DDD	0.0033 mg/kg
P,P'-DDE	0.0033 mg/kg
P,P'-DDT	0.0033 mg/kg
Benzo(A)Pyrene	1 mg/kg
Benzo(B)Fluoranthene	1 mg/kg
Indeno(1,2,3-C,D)Pyrene	0.5mg/kg
1,4-Dichlorobenzene	1.8 mg/kg
1,4-Dioxane (P-Dioxane)	100 ug/kg

Location	DP-PB-03	DP-PB-03	DP-PB-03	DP-PB-03	DP-PB-03
Start Depth (ft)	0	0.5	4	6	8
End Depth (ft)	0.5	1	6	8	10
Sample Date	6/17/2022	6/17/2022	6/17/2022	6/17/2022	6/17/2022
Sample ID	DP-PB-03-0.0-0.5	DP-PB-03-0.5-1.0	DP-PB-03-4.0-6.0	DP-PB-03-6.0-8.0	DP-PB-03-8.0-10.0
SDG	22F1247	22F1247	22F1247	22F1247	22F1247
Matrix	SO	SO	SO	SO	SO
Sample Type Code	N	N	N	N	N

Chemical Name	Unit	Res	Q	Res	Q	Res	Q	Res	Q	Res	Q	Res	Q
Arsenic	mg/kg			14		17							
Lead	mg/kg	100		90				480		70			
Copper	mg/kg							53	J+	97	J+		
Zinc	mg/kg							180					
Mercury	mg/kg							0.19	J+				
Benzo(A)Pyrene	mg/kg							1.1					
Benzo(B)Fluoranthene	mg/kg							1.6					
Indeno(1,2,3-C,D)Pyrene	mg/kg							1.1					
1,4-Dichlorobenzene	mg/kg									2.7			

Location	DP-MW-03
Start Depth (ft)	0
End Depth (ft)	0.5
Sample Date	6/22/2022
Sample ID	DP-MW-03-0.0-0.5
SDG	22F1496
Matrix	SO
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	71	

Location	DP-MW-04	DP-MW-04
Start Depth (ft)	0	18
End Depth (ft)	0.5	20
Sample Date	6/21/2022	6/21/2022
Sample ID	DP-MW-04-0.0-0.5	DP-MW-04-18.0-20.0
SDG	22F1419	22F1419
Matrix	SO	SO
Sample Type Code	N	N

Chemical Name	Unit	Res	Q	Res	Q
Lead	mg/kg	95			
Barium	mg/kg			710	

Location	DP-MW-05	DP-MW-05	DP-MW-05	DP-MW-05	DP-MW-05	DP-MW-05
Start Depth (ft)	0	0.5	1	2	4	4
End Depth (ft)	0.5	1	2	4	6	6
Sample Date	6/23/2022	6/23/2022	6/23/2022	6/23/2022	6/23/2022	6/23/2022
Sample ID	DP-MW-05-0.0-0.5	DP-MW-05-0.5-1.0	DP-MW-05-1.0-2.0	DP-MW-05-2.0-4.0	DP-MW-05-4.0-6.0	DP-MW-05-4.0-6.0D
SDG	22F1598	22F1598	22F1598	22F1598	22F1598	22F1598
Matrix	SO	SO	SO	SO	SO	SO
Sample Type Code	N	N	N	N	N	FD

Chemical Name	Unit	Res	Q	Res	Q	Res	Q	Res	Q	Res	Q	Res	Q
Arsenic	mg/kg			14						16			
Lead	mg/kg	73				64		110		160		100	
Zinc	mg/kg									250			
Mercury	mg/kg							0.19					
P,P'-DDD	mg/kg												
P,P'-DDE	mg/kg												
P,P'-DDT	mg/kg					0.019	J						
Acetone	mg/kg					0.0899	J						
Benzo(A)Pyrene	mg/kg												
Benzo(B)Fluoranthene	mg/kg					1.3							
Indeno(1,2,3-C,D)Pyrene	mg/kg					0.78							
1,4-Dioxane (P-Dioxane)	ug/kg			120									

Location	DP-PB-04
Start Depth (ft)	0
End Depth (ft)	0.5
Sample Date	6/17/2022
Sample ID	DP-PB-04-0.0-0.5
SDG	22F1246
Matrix	SO
Sample Type Code	N

Chemical Name	Unit	Res	Q
Arsenic	mg/kg	16	
Lead	mg/kg	70	

Location	DP-PB-05
Start Depth (ft)	0.5
End Depth (ft)	1
Sample Date	7/19/2022
Sample ID	DP-PB-05-0.5-1.0
SDG	22G1096
Matrix	SO
Sample Type Code	N

Chemical Name	Unit	Res	Q
P,P'-DDE	mg/kg	0.0044	

Location	DP-MW-06	DP-MW-06
Start Depth (ft)	0	1
End Depth (ft)	0.5	2
Sample Date	6/23/2022	6/23/2022
Sample ID	DP-MW-06-0.0-0.5	DP-MW-06-1.0-2.0
SDG	22F1603	22F1603
Matrix	SO	SO
Sample Type Code	N	N

Chemical Name	Unit	Res	Q	Res	Q
Lead	mg/kg			69	
Zinc	mg/kg			170	
P,P'-DDD	mg/kg			0.0035	J
P,P'-DDE	mg/kg			0.046	
P,P'-DDT	mg/kg			0.013	
Acetone	mg/kg			0.101	J
1,4-Dioxane (P-Dioxane)	ug/kg	170			

0 175 350 700 Feet

Figure 6

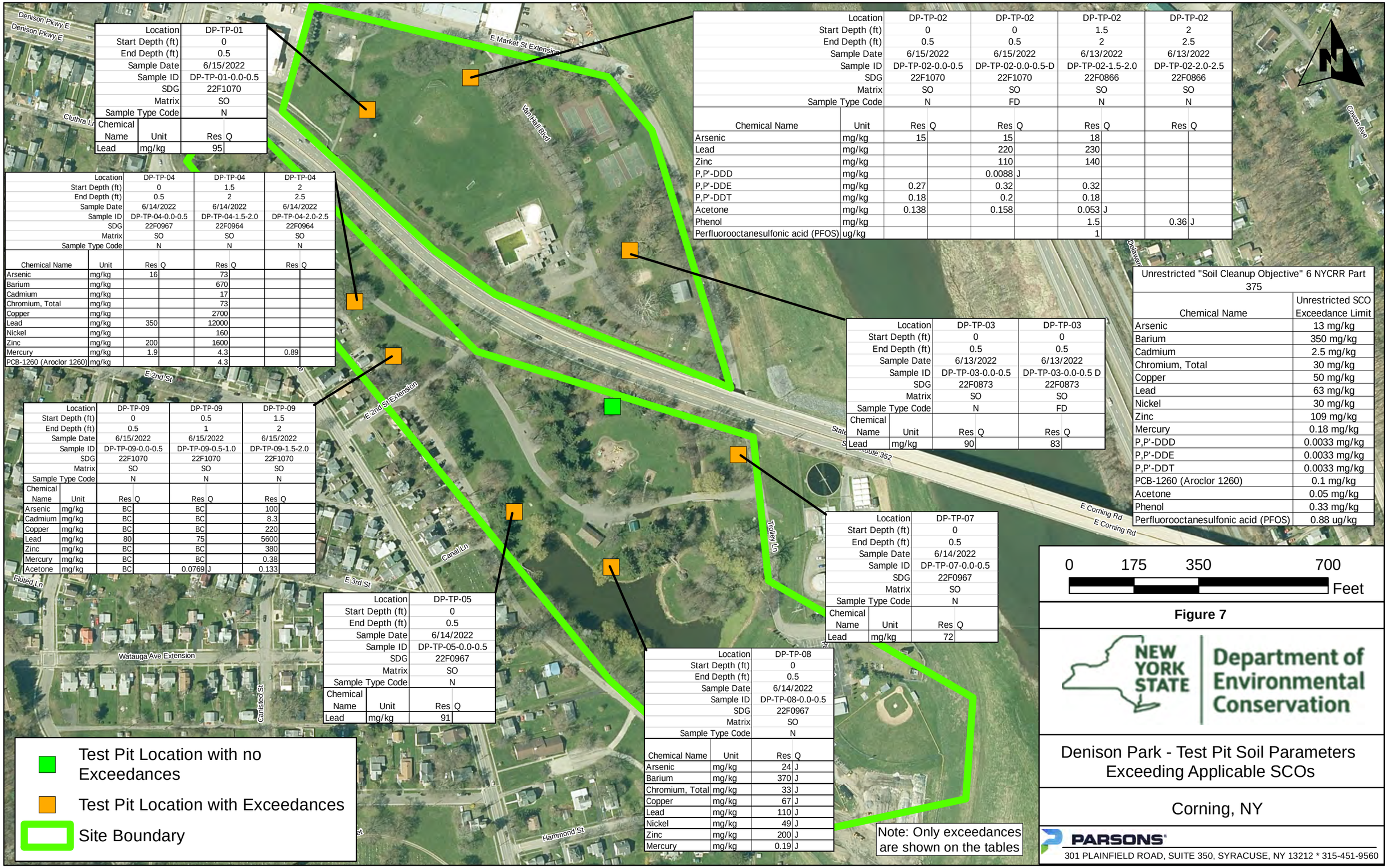
NEW YORK STATE | Department of Environmental Conservation

Denison Park - Subsurface Soil Parameters Exceeding Applicable SCOs

Corning, NY

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 * 315-451-9560

Document Path: Q:\GIS\NYSDEC\Corning\MXDs\Additional Properties\Denison Park\Denison Park Fig 5.mxd



Location	DP-TP-01
Start Depth (ft)	0
End Depth (ft)	0.5
Sample Date	6/15/2022
Sample ID	DP-TP-01-0.0-0.5
SDG	22F1070
Matrix	SO
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	95	

Location	DP-TP-02	DP-TP-02	DP-TP-02	DP-TP-02
Start Depth (ft)	0	0	1.5	2
End Depth (ft)	0.5	0.5	2	2.5
Sample Date	6/15/2022	6/15/2022	6/13/2022	6/13/2022
Sample ID	DP-TP-02-0.0-0.5	DP-TP-02-0.0-0.5-D	DP-TP-02-1.5-2.0	DP-TP-02-2.0-2.5
SDG	22F1070	22F1070	22F0866	22F0866
Matrix	SO	SO	SO	SO
Sample Type Code	N	FD	N	N

Chemical Name	Unit	Res	Q	Res	Q	Res	Q	Res	Q
Arsenic	mg/kg	15		15		18			
Lead	mg/kg			220		230			
Zinc	mg/kg			110		140			
P,P'-DDD	mg/kg			0.0088	J				
P,P'-DDE	mg/kg	0.27		0.32		0.32			
P,P'-DDT	mg/kg	0.18		0.2		0.18			
Acetone	mg/kg	0.138		0.158		0.053	J		
Phenol	mg/kg					1.5		0.36	J
Perfluorooctanesulfonic acid (PFOS)	ug/kg					1			

Location	DP-TP-04	DP-TP-04	DP-TP-04
Start Depth (ft)	0	1.5	2
End Depth (ft)	0.5	2	2.5
Sample Date	6/14/2022	6/14/2022	6/14/2022
Sample ID	DP-TP-04-0.0-0.5	DP-TP-04-1.5-2.0	DP-TP-04-2.0-2.5
SDG	22F0967	22F0964	22F0964
Matrix	SO	SO	SO
Sample Type Code	N	N	N

Chemical Name	Unit	Res	Q	Res	Q	Res	Q
Arsenic	mg/kg	16		73			
Barium	mg/kg			670			
Cadmium	mg/kg			17			
Chromium, Total	mg/kg			73			
Copper	mg/kg			2700			
Lead	mg/kg	350		12000			
Nickel	mg/kg			160			
Zinc	mg/kg	200		1600			
Mercury	mg/kg	1.9		4.3		0.89	
PCB-1260 (Aroclor 1260)	mg/kg			4.3			

Location	DP-TP-03	DP-TP-03
Start Depth (ft)	0	0
End Depth (ft)	0.5	0.5
Sample Date	6/13/2022	6/13/2022
Sample ID	DP-TP-03-0.0-0.5	DP-TP-03-0.0-0.5 D
SDG	22F0873	22F0873
Matrix	SO	SO
Sample Type Code	N	FD

Chemical Name	Unit	Res	Q	Res	Q
Lead	mg/kg	90		83	

Location	DP-TP-09	DP-TP-09	DP-TP-09
Start Depth (ft)	0	0.5	1.5
End Depth (ft)	0.5	1	2
Sample Date	6/15/2022	6/15/2022	6/15/2022
Sample ID	DP-TP-09-0.0-0.5	DP-TP-09-0.5-1.0	DP-TP-09-1.5-2.0
SDG	22F1070	22F1070	22F1070
Matrix	SO	SO	SO
Sample Type Code	N	N	N

Chemical Name	Unit	Res	Q	Res	Q	Res	Q
Arsenic	mg/kg	BC		BC		100	
Cadmium	mg/kg	BC		BC		8.3	
Copper	mg/kg	BC		BC		220	
Lead	mg/kg	80		75		5600	
Zinc	mg/kg	BC		BC		380	
Mercury	mg/kg	BC		BC		0.38	
Acetone	mg/kg	BC		0.0769	J	0.133	

Location	DP-TP-05
Start Depth (ft)	0
End Depth (ft)	0.5
Sample Date	6/14/2022
Sample ID	DP-TP-05-0.0-0.5
SDG	22F0967
Matrix	SO
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	91	

Location	DP-TP-07
Start Depth (ft)	0
End Depth (ft)	0.5
Sample Date	6/14/2022
Sample ID	DP-TP-07-0.0-0.5
SDG	22F0967
Matrix	SO
Sample Type Code	N

Chemical Name	Unit	Res	Q
Lead	mg/kg	72	

Location	DP-TP-08
Start Depth (ft)	0
End Depth (ft)	0.5
Sample Date	6/14/2022
Sample ID	DP-TP-08-0.0-0.5
SDG	22F0967
Matrix	SO
Sample Type Code	N

Chemical Name	Unit	Res	Q
Arsenic	mg/kg	24	J
Barium	mg/kg	370	J
Chromium, Total	mg/kg	33	J
Copper	mg/kg	67	J
Lead	mg/kg	110	J
Nickel	mg/kg	49	J
Zinc	mg/kg	200	J
Mercury	mg/kg	0.19	J

