

REMEDIAL ACTION WORK PLAN

The NEST Site
333 1st Street
City of Niagara Falls, Niagara County, New York 14303
NYSDEC Site No. C932183

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ACRONYMS

AAR	Alternative Analysis Report
ACM	Asbestos Containing Material
ASTM	American Society for Testing and Materials
ADA	Americans with Disabilities Act
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BE3	Brydges Engineering in Energy and Environment
BER	Business Environmental Risk
BGS	Below Ground Surface
CAMP	Community Air Monitoring Program
CERP	Community and Environmental Response Plan
COC	Contaminants of Concern
CP	Commissioner Policy
CVOC	Chlorinated Volatile Organic Compound
DER	Division of Environmental Remediation
DFR	Daily Field Report
E&SC	Erosion and Sediment Control
EC	Engineering Control
ECMC	Erie County Medical Center
EE	Environmental Easement
EIFS	Exterior Insulation and Finish System
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
EWP	Excavation Work Plan
FER	Final Engineering Report
FSP	Field Sampling Plan
GPR	Ground Penetrating Radar
GPS	Global Positioning System
GSF	Gross Square Feet
GSR	Green and Sustainable Remediation
HASP	Health and Safety Plan
HVAC	Heating, Ventilation and Cooling
IC	Institutional Control
LBP	Lead Based Paint
ug/m ³	micrograms per cubic meter
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
NYSHCR	New York State Homes and Community Renewal
OSHA	Occupational Safety Health Administration
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PDI	Pre-Remedial Design Investigation
PFAS	Per- and Polyfluoroalkyl Substances
PID	Photoionization Detector
PPE	Personal Protective Equipment

QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
REC	Recognized Environmental Condition
RI	Remedial Investigation
RIWP	Remedial Investigation Work Plan
SCG	Standards, Criteria, and Guidance
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SSDS	Sub-Slab Depressurization System
SVI	Soil Vapor Intrusion
SVOC	Semi-Volatile Organic Compound
SWPPP	Stormwater Pollution Prevention Plan
TAL	Target Analyte List
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Protocol
TIC	Tentatively Identified Compound
TOGS	Technical and Operational Guidance Series
UST	Underground Storage Tank
VOC	Volatile Organic Compound

1.0 INTRODUCTION

This document presents details of a Remedial Action Work Plan (RAWP) designed to support the implementation of a remedial action (RA) at The NEST Site (Brownfield Cleanup Program [BCP] Site No. C932183) located at 333 1st Street in the City of Niagara Falls, New York. The NEST Site (Site) subject to this RAWP encompasses approximately 0.985 acres and is composed of a portion of two parcels; SBL #159.09-1-2.11 and #159.09-1-2.12 located at 333 1st Street and 217 Old Falls Street, respectively (refer to **Figure 1 - Site Location Map** and **Figure 14 - Site Survey Map**).

Several environmental studies/investigations (refer to Section 2) completed at the Site have indicated the presence of impacted Site soils due to releases and past uses of the property. Site soils have been impacted with semi-volatile organic compounds (SVOCs), primarily polycyclic aromatic hydrocarbons (PAHs), and metals. Also, soil vapor and groundwater have been impacted with chlorinated solvent compounds. The goal of the project is to complete the RA to remove the impacted soils to meet 6 New York Codes, Rules and Regulations (NYCRR) Part 375 Track 1- unrestricted use Soil Cleanup Objectives (SCOs) to allow for the planned redevelopment of the property and intended uses for the Site and to maintain a safe environment for the community. The RA includes:

- Underground storage tank (UST) removal per Department of Environmental Remediation (DER)-10 Section 5.5 – Underground Storage Tank Closure;
- Excavation/removal of existing concrete floor slabs/footings;
- Excavation and off-site landfill disposal of impacted fill/soils above bedrock to meet Part 375 Track 1 unrestricted use SCOs;
- Backfilling excavations with clean off-site fill material or hardscape all to meet Part 375 unrestricted use and new development requirements;
- Implementing short term Institutional Controls (ICs) and Engineering Controls (ECs) for post-remediation monitoring of natural attenuation of solvent related volatile organic compounds (VOCs) in the Site groundwater and monitoring soil vapor intrusion (SVI) in the new building;
- Groundwater monitoring/sampling which will be conducted on a quarterly basis for the first year following remediation. At that time, an assessment will be conducted regarding the condition of the groundwater and the need for further monitoring and evaluation.

The remaining sections of the RAWP discuss the following:

- Section 2.0: Current environmental conditions/past environmental investigations.
- Section 3.0: A summary of remedial objectives and remedy.
- Section 4.0: Detailed description of the remedial approach.
- Section 5.0: Construction oversight and reporting requirements.
- Work Plan professional engineering (PE) certification.
- Appendix A: Site-specific Health and Safety Plan (HASP).
- Appendix B: Community Air Monitoring Plan (CAMP).
- Appendix C: Quality Assurance Quality Control (QA/QC) Plan.
- Appendix D: Field Sampling Plan (FSP).
- Appendix E: DER-10: Imported Fill Requirements.
- Appendix F: Project Schedule.
- Appendix G: Community and Environmental Response Plan (CERP).