Unrestricted "Soil Cleanup Objective" 6 NYCRR Part 375

Chemical Name	Unrestricted SCO Exceedance Limit
Arsenic	13 mg/kg
Barium	350 mg/kg
Cadmium	2.5 mg/kg
Chromium, Total	30 mg/kg
Copper	50 mg/kg
Lead	63 mg/kg
Nickel	30 mg/kg
Zinc	109 mg/kg
Mercury	0.18 mg/kg
P,P'-DDD	0.0033 mg/kg
P,P'-DDE	0.0033 mg/kg
P,P'-DDT	0.0033 mg/kg
PCB-1260 (Aroclor 1260)	0.1 mg/kg
Acetone	0.05 mg/kg
Phenol	0.33 mg/kg
Perfluorooctanesulfonic acid (PFOS)	0.88 ug/kg

Test Pit Location with no Exceedances

Test Pit Location with Exceedances

Site Boundary

Note: Only exceedances are shown on the tables

0 175 350 700 Feet

Figure 7

NEW YORK STATE | Department of Environmental Conservation

Denison Park - Test Pit Soil Parameters Exceeding Applicable SCOs

Corning, NY

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 * 315-451-9560

Plotted By: CS

Plot Date: 6/20/2023

Document Path: Q:\GIS\NYSDEC\Corning\MXDs\Additional Properties\Denison Park\Denison Park Fig 6.mxd

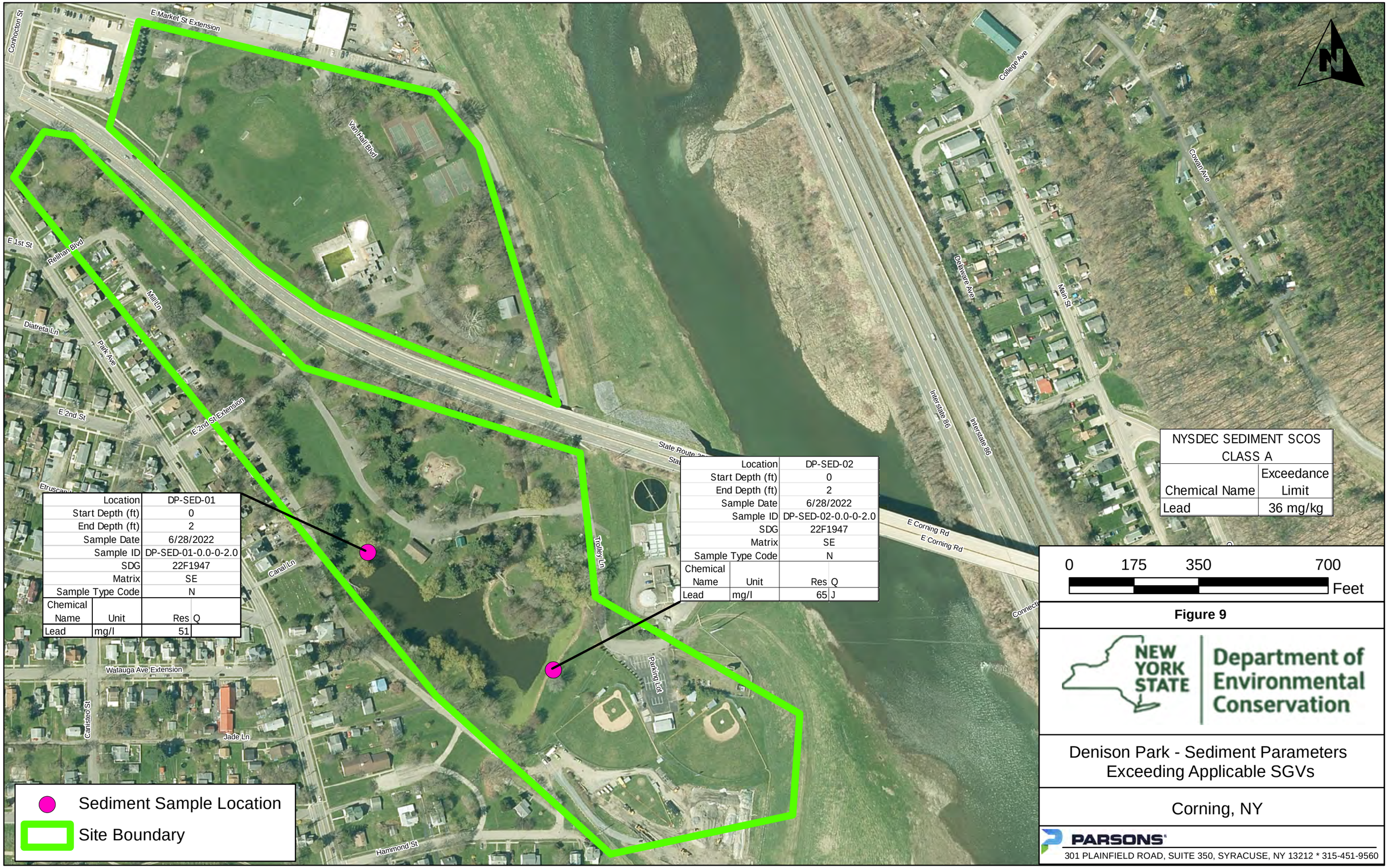


Figure 9

NEW YORK STATE | Department of Environmental Conservation

Denison Park - Sediment Parameters Exceeding Applicable SGVs

Corning, NY

PARSONS
301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 * 315-451-9560

Plotted By: CS

Plot Date: 6/20/2023

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APPENDIX B
Site-Specific Health and Safety Plan

MOVE YOUR ENVIRONMENT FORWARD

SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP)

Denison Park – Site # 851066
Denison Park
City of Corning, New York 14830

Prepared For:

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233
Contract #D009808

Prepared By:

HRP Associates, Inc.
1 Fairchild Square, Suite 110
Clifton Park, NY 12065

HRP #: DEC1057.P3

Issued On: November 24, 2025

ADDENDUM LOG		
Addendum Number	**Date Issued**	**Modification(s) Needed/Reason(s)**

DISCLAIMER

HRP Associates, Inc. does not guarantee the health or safety of any person entering this site. Due to the potential hazards of this site and the activity occurring thereon, it is not possible to discover, evaluate, and provide protection for all possible hazards which may be encountered. Strict adherence to the health and safety guidelines set forth herein will reduce, but not eliminate, the potential for injury at this site. The health and safety guidelines in this plan were prepared specifically for this site for use and should not be used on any other site.

If unexpected conditions were to arise, any employee will have "Stop Work Authority." Employees should be capable of identifying existing and predictable hazards in their surroundings or working conditions that are unsanitary, hazardous, or dangerous to the workers. The employee(s) has the authority to impose prompt corrective measures to eliminate these hazards. Some examples include the ability to stop work, close a jobsite, or evacuate workers if needed.

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1.0 INTRODUCTION

This Health and Safety Plan (HASP) has been prepared for the Denison Park (NYSDEC Site #851066) Remedial Investigation/Feasibility Study (RI/FS). The general and contact information of the site can be found on **Table 1** below.

This HASP has been developed in accordance with HRP Associates, Inc.'s (HRP) Health and Safety (H&S) procedures as required under the Occupational Safety and Health Administration's (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) regulation (Code of Federal Regulations (CFR), 29 CFR 1910.120). Specific H&S information for the project is contained in this HASP. This Plan has also been developed to establish minimum standards necessary for onsite investigation activities to protect the H&S of HRP personnel.

HRP personnel and associated contractors shall be familiar with this HASP prior to conducting proposed site work. This plan must be present onsite and be available for reference/inspection when the subject site work is being conducted.

All project personnel shall sign the certification page acknowledging that they have read and understand this HASP. Changes in the scope of the project or introduction of new hazards to the project shall require revision of the HASP, and approval by the Project Manager (PM) under the Addendum Log.

TABLE 1 GENERAL INFORMATION		
Project Number	DEC1057.P3	
Site/Project Name	Denison Park – Site #851066	
Site Address/Location	Denison Park, Corning, NY	
CONTACTS		
HRP's Contacts		
Title	**Name**	**Phone Number**
Project Manager	John Gorman	716-225-5545
Site Safety Officer	Stephanie Pascual	518-914-6012
Site-Specific Contacts		
Name	Thoren Gianuzzi, Project Manager	
Title	Project Manager, New York State Department of Environmental Conservation	
Phone	518-402-8246	

2.0 EMERGENCY CONTACTS AND PROCEDURES

2.1 Contacts

Table 2 presents the Emergency Contact information associated with the planned RI/FS work. The following information, including directions to the nearest hospital shall be posted at the Site. When contacting the local authorities, be sure to provide: your name, facility name, full address, telephone number, and the nature of the emergency. The information on **Table 2** should be revised, if necessary, upon review of the work to be completed and prior to initializing the activities.

TABLE 2
EMERGENCY CONTACTS

Contact	Name	Phone Number
Local Police	City of Corning Police Department	607-962-0340 ext. 1500
Local Ambulance	Guthrie Corning Hospital	607-937-7200
Local Fire Department	City of Corning Fire Department	607-962-0340
Poison Control Center		1-800-222-1222
National Response Center		800-424-8802
Spill Response Agency	NYSDEC Spills Hotline	1-800-457-7362
Local Hospital	Guthrie Corning Hospital	607-937-7200
Local Hospital Address (Map in **Figure 3**)	1 Guthrie Drive, Corning, NY	
HRP's Site Safety Officer	Stephanie Pascual	518-914-6012
Project Manager	John Gorman	716-225-5545
State Agency PM	Thoren Gianuzzi, Project Manager, NYSDEC	518-402-8246
Site Owner/Contact	Alex Hamilton, Recreation Director – City of Corning	607-962-0340 ext 1125

For the police, ambulance, and fire department, contact 9-1-1.

The Site Safety Officer will coordinate the entry and exit of response personnel in the event of an emergency.

Map and directions to the following medical facilities are provided on **Figure 3**.

2.2 Emergency Procedures

In the event of a worker injury, fire, explosion, spill, flood, or other emergency that threatens the safety and health of site workers, the following procedure will be followed:

1. If the emergency originates within the work area covered by this Plan, the HRP Site Safety Officer shall act as the Emergency Coordinator. The emergency evacuation signal is an air horn or a loud yell. All emergency situations (including worker injuries, no matter how

small) will be reported to the Site Safety Officer, who will determine the appropriate emergency response, up to and including evacuation. The Site Safety Officer will be responsible for reporting any emergency situation to the appropriate authorities, using a telephone or other appropriate method.

2. In the case of an evacuation, site workers will exit the site along the safest route(s) and assemble with team members at a safe rally point. Those workers in the Exclusion Zone will follow the emergency decontamination procedures outlined in **Section 6.4**. Accounting for all site personnel will be conducted by the Site Safety Officer using the personnel log at a location determined by the Site Safety Officer.
3. HRP personnel are not permitted to participate in handling the emergency. Fire and medical emergencies will be handled by the local fire department and ambulance service. In the case of a spill of hazardous materials, a local commercial spill clean-up firm should be contacted.

   If the spill begins to flow overland and threatens to contaminate a storm drain or surface water, HRP personnel may attempt to contain and isolate the spill using any available resources, but only if, in the judgment of the Site Safety Officer, such action will not expose the workers to dangerous levels of hazardous substances and is necessary to preserve life or property. In the event that a spill of material of any amount threatens to reach navigable waters, the National Response Center (NRC) shall be contacted.
4. Once initial emergency procedures to protect worker safety and health have been addressed, and control of emergency has been completed, the Site Safety Officer will complete HRP's Incident Investigation Report and submit this form to the appropriate personnel (HRP and/or client contact).
5. All site workers will be familiarized with the above procedures during the pre-entry briefing to be conducted before site work begins.

In the event of an evacuation, meet at the following rally points (shown on **Figure 2**):

- Denison Park Pool Buildings

2.3 Emergency Supplies and Equipment

Table 3 presents the appropriate Emergency Supplies and Equipment List for the planned listed work. Select the appropriate supplies and equipment based on the proposed work. The information on **Table 3** should be revised, if necessary, upon review of the listed work and prior to initializing the activities.

TABLE 3
EMERGENCY SUPPLIES/EQUIPMENT

SUPPLY ITEM	LOCATION ONSITE
☒ First Aid Kit	In Vehicle
☒ Fire Extinguisher	In Vehicle
☒ Eye Wash (Bottle)	In Vehicle
☒ Spill Kit	In Vehicle

TABLE 3 EMERGENCY SUPPLIES/EQUIPMENT	
SUPPLY ITEM	**LOCATION ONSITE**
☒ Hand Sanitizer	In Vehicle
☒ Caution Tape, Cones	In Vehicle
☐ Air Horn	In Vehicle
☒ Flashlight	In Vehicle
☒ Water or Other Fluid	In Vehicle
☒ Wash and Dry Towels	In Vehicle
☒ Sunscreen	In Vehicle
☒ Insect Repellant	In Vehicle
☒ Cooling Aids (cooling towels, vests, etc.)	In Vehicle
☐ Other	

3.0 SCOPE OF WORK

3.1 Site's Background

Denison Park is located in the southeastern portion of the City of Corning, NY and is bordered by residential neighborhoods to the west and south, the Wastewater Treatment facility and Baseball Complex on the southeast, the Chemung River to the east, and commercial and industrial facilities to the north.

The Site is a City park and is split into north and south sections by New York State Route 352, an elevated roadway and bridge that spans the Chemung River to connect the City of Corning with the City of Elmira, New York.

In 1857, the site was undeveloped with several low-lying areas representing floodplain ponds or drainages. In 1906, 33 acres were purchased by the Business Men's Association for a park, and Harold A. Caparn, a prominent Landscape Architect from New York City, was hired to design the park. With donations from the Denison family and the public, park construction began in 1907 and included a small zoo and a 10-15 foot high levee along the Chemung River floodplain that was wide enough to be used as a carriage path. Ongoing construction in 1910 included a concrete children's wading pool, picnic pavilions, drinking fountains, a concrete bridge, a tower, a baseball field, a quarter mile running track and a playground. The original spatial organization of the park (1907-1910) indicated a U-shaped water feature which appears to correspond to the two original drainages (as arms of the U) and mill pond location from 1873. Additional park features were added from 1916-1919, including sandboxes, a large open-air picnic pavilion, tennis courts, and Memorial Gate, designed by James Walker, an Architect from Buffalo, New York. A public swimming pool and bath house were built and opened in 1921. The 1972 flood destroyed much of Denison Park. When the

park was rehabilitated and repaired, the original 1920s pool and bath house were demolished and replaced. Portions of the two arms of the lake were truncated and infilled south of the elevated roadway and a portion of the eastern arm north of the elevated roadway was isolated becoming a lagoon. Subsequently, the lagoon in the north park area was infilled and by 1973, the west arm was infilled and the west side of the lake was squared off in the south park area.

Figure 1 shows the site's location map.

3.2 Project's Description

The Site is currently utilized for passive and active recreation with uses including sports fields, walking trails, playgrounds, picnic areas, a community pool, disc golf course, and a small pond. Based on investigations conducted to date, on-site soils and groundwater are contaminated with metals and semi-volatile organic compounds at levels exceeding applicable standards, criteria, and guidance. Glass manufacturing waste material, including ash, brick, and/or glass (ABG), was also observed in Site soils. This investigation will further delineate the nature and extent of contamination identified in previous investigations to assist in the design of the presumed remedy of excavating contaminated surface soils and installing a site cover.

Figure 2 shows the areas of environmental concern(s).

Refer to the Introduction (**Section 1.0**) for the site's information and contacts.

3.3 Site Type

TABLE 4 **SITE TYPE** (Check all that may apply to the site/project.)	
☒ Active	☐ Abandoned
☐ Industrial	☐ Landfill
☐ Inactive	☒ Unsecured
☐ Well Field	☐ Water Work
☐ Residential	☐ Railroad
☐ Undeveloped	☐ Commercial
☐ Secure	☐ Service Station
☒ Other – Active Park	

3.4 Scope of Work

In general, the work to be performed by HRP and/or HRP's subcontractors consists of investigative methods to evaluate the environmental condition of the Site. The fieldwork for this task includes the following subtasks:

The pre-design investigation sampling will include the components described below and consist of characterizing and sampling surface soil and pond sediment to meet project objectives. The number

and type of samples to be collected for laboratory analysis is discussed below. Field investigation tasks are listed below in the order that they will be completed:

1. Ground Penetrating Radar (GPR) and Utility Locate
2. GPS Survey of 75 x 75-foot grid
3. Soil Boring Installation and Surface Soil Sampling
4. Pond and River Sediment Sampling
5. Characterization and Disposal of Investigation Derived Waste (IDW)
6. Base Map Development and Site Survey

3.4.1 Geophysical Investigation/Ground Penetrating Radar (GPR)

Prior to the initiation of subsurface drilling activities completed during the pre-design investigation and in accordance with New York state law, the Site will be marked out for underground utilities by Dig Safely New York. In addition, since Dig Safe does not locate any on-site private utilities, a ground penetrating radar (GPR) survey of proposed sampling locations will be completed at the Site under HRP supervision in order to clear unmarked, underground utilities and identify subsurface anomalies, such as possible USTs, hydraulic lifts, septic tanks, etc. All identified subsurface anomalies will be painted and marked at the ground surface. Geophysical techniques include the use of GPR, radio frequency, and electromagnetic induction within each 75 x 75-foot cell and at specified residential properties. A map will be provided of identified Site utilities and subsurface anomalies to HRP by the geophysical contractor prior to any subsurface intrusive work. HRP will coordinate with the City of Corning Parks and Recreation department prior to mobilization to discuss known utilities and safely manage each work area.

3.4.2 GPS Survey

The proposed layout consists of a 75 x 75-foot grid, with one, 2-foot deep boring advanced towards the center of each grid cell. Specific sampling locations will be marked using a GPS unit to establish soil sampling coordinates prior to subsurface work. Any boring locations that were planned will be field-verified during the GPS survey to ensure that the proposed location can be accessed by a drill rig.

3.4.3 Site Survey

Following the completion of the geophysical survey and utility mark out, the surveyor contractor will collect and incorporate all previously identified utilities and subsurface anomalies as a part of the Site survey. The corners of existing hardscapes (such as paved asphalt parking lots, pools, courts, sidewalks, and buildings) will be surveyed at the Site.

A comprehensive topographic survey will be performed to provide base maps for developing the remedial design. A New York State licensed professional land surveyor will perform the survey and collect ground surface point elevation data to construct a Site contour map with 1-foot intervals. The surveyor will provide Computer-Aided Design (CAD) and PDF survey files for all collected Site data.

The survey will be referenced horizontally to the North American Datum 1983, 2011 adjustment (NAD83/2011), and vertically to the North American Vertical Datum of 1988 (NAVD88).

3.4.4 Park Soil Boring Installation and Surface Soil Sampling

All installed soil borings will be named in accordance with the established grid (**Figure 2**). The grid is established to provide adequate distribution and coverage across the Site area. Subsurface anomalies and utilities as well as overhead utilities may affect planned soil boring locations prior to installation. A minimum 10-foot distance will be maintained for soil borings in close proximity to marked or observed utilities. A GPS unit will be used to locate the coordinates for each installed boring.

Shallow soil borings will be installed to evaluate for the presence of ABG and SCO exceedances to support and determine the footprint of any remedial actions. Soil borings will be advanced using a direct-push technique (DPT) drilling rig equipped with MacroCore samplers to confirm the degree and extent of surface soil impacts above the RRU SCO. Soil cores will be advanced continuously until a depth of two-feet below grade is achieved.

Each soil core will be examined for the presence of ABG. If ABG is observed during soil boring installation, field personnel will describe and document the location, depth, and photograph the material. All soil samples will be screened for organic vapors using a photoionization detector (PID) and any evidence of contamination will be noted and/or used for selection of soil samples for laboratory analysis. All samples will be submitted to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory for analysis of Target Compound List (TCL) SVOCs by EPA Method 8270 and Target Analyte List metals by EPA Methods 6010D & 6020B. Quality control samples will be collected during soil sampling to ensure precision and accuracy of results. Duplicate and matrix/matrix spike duplicates will be collected at a frequency of 1 per 20 samples. A summary of soil sample collection and analysis is provided in **Table 2**.

Up to three soil sample samples from each boring will be collected from the depths intervals summarized below and results will be compared against the Part 375 Restricted Residential Use SCO. Soil samples will only be collected from native soils or fill that does not contain ABG. Any samples containing ABG will be considered to be contaminated in accordance with Commissioner Policy CP-51 Section G and do not require laboratory analysis. Soil boring samples will be collected from the following intervals and submitted for laboratory analysis:

- 0-2 inches (excludes sod/grass/organic)
- 2-12 inches
- 12-24 inches

Upon completion, each soil boring will be backfilled with soil cuttings, clean sand, and topped with topsoil. The area surrounding each soil boring will be returned to match previous existing conditions prior to soil boring installation.

3.4.5 Residential Soil Borings

Off-site residential properties surrounding the Site may be sampled during the PDI. Sampling will include up to four soil borings at each offsite residential property. Specific boring locations will be determined in coordination with the property owner. Access to the property will be coordinated with both the property owner and the NYSDEC. Accordingly, access agreements for the residential properties will be sent out prior to the commencement of field activities.

Shallow soil borings will be installed to evaluate for the presence of ABG and SCO exceedances to support and determine the footprint of any remedial actions. Soil borings will be advanced using a DPT drilling rig equipped with MacroCore samplers to confirm the degree and extent of surface soil impacts above the Residential Use SCO. Soil cores will be advanced continuously until a depth of four-feet below grade is achieved.

Each soil core will be examined for the presence of ABG. If ABG is observed during soil boring installation, field personnel will describe and document the location, depth, and photograph the material. All soil samples will be screened for organic vapors using a PID and any evidence of contamination will be noted and/or used for selection of soil samples for laboratory analysis. All samples will be submitted to a NYSDOH ELAP certified laboratory for analysis of TCL SVOCs by EPA Method 8270 and Target Analyte List metals by EPA Methods 6010D & 6020B. Quality control samples will be collected during soil sampling to ensure precision and accuracy of results. Duplicate and matrix/matrix spike duplicates will be collected at a frequency of 1 per 20 samples. A summary of soil sample collection and analysis is provided in **Table 2**.

Up to five soil sample samples from each boring will be collected from the depths intervals summarized below and results will be compared against the Part 375 Residential Use SCO. Soil samples will only be collected from native soils or fill that does not contain ABG. Any samples containing ABG will be considered to be contaminated in accordance with Commissioner Policy CP-51 Section G and do not require laboratory analysis. Soil boring samples will be collected from the following intervals and submitted for laboratory analysis:

- 0-2 inches (excludes sod/grass/organic)
- 2-12 inches
- 12-24 inches
- 24-36 inches
- 36-48 inches

Upon completion, each soil boring will be backfilled with soil cuttings, clean sand, and topped with topsoil. The area surrounding each soil boring will be returned to match previous existing conditions prior to soil boring installation.

3.4.6 Denison Park Pond and Chemung River Sediment Sampling

Sediment samples will be collected using a direct-push stainless steel hand auger or stainless steel trowel from the 1.3-acre on-site pond and along the western bank of the Chemung River located east of the park. Sediment samples will be collected to a depth of up to 2 ft bg from locations depicted on **Figure 2**. If a depth of 2 ft bg cannot be achieved due to poor recovery, additional sampling locations may be needed until a depth of 2 ft bg is achieved. Sediment samples will be evaluated against *the Screening and Assessment of Contaminated Sediments* guidance document

(NYSDEC 2014). All sampling tools are to be decontaminated in between sampling locations using an Alconox-water spray, scrubbed, and rinsed with deionized water.

All sediment collected during sampling will be observed for the presence of ABG and will be recorded on each log. Photographs will be taken of any ABG identified during sediment sampling. Sediment samples will be screened with a PID and headspace VOC readings will be recorded on each log. One sample will be collected from up to eight locations across the pond and one sample will be collected from up to nine locations along the western bank of the Chemung River. Sediment samples will be submitted to a NYSDOH ELAP certified laboratory for analysis of TCL SVOCs by EPA Method 8270 and Target Analyte List metals by EPA Methods 6010D & 6020B as shown on **Table 1.**

QA/QC samples will be collected during sediment sampling for parameters listed in **Table 1** at a rate of one site of QA/QC samples for every 20 regular samples collected. Results from the analytical sampling will be compared to Class A Sediment Guidance Values.

3.4.7 Soil Sampling Collection and Handling Procedures

Soil sampling equipment to be used includes stainless steel trowels, bowls, spoons, or scoops, hand auger, sample containers, sampling zip lock bags, and coolers with ice. Nitrile gloves will be worn by personnel collecting and handling the samples. All non-disposable equipment and tooling used for sampling will be properly decontaminated as described in **Sections 3.4.6 and 6.3** between sampling locations and intervals. Soil samples will be collected using clean laboratory-supplied appropriate containers and will be preserved on ice in coolers during field sampling activities. Target samples will then be submitted for laboratory analysis, and contingency samples will be stored at proper temperatures, pending follow-up analysis, as necessary.

3.4.8 Decontamination Procedures

Non-dedicated sampling equipment (i.e., drill rods, shovels, augers, etc.) will be subject to decontamination procedures prior to each sample collected to reduce the potential for cross-contamination. The decontamination procedures will include the use of a scrub wash with a solution consisting of Alconox® detergent and potable water followed by a rinse with DI water. The decontaminated equipment will be stored in clean environments (i.e., the manufacturer's storage case). Decontamination fluids will be properly labeled and securely stored in the designated waste-container staging area.

3.4.9 Disposal of Investigation Derived Waste (IDW)

Soils from the PDI may be disposed within the direct push hole (cuttings may be used to backfill holes resulting from soil sampling), the direct push hole did not penetrate an aquitard nor an aquiclude and backfilling the hole with cuttings will not create a significant path for vertical movement of contaminants. Material that is visually stained, creates high PID measurements, or exhibits strong odors shall be sampled and analyzed to ensure chemical compatibility with other cuttings before placing the materials in a common storage/disposal area if staining is present in the cuttings.

Investigation-derived waste (IDW) generated during the PDI will be containerized in NYSDOT-approved 55-gallon drums or roll-off container, labeled as IDW, and temporarily staged in a secure area. One composite sample of soil will be collected, if needed, for waste disposal profiling. The specific parameters to be analyzed will be determined in consultation with the selected disposal facility but are likely to include the following analyses:

- Corrosivity (pH)
- Ignitability
- TCLP VOCs
- TCLP SVOCs
- TCLP RCRA 8 Metals
- Total sulfide
- Total cyanide
- Total PCBs
- Percent Solids

Upon receipt of laboratory results, HRP will arrange for disposal of the wastes. HRP will sign any waste manifests as agent of the generator (NYSDEC) prior to waste transport leaving the Site. HRP will label drums as hazardous waste or as non-hazardous waste upon receipt of laboratory analytical data, or as "Pending Analysis" if results have not been received. Data validation will not be required for the waste characterization samples.

Decontamination fluids will be containerized separately from other IDW, and any decontamination fluids that do not exhibit evidence of contamination will be containerized separately from those exhibiting evidence of contamination, if present.

An IDW storage area will be established at the Site at the start of field work. The IDW storage area will include plastic sheeting and silt sock to prevent rainwater runoff. Daily IDW will be drummed and labeled as "Pending Analysis". IDW will be stored in 55-gallon steel drums in the designated storage area until waste characterization analytical results are received and sent to the disposal facility for approval. IDW will be disposed of in accordance with DER-10 as well as local, State, and Federal regulations.

Although not expected, any intrusive ground work that involves the transport and disposal of large quantities of IDW will be performed by licensed waste haulers and in accordance with local, State, and Federal regulations. Haulers will be appropriately licensed and trucks placarded. Materials to be transported by haulers will be secured using covers or tarps. If wet materials are being transported, truck liners will be used prior to leaving the Site.

3.4.9.1. Base Map Development and Site Survey

The Site and surrounding areas will be surveyed by a New York State licensed land surveyor. The field survey will include establishing project horizontal control and the collection of planimetric features for the development of 2D mapping. Only the exterior Site features will be recorded on the survey. Subsequently, a base map of the Site will be developed using CAD software that will be utilized to place all PDI soil borings and previous on-site investigations. The sample locations will be

placed on the base map by geo-referencing previous figures into the local CAD coordinate system, and will include all Geoprobe® boring locations.

Check the box for the following topics that are applicable to the project being completed (**Table 5**).

TABLE 5 TASKS	
☐ Site Inspections (e.g., ESA)	☒ Drum Sampling
☐ Industrial Hygiene	☐ Ground Water Sampling
☐ Asbestos Survey	☐ Landfill Sampling
☐ Bridge Inspections	☐ Product Sampling
☒ Drilling/Probing	☐ Remediation Monitoring (air/water)
☐ Well Repair/Abandonment	☐ Soil Gas Sampling
☐ Stack Testing	☐ Stormwater Sampling
☐ Surface Water Sampling	☒ Surveying
☐ Wastewater Sampling/Benchmark Test	☐ Confined Space Entry
☐ Excavation	☐ Emergency Spill Response Oversight
☐ Chemical/Waste Exposure/Handling	☒ Surface Soil Sampling

Should conditions or the scope of work described herein change significantly; a HASP Addendum will be completed.

A Safety and Logistics Planning call will be held prior to conducting any intrusive activities at the site. Representatives from HRP and each subcontractor will attend the call to discuss logistical and safety challenges general to the scope of work and specific to the Site. This call is documented on the Safety and Logistics Planning Log in **Appendix A**.

Specific procedures may be needed for certain job tasks, include at the end of this HASP.

4.0 ROLES AND RESPONSIBILITIES

The following personnel on **Table 6** are designated to perform the stated project activities and to ensure that the requirements of this HASP are met. The same person may fill more than one role, and/or serve as an alternate in the absence of the designated team member.

A complete list of HRP employee and subcontractor responsibilities (as applicable) can be found in the HRP's H&S procedures.

NOTE: Any employee has the STOP WORK AUTHORITY (sometimes known as PAUSE WORK).

TABLE 6 ROLES AND RESPONSIBILITIES	
Project Team Member	**Responsibilities and Tasks**
Stephanie Pascual, Consultant	**HRP's Site Safety Officer:** Ensuring all site work is performed in accordance with HRP's H&S Programs, as well as in accordance with local, state, and federal regulations. • Directing and implementing HRP's HASP. • Reviewing the Subcontractor's HASP and being aware of the hazards detailed therein. • Conduct a job orientation meeting and routine safety meetings for HRP employees and subcontractors, as applicable. • Provide copies of these inspections, recordkeeping/personnel logs to the engineer/contractor as required. • Ensuring all project personnel have been adequately trained in the recognition and avoidance of unsafe conditions. • Address Stop Work Orders that shall be executed upon the determination of an imminent H&S concern and will notify the appropriate contacts upon issuance of this order. • Authorizing work to resume, upon approval from the Contractor. • Directing activities, as defined in the HRP's and the Contractor's written HASP, during emergency situations. • Providing personnel monitoring where applicable. • Ensuring that adequate personal protective equipment (PPE) and first aid supplies are available. • Ensure site security, to the extent practicable. • Ensure accident victims are promptly cared for, and the incident is investigated and properly reported. • Communicating with HRP's PM, Office H&S Manager (OHSM), and others when needed. • Report all injuries, illnesses, and other incidents to the PM.
John Gorman – Project Manager **Mark Wright, DEC Contracts Manager**	**HRP's Site Supervisor/Project Manager** • Monitor and assist the Site Safety Officer. • Maintain appropriate rules, regulations, and codes at the job site. • Provide advanced safety planning for all activities through the use of scheduling and administrative controls. • Obtain site-specific H&S information and communicate that information with the appropriate personnel (i.e., contractors, client, etc.) • Report all injuries, illnesses, and other incidents to the Regional Office Manager (ROM) and Corporate H&S Officer (CHSO). If ROM or CHSO cannot be reached, contact Chief Operating Officer (COO) or Human Resources. • Ensure all HRP personnel are trained and qualified to perform site work.
Site Workers (Subcontractors)	**Site Workers** • Read and work in accordance with this HASP. • Report all unsafe work practices to the Site Safety Officer. • Report all incidents, including near-misses to the Site Safety Officer. • Work in a safe manner. • Provide designated Competent Person

*A list of site workers will be maintained in the Personnel Log (**Appendix B**).

5.0 PROJECT HAZARDS AND CONTROL MEASURES

5.1 Identifying Hazards

The Site Supervisor/PM shall complete the Job Safety Analysis (JSA) in **Appendix C** prior to the start of the project. The JSA identifies the steps of the task to be performed with its hazards, unsafe conditions, and materials that are known or suspected to be onsite. The hazards that are listed in the JSA must be ranked using HIGH (H), MEDIUM (M), or LOW (L) based on current site knowledge. Use the results of this analysis to verify that controls in the JSA are adequate to mitigate task hazards.

Details of specific hazards associated with individual tasks will be discussed in the Toolbox Talk (formerly known as the Daily Job Brief Record (**Appendix D**)). **The Toolbox Talk is the key to the entire operation**. We are writing this HASP prior to going onsite and therefore cannot anticipate all of the site-specific hazards. The PM must do a thorough job on the Toolbox Talk, so we remain compliant. The Daily Toolbox Talk records will be reviewed by the PM at the conclusion of the field work.

5.2 Task Policy Reminders

Confined Spaces

Only properly trained HRP personnel are authorized to enter confined spaces. Confined space entry may be performed by subcontractors who have the proper training and experience to conduct this work.

Emergency Spill Response Oversight

HRP personnel are not permitted to participate in handling the emergency, only the oversight of such activities.

Excavations

It is HRP's policy to ensure that for excavation projects the subcontracted environmental contractor will provide a competent person to perform daily and as needed inspections of excavation sites. This policy will be conveyed through the subcontract agreement with the environmental contractor. At a minimum HRP will provide our employees involved with construction projects with awareness level training regarding excavation hazards and notify the subcontracted firm if any obvious excavation safety hazard exists during the course of onsite activities.

Drilling

HRP employees will not perform drilling, rather HRP will use a competent subcontractor to perform drilling services. At a minimum, HRP will provide our employees involved with this type of project with awareness level training regarding drilling, the hazards of the equipment and distance of the drilling.

Chemical Hazards

Hazardous materials and/or chemicals are listed on **Table 9**. Contaminants that are known or suspected onsite are listed at the end of this document on **Table 13** includes Chemical name, odor threshold OSHA permissible exposure limit (PEL), the American Conference of Governmental

Industrial Hygienists (ACGIH) threshold limit value (TLV), OSHA short-term exposure limit (STEL), Immediately Dangerous to Life or Health (IDLH) Concentrations, routes of exposure, and symptoms of acute exposure. Chemicals likely to be encountered during site work are highlighted.

Physical Hazards

Physical hazards known or suspected to be onsite are listed on **Table 8**. **Table 8** includes description of potential hazards, methods to identify/minimize them, potential for occurrence and potentially affected tasks.

Air Monitoring

In order to determine potential health hazards and to determine the level of personal protection needed during drilling, excavation, and sampling activities within the areas of concern, a photoionization detector (PID) will be periodically operated to monitor air quality for the purpose of ensuring minimal exposure to volatile organic compounds.

Background ambient air levels will be established outside the exclusion zone prior to commencement of site work. Ambient air sampling will occur in the breathing zone of site workers for comparison to the action levels (described below). Additionally, air sampling will be conducted in the vicinity of any intrusive exploration (i.e., near excavations, trenches, etc.) to determine if any contaminants are present. See **Table 7** for action levels to be used.

TABLE 7
ACTION LEVELS
Use the following Action Levels

INSTRUMENT	ACTION LEVEL	LEVEL OF PROTECTION OR ACTION REQUIRED
PID	<5 ppm	• Continue to monitor • Recheck levels after fifteen minutes • If levels are sustained, reassess • Use engineering controls to lower breathing zone vapors • Level C protection (at the H&S Officer's (HSO) discretion)
PID	>5 ppm	• Stop work and evacuate exclusion zone • Recheck levels after fifteen mins • Use engineering controls to lower breathing zone vapors • If levels are sustained, contact CHSO and/or OHSM, and re-evaluate HASP

NOTE: When the background reading is >1 ppm, assess the area and equipment, but continue PID monitoring and wear Level D protection

ppm = parts per million

When an action level is equaled or exceeded, the work area should be evacuated, and the area re-tested with the sampling device. If the appropriate action level continues to be exceeded, the Site Safety Officer will have to assess the use of engineering controls to lower vapor levels or availability of required increased personal protection equipment before authorizing re-entry.

5.3 Community Air Monitoring (required by DER 10)

AWARENESS FOR NEW YORK ONLY:

To ensure the protection of receptors surrounding the site HRP has developed and will implement a Community Air Monitoring Program (CAMP), which requires real time monitoring of volatile organics and dust during the remedial investigation. The CAMP will be implemented during all intrusive activities.

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

If the downwind PM-10 particulate level is 100 micrograms per cubic meter($\mu g/m^3$) greater than the background (upwind perimeter) for the fifteen-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques provided that no visible dust is migrating from the work area.

If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 $\mu g/m^3$ above the upwind level, work will 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 $\mu g/m^3$ of the upwind level and in preventing visible dust migration.

TABLE 8
HAZARDS KNOWN OR SUSPECTED ONSITE
*Check all that may potentially apply to the tasks being performed. Chemical Hazards are included on **Table 8**.

PHYSICAL HAZARDS	SAFETY HAZARDS	BIOLOGICAL HAZARDS	ERGONOMIC HAZARDS	PSYCHOLOGICAL HAZARDS
☐ Structure Unsafe	☒ Slipping/Tripping/Falling	☐ Bacteria	☒ Repetitive Movements	☒ Workload
☒ Uneven Floors/Surfaces	☐ Improper Machine Guard	☐ Viruses	☐ Improper Work Setup	☐ New Worker
☐ Ceiling Unsafe	☐ Equipment Malfunction	☐ Insects	☐ Poor Equipment Design	☐ Lone Worker
☐ Falling Objects/Loads	☒ Struck By	☒ Plants	☐ Poor Workstation Design	☐ Stress
☐ Flying Debris	☐ Homeless Encampments	☒ Animals/Birds	☒ Postural/Workflow	☐ Harassment
☒ Slippery Floor/Ground	☒ Falling Into	☐ Other (Specify)	☒ Manual Handling	☐ Communication Issue
☐ Obstructed Walking Areas	☐ Cave In/Collapses		☐ Other (Specify)	☐ Other (Specify)
☐ Misuse of Machinery	☒ Underground Utilities			
☒ Excessive/Loud Noise	☐ Excavation Spoils			
☐ Poor Lighting	☐ Superimposed Loads			
☐ Fire	☒ Mobile Equipment/Machinery			
☐ Radiation	☐ Electrical			
☐ Magnetic Fields	☐ Poor Housekeeping			
☐ Pressure Extremes	☐ Suspicious Activity/Person			
☒ Extreme Heat/Cold	☐ Security			
☒ Inclement Weather	☐ Traffic			
☐ Confined Space Entry	☐ Other (Specify)			
☐ Atmosphere				
☐ Drowning				
☒ Flooding				
☐ Poor Visibility				
☐ Other (Specify)				

CONTROL MEASURES AND WORK PRACTICES

NOTE: Hand signals are encouraged to communicate during a job where hearing is limited, but vision is not. These hand signals should be listed within the Toolbox Talk and JSA.

REQUIRED PERMITS

☒ None ☐ Excavation ☐ Encroachment ☐ Confined Space Entry ☐ Hot Tap ☐ Street Open/Closing ☐ Hot Work
☐ Energized Equipment ☐Other (Specify)

***These permits may not be issued by HRP employees. You may reference them as needed.**

TABLE 9
HAZARDOUS MATERIAL SUMMARY
Check all that may apply onsite. Attach Safety Data Sheets (SDS) in **Appendix F** for each chemical that will be brought to the site.

HAZARDOUS MATERIAL LIST		**KNOWN CHEMICALS** List the actual chemical name that HRP employees are exposed to.
☐ Acids	☐ Diesel Fuel/Oil	Arsenic, barium, boron, cadmium, chromium, lead, mercury
☐ Pickling Liquors	☐ Lubricants	Benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene
☐ Caustics	☒ PCBs	Chrysene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, phenol
☒ Pesticides	☒ PAHs	Trichloroethylene, 1,4-dioxane, 1,4-dichlorobenzene
☐ Dyes/Inks	☐ Kerosene	PFOS
☐ Cyanides	☐ Propane	PCBs
☒ Phenols	☒ PFAS	P,P'-DDD, P,P'-DDE, P,P'-DDT
☐ Halogens	☐ Mold	
☐ Dioxins	☐ Distillation Bottoms	**CONTROL MEASURES:**
☒ Fly Ash	☐ Fecal Matter/Animal Waste	Avoid skin contact with surface soil. Wear nitrile gloves when sampling/handling soils.
☐ Asbestos	☐ Laboratory Waste	
☐ Millings/Mine Tailings	☐ Pharmaceuticals	
☐ Ferrous Smelter	☐ Hospital Waste	
☐ Non-Ferrous Smelter	☐ Radiological Waste	
☒ Metals	☐ Municipal Waste	
☒ Chlorinated Solvents	☒ Construction Debris	
☐ Hydrocarbons	☐ Aluminum	
☐ Alcohols	☐ Paint	
☐ Ketones	☐ Pigments	
☐ Esters	☐ Metal Sludges	
☐ Ethers	☐ POTW Sludges	
☐ Oily Wastes	☒ Glass	
☐ Gasoline		

5.4 Equipment Usage

Table 10 below lists the equipment that will be used for the above task(s). Equipment must be included in the JSA and/or Toolbox Talk for proper hazard identification of tasks being performed.

TABLE 10 EQUIPMENT USAGE			
EQUIPMENT/ INSTRUMENT	**USED FOR**	**CALIBRATION BY**	**CALIBRATION DATE**
MiniRae 3000 PID	Screening Soils		
MiniRae 3000 PID x 2	CAMP - VOCs		
DustTrack x 2	CAMP – Particulates		

6.0 SUSPECTED CONTAMINATION AND DECONTAMINATION

6.1 Suspected Contamination

Prior to commencement of work in the area of suspected contamination, protective zones specific for each phase of the HASP will be established by the Site Safety Officer, if necessary, prior to the start of field work. These zones will be defined during the Toolbox Talk.

The purpose of the protective zones is to prevent potential cross-contamination of adjacent areas as well as to protect project personnel from exposure to contaminated areas.

6.2 Protective Zones

Protective zones shall be delineated as follows:

- **Exclusion Zone:**

  This is the contaminated area in which intrusive activities are performed. The area of environmental concern (AOEC) is located within this area. A single access point for entrance and exit should be established and maintained, if possible. This zone should be delineated from the Contaminant Reduction Zone via perimeter cones or caution tape, or other applicable method. Work areas are shown on **Figure 2**. The Exclusion Zone delineation and any necessary modifications will be based onsite conditions.

- **Contaminant Reduction Zone:**

  This zone is a transition zone located between the Exclusion Zone and the Support Zone and is utilized to decontaminate personnel and equipment.

- **Support Zone:**

  This zone will be utilized by equipment and vehicle storage and will be kept free of contaminated material. The Site Safety Officer will determine the location of this zone. In the event of a site evacuation, see **Figure 2** and **Section 2.2** (Emergency Contacts/Planning) for the rally point. The designated rally point may be relocated by the Site Safety Officer based on project or site conditions. All site workers will be notified of any relocation prior to implementation.

NOTE: Protective zones are not anticipated for this project.

6.3 Decontamination Procedures

All personnel and equipment leaving the exclusion zone must be properly cleaned and decontaminated. When there is evidence of chemical contamination during the site operations, all personnel will be decontaminated under the direction of the Site Safety Officer. Clean-up and/or decontamination of personnel shall consist of washing off excessively soiled PPE with a disinfectant detergent scrub and water. At the very least, all personnel should wash their hands and face before leaving the exclusion zone. After washing, all disposable clothing (Tyvek, gloves, etc.) will be removed and placed in a double lined plastic bag.

Sampling tools and any other non-disposable items will be decontaminated between sampling points, and at the direction of HRP personnel, to prevent cross-contamination of work areas or environmental samples, as applicable.

6.4 Emergency Decontamination

If immediate medical attention is required in an emergency, decontamination will be performed after the victim has been stabilized. If a worker has been exposed to an extremely toxic or corrosive material, then emergency decontamination will consist of flushing with copious amounts of water. If the victim cannot be decontaminated because it will interfere with emergency medical aid being administered, then the victim should be wrapped with plastic or other available items (i.e., an uncontaminated coverall) to reduce potential contamination of other personnel or medical equipment.

If a site worker has been overcome by heat related illness, then any protective clothing should be removed immediately. In the case of non-medical emergency evacuation, decontamination should be performed as quickly as possible, unless instant evacuation is necessary to save life or prevent injury.

6.5 Personal Hygiene

All employees will be required to wash their hands and face prior to eating, smoking, drinking, and going to the bathroom. Workers will be required to remove contaminated PPE and clothing prior to leaving the Contaminant Reduction Zone. All field personnel should avoid contact with potentially contaminated substances such as puddles, pools, mud, etcetera.

7.0 PERSONAL PROTECTIVE EQUIPMENT

There is different equipment that is worn to minimize exposure to hazards that can cause serious work injuries and illnesses. **Table 11** will list out the PPE that is required onsite and for the job that needs to be performed.

TABLE 11
PERSONAL PROTECTIVE EQUIPMENT
Check all the PPE that may apply and give the description of PPE.

TYPE of PPE	DESCRIPTION of PPE
HEAD AND FACE: ☐ Not Needed ☒ Safety Glasses ☐ Safety Goggles ☐ Face Shield ☐ Hard Hat ☒ Hearing ☐ Other	Hearing protection needed when drilling
FEET: ☐ Not Needed ☒ Steel Toes ☐ Overboots ☐ Disposable Booties ☐ Rubber Boots ☐ Electrostatic Discharge (ESD) ☐ Chemical Resistant ☐ Other	
PROTECTIVE CLOTHING: ☐ Not Needed ☐ Encapsulated Suit ☐ Splash Suit ☐ Apron ☒ High Visibility Vest ☐ Coveralls ☐ Other	
HANDS: ☐ Not Needed ☐ Cut Resistant ☐ Chemical Resistant ☐ Under Gloves ☐ Over Gloves ☐ Heat Resistant ☒ Other	Nitrile Gloves
RESPIRATOR: ☒ Not Needed ☐ Supplied Air ☐ APR	☐ Filtering Face Piece (N95/Dust Mask) ☐ Half Face ☐ Full Face

7.1 Levels of Personal Protective Equipment

As identified in **Section 5.0**, the overall H&S risk associated with chemical hazards for HRP, and associated contractors is considered significant. This is primarily due to the moderate concentrations of chemical contaminants expected based on minimal contact personnel will have with any potentially contaminated media. Therefore, the minimal level of protection for HRP personnel during the conduct of all the environmental work performed at the site will be Level D PPE. The following constitute Level D PPE; it may be used as appropriate:

- Coveralls
- Gloves, as applicable
- Chemical-resistant steel toe and shank shoes
- Boots, outer, chemical-resistant (disposable), as applicable
- Safety glasses or chemical splash goggles
- Hard hat, as applicable
- Escape mask, as applicable
- Face shield, as applicable

If site conditions warrant, an upgrade to Level C PPE may be required. If required, the Contractor will make Level C PPE readily available. The following constitute Level C PPE; it may be used as appropriate:

- Full-face or half-mask, air purifying respirators (National Institute for Occupational Safety and Health (NIOSH) approved)
- Hooded chemical-resistant clothing (e.g., Tyvek, overalls, two-piece chemical-splash suit, disposable chemical-resistant overalls)
- Coveralls, as applicable
- Gloves, outer, chemical-resistant
- Gloves, inner, chemical-resistant
- Boots (outer), chemical-resistant steel toe and shank, as applicable
- Boot-covers, outer, chemical-resistant (disposable), as applicable
- Hard hat, as applicable
- Escape mask, as applicable
- Face shield, as applicable

NOTE: Safety vest may or may not be required depending onsite conditions/location and will be addressed at the time of task assignment by the Site Safety Officer.

If the Toolbox Talk determines that protection beyond Level D is required, HRP will re-evaluate the HASP as well as the site conditions, and will revise the HASP as required.

NOTE: The level of protection identified here does not include the necessary equipment for entering confined spaces.

The following table provides a general description of potential field activity tasks to be performed and associated (recommended) PPE. The use of this PPE may or may not vary depending onsite conditions and will be addressed at the time of task assignment by the Site Safety Officer.

TABLE 12
POTENTIAL FIELD ACTIVITY TASKS AND ASSOCIATED PPE

Task Description	Invasive (Y/N)	Protection Level
Site Mobilization - Surveying, fence and barrier installation, hay bale installation, decon and work zone set up, soil staging areas preparation	N	Level D
Soil and Water Sampling - Drilling, sampling, soil moving as needed.	Y	Modified Level D or Level C – Respirator as needed based on monitoring. Eye protection required during collection of any liquid sample
Soil Excavation, Staging and Load-Out	Y	Modified Level D – or Upgrade to Level C dependent on monitoring
Decontamination - Truck dry sweeping, decon pressure wash of equipment, PPE change out	Y	Modified Level D – or Upgrade to Level C dependent on monitoring
Waste Management - Soil load-out for offsite disposal, water removal for disposal, PPE disposal	Y	Modified Level D – or Upgrade to Level C dependent on monitoring
Site Control (Exclusion, Decontamination, Support Zones)	N	Modified Level D – or Upgrade to Level C dependent on monitoring
Communications - Use of hand signals, backup alarms, and voice	N	NA
Site Restoration	Y	Level D

8.0 TRAINING/MEDICAL SURVEILLANCE

8.1 Training Requirements

All HRP and HRP subcontractor personnel who enter the work zone and/or Exclusion Zone must have successfully completed the 40-hour or 24-hour training requirement outlined in 29 CFR 1910.120(e). If the 40-hour or 24-hour training of any person occurred more than twelve months prior to commencement of work, then that person must have attended an 8-hour refresher course within the twelve months prior to commencement of work.

If respirators are in use in the Exclusion Zone, then all personnel must have undergone respirator training and a fit test within the last twelve months.

Training certificates and records for HRP employee(s) are maintained by HRP. All other contractors will be required to supply written proof of training before being allowed into the Exclusion Zone.

8.2 Pre-Entry Briefing

Prior to commencement of work in an area of suspected contamination, HRP's HSO will conduct a pre-entry briefing with onsite contractors, which will include the following:

- Name of the Site Safety Officer and person responsible for the visitor log
- Description of the parcel as well as location of emergency telephones and the location/boundaries of the Exclusion Zone, Contamination Reduction Zone, and Support Zone, if established
- Review of hospital locations and directions
- Review of tasks to be conducted within the parcel by the site workers
- Review of the Emergency Action Plan and rally point, including the nearest emergency communications and telephone numbers
- The nature, level, and degree of anticipated hazards (physical and chemical) involved in the site work
- Required PPE
- Decontamination procedures

The Site Safety Officer should also, at this time, ensure that all onsite HRP and HRP subcontractor personnel have read the HASP and signed the Field Team Acknowledgement (**Section 12.0**). If additional information on the site becomes available, the Site Safety Officer will call additional briefings, as necessary.

8.3 Toolbox Talk (Daily Job Brief)

The HRP Site Safety Officer will conduct a safety overview meeting at the beginning of each workday on the site. The meeting will be given in addition to any safety meetings that the subcontractor conducts. A summary of the meeting topics signed by the personnel attending the meeting is included in **Appendix D**.

8.4 Medical Surveillance

All HRP and HRP subcontractor personnel entering the Exclusion Zone must have had a physical within the twelve months prior to commencement of site work. A physician's written opinion regarding fitness for work for each employee including work limitations, if any, is on file at HRP, as applicable. A written opinion for all other site personnel must be supplied prior to commencement of site work to the HRP Site Safety Officer. Any work limitations for site personnel, or relevant medical information (i.e., allergic reactions to medication) should be included in this Plan.

9.0 AUTHORIZATION

Personnel authorized to enter the Exclusion Zone include the personnel listed from **Table 6** of this plan. Persons not listed on **Table 6** may enter the Exclusion Zone only if the appropriate training and medical fitness certifications have been supplied to either the HRP PM or OHSM and the Site

Safety Officer or his/her designee onsite has approved site entry. All personnel entering or leaving the Exclusion Zone must sign in and sign out with the recordkeeper.

10.0 RECORDKEEPING

By the completion of the Project this Site-Specific HASP document, and all associated records (Toolbox Talks, JSA, Monitoring data, etc.) must be provided to the appropriate personnel at the office that implemented the Project. The appropriate personnel will then electronically store these records into the project folder. It is expected that some scanning will be necessary.

11.0 SITE-SPECIFIC HEALTH AND SAFETY PLAN APPROVAL

This plan meets the minimum requirements of 29 CFR 1910.120 and 29 CFR 1929.65 and has been written for specified site conditions, dates, and personnel, and must be amended if conditions change. By their signature, the undersigned certify that this HASP is approved and will be utilized during activities at the project.

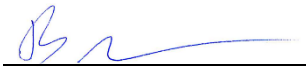
Stephanie Pascual
Site Safety Officer

Date

9/19/2025

John Gorman
Project Manager

Date



9/18/2025

Bryan Sherman
Office Health and Safety Manager

Date

Subcontractor:
I have been provided a copy of this HASP for review.

[Name]

Date

Representing _____

The Designated Competent person representing [subcontractor] at the site will be:

_____.

Any alternate Competent Person will be noted in the Toolbox Talk (**Appendix D**).

ADDITIONAL APPROVALS (or Re-Approvals)	
Name:	**Date:**

12.0 FIELD TEAM ACKNOWLEDGMENT

All HRP personnel shall sign below after reading this HASP and shall agree with the following statement:

"I have read and understand this Site-Specific Health and Safety Plan.
I will comply with the provisions set forth therein."

Printed Name	Signature	Date

FIGURES

Figure 1
Site Location Map

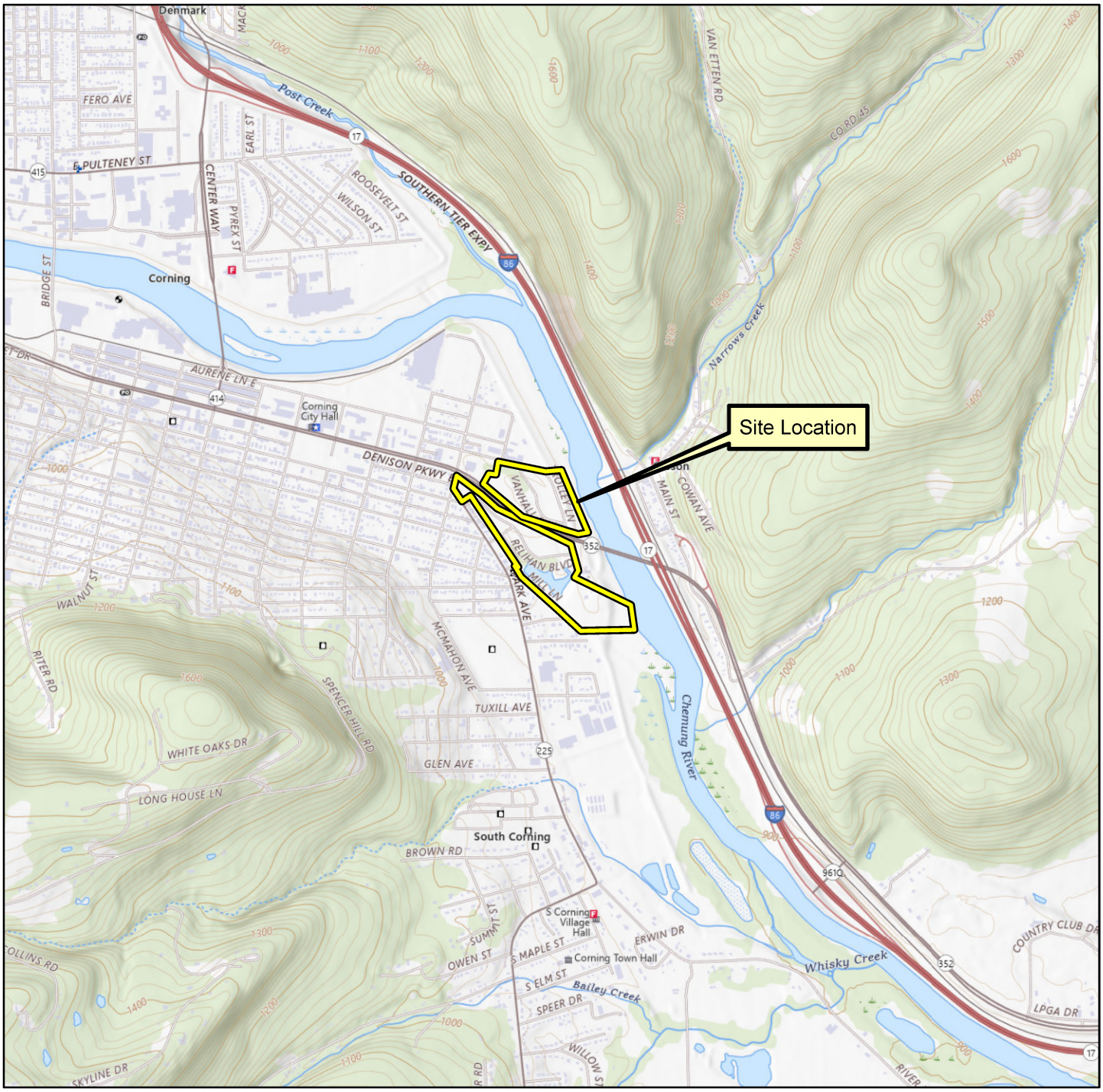


Figure 1
Site Location
Denison Park
Corning New York
HRP # DEC1057.P3

USGS Quadrangle Information
Quad ID: 42077-B1
Name: Corning, New York
Date Rev: 2016
Date Pub: 2019

MOVE YOUR ENVIRONMENT FORWARD
ONE FAIRCHILD SQUARE
SUITE 110
CLIFTON PARK, NY 12065
(518) 877-7101
HRPASSOCIATES.COM

Path: S:\Data\NNYDEC - NYSDEC\CORNING ABG\DEC1057P3 - Denison Park\GIS\denison park gis.aprx

Figure 2

Site Plan with Areas of Environmental Concern

Path: S:\Data\N\NYDEC - NYSDEC\CORNING ABG\DEC1057P3 - Denison Park\GIS\denison park gis.aprx

Sampling Labels omitted from areas with 100% hardscape

Legend

- Property Boundary
- Proposed Soil Sampling Grid (75 X 75 ft)
- Onsite Pond
- US Army Corps of Engineers (USACE) Flood Control Levee
- Proposed Pond Sediment Samples
- Proposed River Sediment Samples
- Subsurface Locations with Observed ABG
- Proposed Soil Sampling Grids Near Flood Control Levee - Field Verification Required Prior to Sampling
- DS-3 60" Diameter Flood Control Pipe

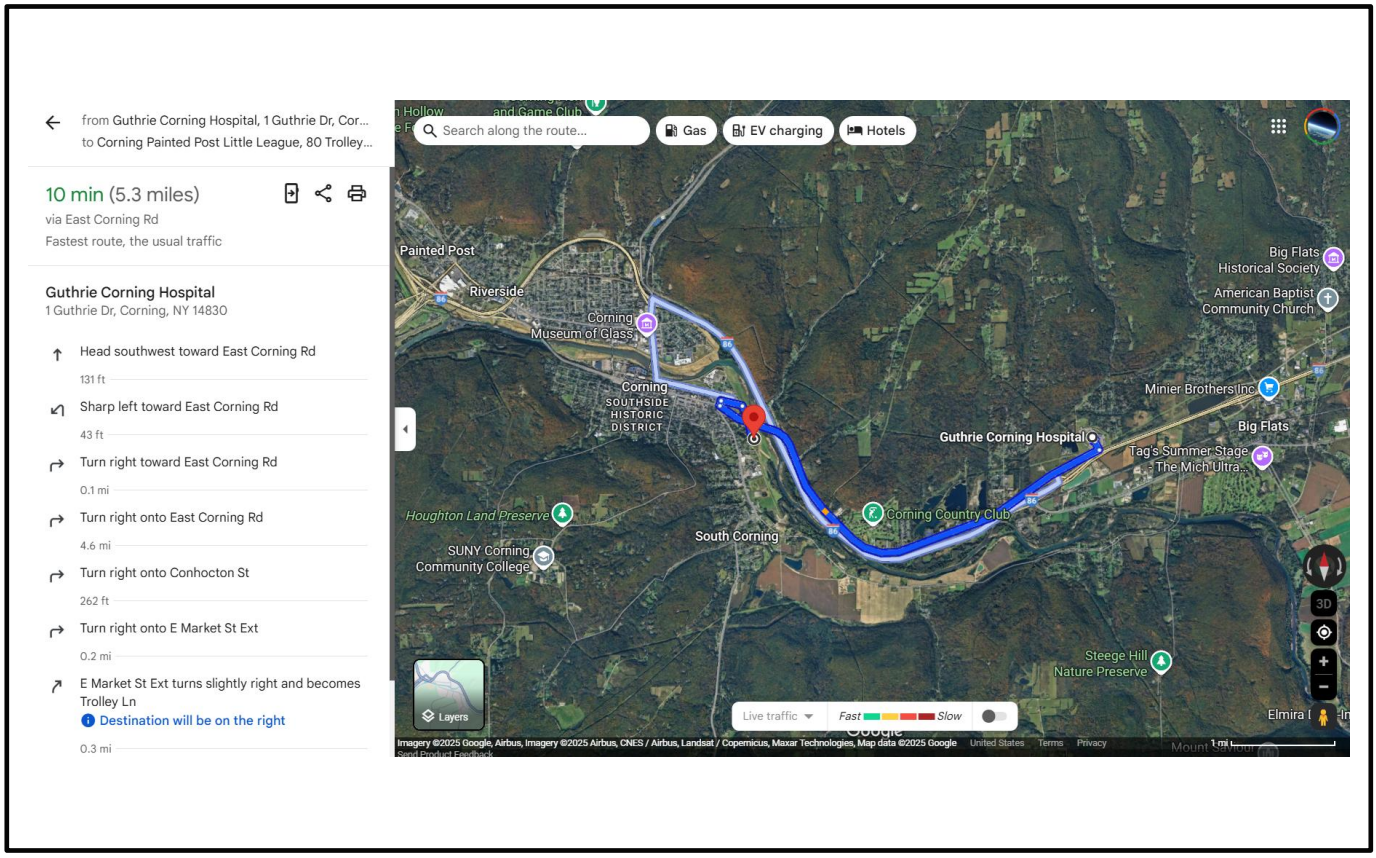
Figure No. **2**	Site Plan Proposed Sediment and Soil Sampling Grid Denison Park Site ID 851066 Corning, New York 14830	Issue Date: 10/31/2025 Project No: DEC1057.P3 Sheet Size: 11x17	Designed By: CMS Drawn By: CMS Reviewed By: MEW	Revisions No. / Date	North 0 105 210 Feet	HRP MOVE YOUR ENVIRONMENT FORWARD ONE FAIRCHILD SQUARE SUITE 110 CLIFTON PARK, NY 12065 (518) 877-7101 HRPASSOCIATES.COM

Figure 3
Route and Map to Nearest Hospital

Directions to Guthrie Corning Hospital

Starting Address: Denison Park Corning, NY
Ending Address: 1 Guthrie Drive, Corning, NY

Total Estimated Time: 10 minutes
Total Estimated Distance: 5.3 miles



TABLES

TABLE 13
CONTAMINANTS OF CHEMICALS KNOWN OR SUSPECTED ONSITE
*HIGHLIGHT THOSE THAT APPLY TO THE TASK BEING PERFORMED.

CONTAMINANT	ODOR THRESHOLD	OSHA PEL[1]	TLV (ACGIH)	OSHA CEILING[2] /STEL	IDLH CONC.	ROUTES OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE[3]
1,1,1 Trichloroethane	44 ppm	350 ppm	350 ppm	---	700 ppm	Inh, Ing, Con	Head, Lass, CNS, Derm
1,1,2-Trichloroethane	---	10 ppm	10 ppm	----	[100 ppm]	Inh, Ing, Abs, Con	Eyes, Nose Irrit, Resp Irrit, CNS, Liver, Kidney Damage, Derm, [Carc]
1,2,4 Trimethylbenzene 1,3,5 Trimethylbenzene		25 mg/m^3	25 ppm	25 mg/m^3	ND	Inh, Ing, Con	Irrit Eyes, Skin, Nose, Throat, Resp Sys, Bron, Hyprochronic Anemia, Head, Drow, Ftg, Dizz, Nau, Inco, Vomit, Conf, Chemical Pneu (aspir lig)
1,1′ Biphenyl	0.0062 mg/m^3	0.2 ppm	0.2 ppm	---	100 mg/m^3	Inh	
1,1-Dichloroethane	120 ppm	100 ppm	100 ppm	---	3,000 ppm	Inh, Ing, Con	CNS Depres, Skin Irrit, Liver, Lung, and Kidney Damage
1,1-Dichloroethylene***	500 ppm	---	5 ppm	---	---	Inh, Con	CNS depress, Resp, [Carc]
1,2-Dichlorobenzene	50 ppm	50 ppm	25 ppm		200 ppm	Inh, Ing, Abs, Con	Irrit, Resp
1,2-Dichloroethylene	26-87 ppm	200 ppm	200 ppm	---	1,000 ppm	Inh, Ing, Con	Vomit, Irrit Eyes, Resp Sys; CNS Depres
1,2-Dichloropropane	130-190 ppm	75 ppm	75 ppm	---	[400 ppm]	Inh, Con, Ing	Eye irritation, Drow, light-headedness; irritated skin, [Carc]
1,3-Dichlorobenzene	---	----	---	----	---	----	----
1,4-Dichlorobenzene	20 ppm	75 ppm	10 ppm	----	[150 ppm]	Inh, Ing	[Carc], Eye Irrit, swelling around eye, headache, nausea, vomiting
1-Methylnaphthalene	0.02 ppm	---	---	---	---	---	---
2,4-Dichlorophenol	1.4007 mg/m^3	---	---	---	---	---	---
2,4-Dimethylphenol	0.001 mg/m^3	---	---	---	---	---	---
2-Methylnaphthalene	0.01 ppm	---	---	---	---	---	---
2-Methylphenol (o-cresol) [skin]	1.4 mg/L	5 ppm	5 ppm	---	250 ppm	Inh, Abs, Ing, Con	Confusion, depression, Resp Fail; difficulty breathing, irregular rapid respiration, weak pulse; skin, eye burns; dermatitis

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CONTAMINANT	ODOR THRESHOLD	OSHA PEL[1]	TLV (ACGIH)	OSHA CEILING[2] /STEL	IDLH CONC.	ROUTES OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE[3]
3, 3'-Dichlorobenzidine	---	None	**---**	---	---	Inh, Abs, Ing, Con	Sens, Derm, Head, Dizz, Burns, GI Upset, [Carc]
4-Isopropyltoluene	---	---	---	---	---	Con, Inh, Ing	Defat, Eryt
Acenephthene	0.5048 mg/m^3	---	---	---	---	---	---
Acenaphthylene	---	---	---	---	---	---	---
Acetone	47.5 mg/m^3	1,000 ppm	500 ppm		2,500 ppm	Ing, Inh, Con	Head, Dizz; Irrit Eyes, Nose, Throat; Derm, CNS, Depress, Derm
Acetonitrile	70 mg/m^3	40 ppm	20 ppm	---	500 ppm	Inh, Ing, Abs, Con	Asphy; Nau, Vomit; Chest Pain; Weak, Stupor, Convuls; Eye Irrit
Aldrin	---	0.25 mg/m^3	0.25 mg/m^3	---	25 mg/m^3	Inh, Abs, Ing, Con	Head, Dizz, Nau, Vomit, Mal, Myo, [Carc]
Anthracene (Coal Tar Pitch)	---	0.2 mg/m^3			[80 mg/m^3]	Inh, Con	Derm, bron, [carc]
Antifreeze		50 ppm	100 mg/m^3 (aerosol)	---	ND	Inh, Ing, Con	Irrit Eyes, Skin, Nose, Throat, Nau, Vomit, Abdom Pain, Lass, Dizz, Stup, Conv, CNS, Depres, Skin Sen
Arsenic	----	0.010 mg/m^3	0.01 mg/m^3	----	[5 mg/m^3]	Abs, Inh, Con, Ing	Derm; GI; Resp Irrit; ulceration of nasal septum; Resp, Irrit, Hyper Pig of Skin, [Carc]
Barium (elemental)	---	0.5 mg/m^3	0.5 mg/m^3		50 mg/m^3 (barium components)	Inh, Ing, Con	Resp. Irrit, GI, Muscle Spasm, Eye Irrit, Slow Pulse; skin burns
Benzene*	4.7 ppm	1 ppm	0.5 ppm	5 ppm	[500 ppm]	Inh, Ing, Abs, Con	Irrit Eyes, Nose, Throat; Head, Nau, Derm, Ftg, Anor, Lass, [Carc]
Benzo(a)anthracene (coal tar pitch)	---	0.2 mg/m^3			[80 mg/m^3]	Inh, Con	[Carc], Derm, Bron
Benzo(a)pyrene (coal tar pitch)	---	0.2 mg/m^3	---		[80 mg/m^3]	Inh, Con	[Carc], Derm, Bron

TABLE 13
CONTAMINANTS OF CHEMICALS KNOWN OR SUSPECTED ONSITE
*HIGHLIGHT THOSE THAT APPLY TO THE TASK BEING PERFORMED.

CONTAMINANT	ODOR THRESHOLD	OSHA PEL[1]	TLV (ACGIH)	OSHA CEILING[2] /STEL	IDLH CONC.	ROUTES OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE[3]
Benzo(b)fluoranthene (coal tar pitch)	---	0.2 mg/m^3	---		[80 mg/m^3]	Inh, Con	[Carc], Derm, Bron
Benzo(g,h,i)perylene (coal tar pitch)	---	0.2 mg/m^3			[80 mg/m^3]	Inh, Con	[Carc], Derm, Bron
Benzo(k)fluoranthene (coal tar pitch)	---	0.2 mg/m^3			[80 mg/m^3]	Inh, Con	[Carc], Derm, Bron
Bis (2-ethylhexyl) Phthalate**	N/A	5 mg/m^3	5 mg/m^3	10 mg/m^3	[5,000 mg/m^3]	Inh, Ing, Con	[Carc], Irrit Eyes
Cadmium (dust)	---	0.005 mg/m^3	Lowest concentration feasible 0.01 mg/m^3	---	[9 mg/m^3]	Inh, Ing	CNS, Resp, Irrit, Vomit, Cough, Head, Chills, Nau, Diarr, Pulm Edema, Dysp, Chest Tight, [Carc]
Carbazole	---	---	---	---	---	Inh	---
Carbon disulfide	0.1-0.2 ppm	20 ppm	1 ppm	30 ppm	500 ppm	Inh, Abs, Ing, Con	Diz, Head,Ftg, Ner, anorexia, trembling hands, loss of fine motor coord, gastritis, eye, skin burns, Derm
Carbon Tetrachloride***	21.4 ppm	10 ppm	5 ppm	25 ppm	[200 ppm]	Inh, Abs, Con, Ing	CNS Depres, Nau, Vomit, Irrit, Irrit Eyes, Skin, Drow, Dizz, [Carc]
Chlorobenzene***	0.98 mg/m^3	75 ppm	10 ppm	---	1,000 ppm	Inh, Ing, Con	Irrit, Drow, CNS, Depres, Eyes, Skin, Nose, Inco.
Chloroform***	85 ppm	50 ppm	10 ppm	50 ppm	[500 ppm]	Inh, Ing. Con, Abs	Dizz, Dullness, Nau, Head, Ftg, Irrit Eyes, Skin, Conf, [Carc]
Chromium	---	1 mg/m^3	0.5 mg/m^3	---	250 mg/m^3	Inh, Ing, Con	Irrit Eyes, Sens Derm
Chrysene (coal tar pitch)		0.2 mg/m^3	---		[80 mg/m^3]	Inh, Con	Derm, Bron, [Carc]
Cis-1-2-Dichloroethylene	---	200 ppm	200 ppm	----	1000 ppm	Inh, Con, Ing	Irrit Eyes, Resp, CNS Depress
Copper (dusts and mists) (fumes)		1 mg/m^3 0.1 mg/m^3	1 mg/m^3 0.2 mg/m^3	----	100 mg/m^3	Inh, Ing, Con	Vomit, Derm, CNS, Irrit, Derm, Nau, Taste (metallic)

TABLE 13
CONTAMINANTS OF CHEMICALS KNOWN OR SUSPECTED ONSITE
*HIGHLIGHT THOSE THAT APPLY TO THE TASK BEING PERFORMED.

CONTAMINANT	ODOR THRESHOLD	OSHA PEL[1]	TLV (ACGIH)	OSHA CEILING[2] /STEL	IDLH CONC.	ROUTES OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE[3]
Cyanide	0.9 mg/m^3	5 mg/m^3	5 mg/m^3 (10 min)	5 mg/m^3	25 mg/m^3	Inh, Ing, Abs, Con	Weak, Head, Nau, Conf, Cyan
Dibenzo(a,h)anthracene						Inh, Ing	
Dichloromethane	540 mg/m^3	25 ppm	50 ppm	125 ppm	[2,300 ppm]	Inh, Abs, Ing, Con	Irrit Eyes, Skin, lass, drow, dizz, Numb, tingl, Nau, [Carc]
Diethylphthalate**	---	None	5 mg/m^3	---	N.D.	Inh, Ing, Con	Irrit Eyes, Skin, Nose, Throat, Head, Dizz, Nau, Lac, Possible Polyneur, Vestibular Dysfunc, Pain, Numb, lass, Spasms in Arms and Legs
Di-n-octylphthalate	---	---	---	---	---	Inh, Ing, Con	---
Dimethylpthalate	---	5 mg/m^3	5 mg/m^3	---	2,000 mg/m^3	Inh, Ing, Con	Irrit, Resp, Abdom
Ethyl Benzene*	8.7 mg/m^3	100 ppm	100 ppm	125 ppm	700 ppm	Inh, Abs, Con	Head. Irrit, Derm, Narc., Irrit Eyes, Skin; Coma
Fluoranthene		0.2 mg/m^3	0.2 mg/m^3			Ing, Inh	[Carc]
Fluorine*	6 mg/m^3	0.1 ppm	1 ppm	2 ppm	25 ppm	Inh, Con	
Fuel Oil/#2	----	----	300 ppm	----		Inh, Abs, Ins, Con	Irrit Eyes, Skin, Derm, Head, Ftg, Blurred Vision, Dizz, Conf
Ideno(1,2,3-cd)pyrene		0.2 mg/m^3				Ing, Inh	
Lead (inorganic forms and dust as Pb)****		0.05 mg/m^3	0.05 mg/m^3		100 mg/m^3	Inh, Ing, Con	Irrit, Cns, Vomit, Narco, Weak, Pall, Insom, Lass, Abdom, Constip
Mercury (organic alkyl compounds) [skin]		0.01 mg/m^3	0.01 mg/m^3	0.03 mg/m^3	2 mg/m^3	Inh, Abs, Ing, Con	Irrit Eyes, Skin; Cough & Chest Pain, Bron Pneu, Tremor, Insom, Irrty, Indecision, Head, Ftg, Weak, Stomatitis, Salv, GI Dist, Anor, Low-wgt, Ataxia

TABLE 13
CONTAMINANTS OF CHEMICALS KNOWN OR SUSPECTED ONSITE
*HIGHLIGHT THOSE THAT APPLY TO THE TASK BEING PERFORMED.

CONTAMINANT	ODOR THRESHOLD	OSHA PEL[1]	TLV (ACGIH)	OSHA CEILING[2] /STEL	IDLH CONC.	ROUTES OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE[3]
Mercury (compounds)	----	0.1 mg/m^3	0.025 mg/m^3	0.1 mg/m^3	10 mg/m^3	Inh, Abs, Ing, Con	Irrit Eyes, Skin; Cough & Chest Pain, Bron Pneu, Tremor, Insom, Irrty, Indecision, Head, Ftg, Weak, Stomatitis, Salv, GI Dist, Anor, Low-wgt, Ataxia
Methanol	13.1150 mg/m^3	200 ppm	200 ppm	---	6,000 ppm	Inh, Abs, Ing, Con	Irrit Eyes, Skin, Resp, Head, drow, dizz, Nau, Vomit, vis dist, Optic, derm
Methyl Ether	----	----	---	----	---	Inh	Poison
Methyl Ethyl Ketone (2-Butanone)***	0.7375 mg/m^3	200 ppm	200 ppm	300 ppm	3,000 ppm	Inh, Con, Ing	Irrit Eyes, Skin, Nose, Throat, Head, Dizz, Vomit, Derm
Methylene Chloride	540 mg/m^3	25 ppm	50 ppm	125 ppm	[2,300 ppm]	Inh, Ing, Con, Abs	Ftg, Weak, dizz, drow, Numb, Tingle [carc], Irrit Eyes, Skin, Nau
Mineral Spirit	20 ppm	500 ppm	100 ppm	---	20,000 mg/m^3	Inh, Ing, Con	Irrit Eyes, Nose, Throat, Dizz, Derm, Chemical pneu
Methyl tert butyl ether (MTBE)	---	---	50 ppm	---		Inh, Abs	
Naphtha	0.86 ppm	100 ppm	400 ppm	---	1,000 ppm	Inh, Con, Ing	Light Head, Drow, Irrit, Derm, Irrit Eyes, Skin, Nose
Naphthalene*	0.084 ppm	10 ppm	10 ppm	15 ppm	250 ppm	Inh, Abs, Ing, Con	Eye irritation; headache; confusion, excitement, malaise (vague feeling of ill-being); nausea, vomiting, abdominal pain; irritated bladder; profuse sweating; renal shutdown; dermatitis
Nickel (metal)	---	1 mg/m^3	1.5 mg/m^3	---	[10 mg/m^3]	Inh, Ing, Con	Head, Verti, Nau, Vomit, Pain, Cough, Weak, Convuls, Delirium, Pneu, ,[Carc]
Nitrobenzene	0.0235 mg/m^3	1 ppm	1 ppm	---	200 ppm	Inh, Abs, Ing, Con	Irrit Eyes, Skin, Anoxia, Derm, Anem, Methem

TABLE 13
CONTAMINANTS OF CHEMICALS KNOWN OR SUSPECTED ONSITE
*HIGHLIGHT THOSE THAT APPLY TO THE TASK BEING PERFORMED.

CONTAMINANT	ODOR THRESHOLD	OSHA PEL[1]	TLV (ACGIH)	OSHA CEILING[2] /STEL	IDLH CONC.	ROUTES OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE[3]
n-Butylbenzene	---	---	---	---	---	---	---
n-Propylbenzene	---	---	---	---	---	---	---
PCBs 42% chlorine (Aroclor 1242)	---	1 mg/m^3 (skin)	1 mg/m^3 (skin)	---	[5 mg/m^3]	Inh, Abs, Ing, Con	Irrit Eyes, Chloracne, Liver Damage [carc]
PCBs 54% chlorine (Aroclor 1254)	---	0.5 mg/m^3 (skin)	0.5 mg/m^3 (skin)	---	[5 mg/m^3]	Inh, Abs, Ing, Con	Irrit Eyes; Chloracne, Liver Damage [carc]
PFAS	There are currently no established exposure limits for PFAS. If your project involves potential exposure to PFAS, reach out to the CHSO or OHSM about current best practices relative to exposure controls.						
Petroleum Distillates	---	500 ppm	100 ppm		[1,100 ppm]	Inh, Ing, Con	Dizz, Drow, Head, Dry Skin, Nau, Irrit Eyes, Nose, Throat, [Carc]
Phenanthrene (Coal Tar Pitch)		0.2 mg/m^3	0.2 mg/m^3		[80 mg/m^3]	Inh, Con	Derm, bron, (carc)
Phenol**	0.1786 mg/m^3	5 ppm	5 ppm	---	250 ppm	Inh, Abs, Ing, Con	Irrit Eyes, Nose, Throat, Anor, Low Wgt, Weak Musc Ache, Pain, Dark Urine, Cyan, Liver, Kidney Damage, Skin, Burns, Derm, Ochronosis, Tremor, Convuls, Twitch
Pyrene		0.2 mg/m^3			[80 mg/m^3]	Inh, Con	[Carc]
Sec-Butylbenzene	---	---	---	---	---	---	---
Selenium	N/A	0.2 mg/m^3	0.2 mg/m^3	Unknown	1 mg/m^3	Inh, Ing, Con	Irrit, Head, Fever, Chills, Skin/Eye Burns, Metallic Taste, GI, Dysp, Bron
Silver (metal and soluble compounds as Ag)	----	0.01 mg/m^3	Metal = 0.1 mg/m^3 Soluble 0.01 mg/m^3		10 mg/m^3	Inh, Ing, Con	Blue-gray Eyes, Nasal Septum, Throat, Skin; Irrit, Ulcer, Skin, GI Dist
Tetrachloroethylene (a.k.a. perchloroethylene)***	4.68 ppm	100 ppm	25 ppm	200 ppm	[150 ppm]	Inh, Ing, Con, Abs	Irrit Eyes, Skin, Nose, throat, Resp. Nau, flush face, Neck, dizz, inco, head, drow, eryth, [Carc]

TABLE 13
CONTAMINANTS OF CHEMICALS KNOWN OR SUSPECTED ONSITE
*HIGHLIGHT THOSE THAT APPLY TO THE TASK BEING PERFORMED.

CONTAMINANT	ODOR THRESHOLD	OSHA PEL[1]	TLV (ACGIH)	OSHA CEILING[2] /STEL	IDLH CONC.	ROUTES OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE[3]
Toluene*	2.14 ppm	200 ppm	50 ppm	300 ppm	500 ppm	Inh, Abs, Ins, Con	Resp, Irrit, Ftg, Conf, Dizz, Head, Derm, Euph, Head, Dilated Pupils, Lac, Ner, Musc FTg, Insom, Pares, Derm, lass
Petroleum Distillates (naphtha)	10 ppm	100 ppm	400 ppm	---	1,000 ppm	Con, Inh, Ing	---
Trans 1,2-Dichloroethylene	0.3357 mg/m^3	200 ppm	200 ppm	---	1,000 ppm	Inh, Con	Irrit, Resp, CNS depress
Trichloroethylene***	21.4 ppm	100 ppm	50 ppm	200 ppm	[1,000 ppm]	Inh, Con, Abs, Ing	Head, Vert, Nau, Vomit, Derm, Vis Dist, Tremors, Som, Nau, Irrit Eyes, Skin, Card Acc., Ftg, [Carc]
Trichlorofluoromethane	28 mg/m^3	1,000 ppm	1,000 ppm		2,000 ppm	Inh, Con, Ing	Inco, trem, derm, card, asph, frost
Trichlorotrifluoroethane	45 ppm	1,000 ppm	1,000 ppm	1,250 ppm	2,000 ppm	Inh, Con, Ing	Irrit Skin, throat, Drow, Derm, CSN, Depress
Vinyl Chloride***	10-20 ppm	1 ppm	1 ppm	5 ppm	ND	Inh, Con	Lass, Abdom, Gi Bleeding; Hepatomegaly; Pallor or Cyan of Extremities; Liq: Frostbite; [Carc]
VM&P Naphtha (petroleum naphtha)	---	---	300 ppm	---	ND	Con, Ing, Inh	Irrit Eyes, Nose, Throat, Dizz, drow, head, nau, dry skin, chem. Pneumonitis
Xylene*	4.5 mg/m^3	100 ppm	100 ppm	150 ppm	900 ppm	Inh, Ing, Abs, Con	Dizz, Drow, Irrit, Excite, Nau, Vomit, Eyes, Skin, Nose, Throat
Zinc (oxide)	---	5 mg/m^3	2 mg/m^3	---	500 mg/m^3	Inh	Dry Throat, Cough, Chills, Tight Chest, Blurred Vision
4,4' DDD	---	---	---	---	---	Ing, Inh, Con	---
4,4' DDE	---	---	---	---	---	Ing, Inh, Con	---
4,4' DDT	5.0725 mg/m^3	1 mg/m^3	1 mg/m^3	---	[500 mg/m^3]	Inh, Abs, Ing, Con	Irrit Eyes, Skin, Pares, Tongue, Lips, Face, Trem, Anxi, Dizz, Conf, Mal, Head, Lass, Conv, Paresi Hands, Vomit, [Carc]

TABLE 13
CONTAMINANTS OF CHEMICALS KNOWN OR SUSPECTED ONSITE
*HIGHLIGHT THOSE THAT APPLY TO THE TASK BEING PERFORMED.

CONTAMINANT	ODOR THRESHOLD	OSHA PEL[1]	TLV (ACGIH)	OSHA CEILING[2] /STEL	IDLH CONC.	ROUTES OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE[3]
Aldrin		0.25 mg/m^3	0.25 mg/m^3	---	[25 mg/m^3]	Inh, Abs, Ing, Con	Head, Dizz, Nau, Vomit, Mal, Myo [Carc]
Chlordane [skin]	0.0084 mg/m^3	0.5 mg/m^3	0.5 mg/m^3		[100 mg/m^3]	Inh, Abs, Ing, Con	Blurred vision, confusion, delirium, cough; abdominal pian, nausea, vomiting diarrhea; irritability, tremor, convulsions [Carc]
EDB	76.8 mg/m^3	20 ppm		30 ppm	[100 ppm]	Inh, Abs	Resp. Irr, Eye Irr. [Carc]
Endosulfan I Endosulfan II	---	0.1 mg/m^3	0.1 mg/m^3	---	N.D.	Inh, Abs, Ing, Con	Irrit, Skin, Nau, Conf, Agit, Flush, Dry, Trem, Conv, Head
Endosulfan Sulfate		---	0.1 mg/m^3	---	---	Ing, Con	---
Endrin	1.8 x 10^{-2} ppm	0.1 mg/m^3	0.1 mg/m^{-3}	---	2 mg/m^3	Inh, Abs, Ing, Con	Epil Conv, Stup, Head, Dizz, Abdom, Nau, Vomit, Insom, Agress, Conf, Drow, Lass, Anor
Endrin Aldehyde	1.8 x 10^{-2} ppm	---	---	---	---	Inh, Con	---
Endrin Ketone	---	---	---	---	---	---	---
Heptachlor	0.02 ppm	0.5 mg/m^3	0.05 mg/m^3	---	[35 mg/m^3]	Inh, Abs, Ing, Con	In animals, Trem, Conv, [Carc]
Heptachlor epoxide	0.02 ppm	---	0.05 mg/m^3	---	---	Ing, Inh	Trem, Conv, [Carc]
Hydrogen Cyanide(Hydrocyanic Acid)	0.9 mg/m^3	10 ppm (11 mg/m^3)	4.7 ppm	4.7 ppm	50 ppm	Con, Inh, Ing, Abs	Asphy & death at high levels; Weak, Head, Conf, Nau, Vomit, Incr. Rate and Depth of Respiration or Respiration Slow and Gasping

TABLE 13
CONTAMINANTS OF CHEMICALS KNOWN OR SUSPECTED ONSITE
*HIGHLIGHT THOSE THAT APPLY TO THE TASK BEING PERFORMED.

CONTAMINANT	ODOR THRESHOLD	OSHA PEL[1]	TLV (ACGIH)	OSHA CEILING[2] /STEL	IDLH CONC.	ROUTES OF EXPOSURE	SYMPTOMS OF ACUTE EXPOSURE[3]

NOTES

* = Constituent found in ETPH

**=Constituent found in Acid/Base/Neutral Extractable Compounds

***=Constituent found in Volatile Organic Compounds

****=Constituent found in Leaching Lead

[1]PEL = Permissible Exposure Limit. If no PEL is available, then the NIOSH Threshold Limit Value (TLV) should be used, if available.

[2]Ceiling limit or Short-Term Exposure Limit (STEL), if available. Again, the NIOSH TLV may be used if no OSHA standard exists.

[3]Abbreviations are contained on the next page

[ ] = Potential Occupational Carcinogen

ND = Not Been Determined

ABBREVIATIONS

abdom = Abdominal
abs = Absorption
aggress = Aggressiveness
agit = Agitation
anor = Anorexia
anos = Anosmia (loss of the sense of smell)
Anxi = anxiety
anem – Anemia
aspir = Aspiration
asph – asphyxia
bron = Bronchitis
bron pneu = Bronchitis pneumonitis
[carc] = Potential occupational carcinogen
Card = Cardiac arrhythmias
CNS = Central nervous system
conf = Confusion
constip = Constipation
con = Skin and/or eye contact
conv = Convulsions
corn = Corneal
cyan = Cyanosis
defat = Defatting
depres = Depressant/Depression
derm = Dermatitis
diarr = Diarrhea
dist = Disturbance
dizz = Dizziness
drow = Drowsiness
dry = Dry mouth
dysp = Dyspnea (breathing difficulty)
emphy = Emphysema
epil-conv = Epileptiform convulsions
eryth = Erythema
euph = Euphoria
fib = Fibrosis
frost = frostbite
ftg = Fatigue
flush = Flushing
GI = Gastrointestinal
head = Headache
hyperpig = Hyperpigmentation
inco = Incoordination
ing = Ingestion
inh = Inhalation
inj = Injury
insom = Insomnia
irrit = Irritation
irrty = Irritability
lac = Lacrimination (discharge of tears)
lass = Lassitude (weakness, exhaustion)
li-head = Lightheadedness
liq = Liquid
low-wgt = Weight loss
mal = Malaise (vague feeling of discomfort)
malnut = Malnutrition
methem = Methemoglobinemia
myo = Myochonic (jerks of limbs)
mg/m = milligrams/cubic meter
muc memb = Mucous membrane
mus ftg = Muscle fatigue
narco = Narcosis
nau = Nausea
ner = Nervousness
numb = Numbness
optic = Optic nerve damage (blindness)
pall = Facial pallor
parap = Paralysis
ppm = Parts per million
pares = Paresthesia
paresi = Paresis
peri neur = Peripheral neuropathy
pneu = Pneumonitis
prot = Proteinuria
pulm = Pulmonary
peri neur = Peripheral neuropathy
pneu = Pneumonia
prot = Proteinuria
pulm = Pulmonary
repro = Reproductive
resp = Respiratory
skin sen = skin sensitization
salv = Salvation
som = Somnolence (sleepiness unnatural drowsiness)
subs = Substernal (occurring beneath the sternum)
stup = Stupor
sys = System
tingle = tingle limbs
trem – Tremors
verti = Vertigo
vis dist = Visual disturbance
vomit = Vomiting
weak = Weakness

APPENDIX A

Safety and Logistics Planning Log

Safety and Logistics Planning Log
DEC009808

Date of Call	
Work Assignment Number / Task	
DEC Site Name and Number	

ATTENDEES		
HRP		
POSITION	**NAME**	**NUMBER**
HRP PM		
HRP SSO		
HRP Other:		
HRP Other:		
SUBCONTRACTORS		
POSITION	**NAME**	**NUMBER**
Driller Contact		
Utility Survey		
Surveyor		
Construction		
Other		
DEC		
POSITION	**NAME**	**NUMBER**
DEC PM		
DEC Other:		
DEC Other:		

BRIEF DESCRIPTION: SCOPE OF WORK (Task Specific)	*Use additional forms for additional tasks

LOGISTICS			
Date of Work		Time to Meet	
Site Contact (phone)			
Notification of Site Contact made by			
Describe any unusual site-specific conditions/logistics here (if any):			

QUESTIONS	**Y/N**	**NOTES**
Water Needed? Source Confirmed?	Y / N	
Electricity Needed? Source Confirmed?	Y / N	
Water Storage Needed?	Y / N	
Water Discharges? Permits Needed/Attained?	Y / N	
Air Monitoring – CAMP?	Y / N	
Will there be intrusive work?	Y / N	
Locations marked in the field?	Y / N	
NYS Code Rule 753/Dig Safe System	Y / N	Ticket Number:
Confirmed that mark-out complete?	Y / N	
Anticipated Subsurface Conditions (Geology, Utilities, etc.):		
Anticipated Depth to Groundwater:		
Will NAPL/Product be Present?	Y / N Describe:	
Will there be any other parties entering the work zones? Describe control measures.		

APPENDIX B
Personnel Log

PERSONNEL LOG				
Name	**Representing**	**Date**	**Time In**	**Time Out**

APPENDIX C
Job Safety Analysis (JSA)

JSA Completed By	

HAZARD RANKING CHART

SEVERITY	CONSEQUENCE	PROBABILITY				
	Injury	**Frequent**	**Likely**	**Occasional**	**Seldom**	**Unlikely**
	Fatality	**H**	**H**	**H**	**H**	**M**
	Injury Requiring Hospitalization	**H**	**H**	**H**	**M**	**L**
	Injury Requiring Medical Treatment Beyond First Aid	**H**	**M**	**M**	**L**	**L**
	Injury Requiring First Aid	**M**	**L**	**L**	**L**	**L**

TASK			
LOCATION OF TASK PERFORMED		**DATE OF JSA**	

TASK DESCRIPTION

*There are different categories of hazards to include: Biological, Physical, Safety, Chemicals, and Ergonomics

STEPS	HAZARD	CONTROL MEASURES	RISK RATING

APPENDIX D
Toolbox Talk

TOOLBOX TALK

GENERAL INFORMATION		
Person Conducting	**Site Name/Address**	**HRP Client Name/Job #**
Client Contact/Phone	**HRP H&S Rep.**	**HRP Supervisor**
Date/Time	**Number Attending**	**Weather**
Designated Competent Person:		
Description of Work		

ATTENDEES (Use additional sheets as needed)		
Name	**Company**	**Signature**

EMERGENCY CONTACT INFORMATION		
Emergency Telephone Numbers	FIRE / POLICE / AMBULANCE: 911	
Hospital Name & Location:		
NYSDEC Spill Line: 1-518-457-7362	National Response Center: 800-424-8802	CBYD: 800-922-4455
Health & Safety Manager:		

HAZARDS		
☐ Toxic	☐ Extreme Cold/Heat	☐ Soil Excavation
☐ Corrosive	☐ Drains/Sumps	☐ Tank Excavation
☐ Flammable	☐ Sharp Objects	☐ Trenching
☐ Combustible	☐ Drilling in Soil	☐ Floor Holes
☐ Reactive	☐ Lighting	☐ Working on/near Water
☐ Path Waste	☐ Slips/Trips/Falls	☐ Underground/Overhead Utilities
☐ Asbestos	☐ Lead	☐ Power washing
☐ Abrasive Blasting	☐ Abrasive Blasting	☐ Lifting
☐ Drum Handling	☐ Live Electrical Circuits	☐ Noise
☐ Pneumatic Tools	☐ Elevated Work Area	☐ Ladders
☐ Vac Truck	☐ Hot Work	☐ Vehicle Traffic
☐ Other (s):		

TOOLBOX TALK

PERSONAL SAFETY / PERSONAL PROTECTIVE EQUIPMENT (PPE)			
☐ Supplied Air Respirator	☐ SAR w/Egress Bottle	☐ SCBA	☐ Air Purifying Respirator Cartridge:
☐ Fully Encapsulating Suit	☐ Flash Suit	☐ NOMEX (flam resistant)	☐ Protected Coveralls, Type:
☐ Overboots	☐ Lifebelt/Lanyard	☐ Hardhats	☐ Outer Gloves, Type:
☐ Safety Glasses	☐ Chemical Goggles	☐ Face Shield	☐ Inner Gloves, Type:
☐ Reflective Vests	☐ Eye Wash	☐ Safety Shower	☐ First Aid Kit
☐ Hearing Protection	☐ Evacuation Plan	☐ Communications	☐ Properly Sloped Excavation/ Trench
☐ PFD's	☐ Ventilation	☐ Steel Toe Boots	

FIRE SAFETY			
☐ Fire Extinguishers	☐ Hot Work Permit	☐ Fire Blanket	☐ Explosion-Proof Equipment
☐ Equipment Grounded & Bonded	☐ Non-Sparking Tools	☐ Eliminate Ignition Sources	☐ Area Kept Wet
☐ Smoking Area Designated Location:	☐ Fire Hose Laid Out	☐ Alarm Box in Area, Location:	

ISOLATE EQUIPMENT & ELECTRICAL EQUIPMENT			
☐ Establish Exclusion Zone/Traffic Cones	☐ Work Signs	☐ LockOut/TagOut	☐ Non-Conductive Tools
☐ Stop Transfers	☐ Caution Tape Area	☐ Equipment Grounded	☐ FR Suits/Coveralls
☐ GFCIS	☐ Temporary Fencing		

AIR MONITORING			
Type of Meter:		Date last calibrated:	
SUBSTANCE	**LEVEL B MAX.**	**ACTION LEVEL/LEVEL C MAX.**	**LEVEL D MAX.**

HEALTH & SAFETY COMMENTS-QUESTIONS-CONCERNS / TOPICS & SAFET RULES REVIEWED

Contaminants of Concern:			
HEALTH & SAFETY SIGNATURE:		Date:	

Is there a Health & Safety Plan available on-site? Yes ☐ No ☐

☐ HAZARD ZONES NOT APPLICABLE, GENERAL WORK AREA Level D ☐ Modified Level D ☐ Level C ☐

Anything above Level C, foreman should use a Confined Space Permit/Form.

Note: HOT WORK requires a hot work permit and minimum 20# fire extinguisher. Foreman or HSM must record at least one contaminant of concern above. Toxic plants may be considered a COC if no chemical hazards are expected.

LEVEL C

Respirator Type:	

Name	Zone	Time In	Time Out	Decon Type

Before performing Level C work, ALL employees must review HRP's Respiratory Protection Program - a copy of which must be on-site along with a HASP.

APPENDIX E
Specific Procedures

APPENDIX F

Safety Data Sheets

(for chemicals brought to the site)

REVISION HISTORY

REVISION AND APPROVAL LOG			
REVISION DATE	**REVISION CONTENT**	**REVISED BY**	**APPROVED BY**
1/18/2021	Initiation of document/Reviewed by Jackie Baxley	SF	TAG
6/6/2024	- Update formatting - Update order of headers - Implemented tables within HASP, not as Appendix - Combining NY and other states – generic HASP to make site-specific - Checkbox formatting - Updated Action Levels Table	JLE	TAG

APPENDIX C
Community Air Monitoring Program

Community Air Monitoring Plan
Denison Park, Corning, New York

This 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 during remedial activities at the site. The CAMP is not intended for use in establishing action levels for workers 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.

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

Depending on the nature of known or potential contaminants at the site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary.

Continuous monitoring will be required for all ground intrusive activities. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil samples. "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, continuing monitoring may be required during sampling activities.

Particulate Monitoring, Response Levels, and Actions

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

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than the background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures

and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for State (DEC and DOH) personnel to review.

VOC Monitoring, Response Levels, and Actions

VOCs will 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 will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using a photo ionization detector (PID) equipped with a 10.2 eV bulb. The PID will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

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

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

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

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