- Appendix H: New Development-Preliminary Civil Construction Plans.
- Appendix I: Site Specific Work Plan
- Appendix J: Pre-remediation topographic/contour map

1.1 SITE HISTORY AND DESCRIPTION

1.1.1 Location

The Site is composed of a portion of two parcels associated with SBL #159.09-1-2.11 and #159.09-1-2.12 located at 333 1st Street and 217 Old Falls Street, respectively, in the City of Niagara Falls, New York. The portions of these two parcels that compose the BCP Site is approximately 0.985 acres. The Site is bound by 1st Street to the west, Old Falls Street to the south, a commercial building to the east, and a large parking lot to the north. See **Figure 1** – Site Location Map and **Figure 14** – Site Survey Map.

1.1.2 Site Features

The Site is relatively flat with approximately 95 percent of the Site currently covered by a concrete building slab from the recently demolished building. The remainder of the Site is covered with miscellaneous asphalt and grass areas.

1.1.3 Contemplated Use of The Site

Plans include construction of a 76-unit, six-story residential complex with commercial uses on the first floor. Additional development features will include asphalt parking, a playground area, plant bedding and sod lawn areas and hardscape sidewalks throughout the Site.

1.1.4 Site History and Description

Historical records including street directories and Sanborn Maps suggest that the Site was mixed use residential and commercial. In 1892, the northern portion of the Site was occupied by multiple independent residences, stables and shared dwellings including the American House and Temperance House. The southeastern portion of the Site was occupied by Western Hotel and the northwestern portion by Hotel Nassau. In 1914, the northwestern portion of the Site was occupied by stables, dwellings and the Converse House, the northeastern portion by Wayne Hotel and American Express Company, the eastern portion by Temperance Hotel and the southwestern portion by Hotel Imperial and Hotel Nassau. The Site was occupied as follows in 1950: Converse Hotel, J.N. Adams and Co. staging floor and auto parking in the northwest, Wayne Hotel and auto parking in the northeast, Temperance Hotel in the east, New Imperial Hotel and J.N. Adams and Co., a department store, and multiple storefronts in the southeast, and various stores in the southwest. In 1955, the Site remained relatively unchanged with the exception of the renaming of Temperance Hotel to Henry Hubbs Hotel. 1950 through 1970 Sanborn maps indicated the presence of two gas tanks of unknown size in the northwest corner of the Site. These gas tanks are not identified on subsequent maps, and no removal records were identified, thus presenting a potential vapor intrusion concern. In 1969, J.N. Adams and Co. department store was converted into a leather goods manufacturer. All storefronts located in the southwestern portion of the Site were demolished between 1969 and 1970. In 1971, the one- and two-story masonry building and garage were demolished. The Site appears as vacant land from 1979 to 1985. The Site was under the ownership of Niagara Heritage Group and

Niagara County Industrial Development Agency (IDA) in 1995 and 1996, respectively. Since 1995, the Site was occupied by a large, U-shaped structure which was demolished in September through November 2024 with the exception of the floor slab/foundations.

1.1.5 Site Geology and Hydrogeology

Shallow subsurface conditions generally consist of fill with some construction and demolition debris including brick, concrete and cinder material. Fill depths range from 0.5 to 10 feet below ground surface (bgs). Beneath the fill in some locations is stiff, tight, brown silty clay. Bedrock has been identified from 8 to 10 feet bgs consisting of grey dolomite. Groundwater was not encountered in the fill/overburden in any of the remedial investigation (RI) soil borings nor in the one overburden groundwater monitoring well installed during the RI. Three bedrock monitoring wells were also installed during the RI with groundwater levels measured at 21+/- feet bgs with groundwater flow to the west/southwest.

2.0 ENVIRONMENTAL CONDITIONS/PAST INVESTIGATIONS

2.1 ENVIRONMENTAL ASSESSMENTS

The following environmental assessments or investigations were previously conducted at the Site:

- *Hazardous Materials Inspections by Stohl Environmental, Inc in September 2011 and by Watts Architecture and Engineering in October 2018.* Various materials were identified as asbestos containing material (ACM) including heating, ventilation and cooling (HVAC) tar, curbs, vent pipes and access hatch. Lead-based paint (LBP) was identified on structural steel.
- *Phase I Environmental Site Assessment (ESA) by LiRo Engineers Inc. in October 2018.* The two gasoline tanks historically located on-site in the northwest corner from 1950 to 1970 were identified as a recognized environmental condition (REC).
- *Phase II ESA by LiRo Engineers Inc. in February 2019.* Potential impacts were investigated in soil and soil gas on the Site. The Phase II ESA focus was associated with the two gasoline tanks identified in the Phase I and potential impacts from adjacent property history of commercial and railroad use. Phase II ESA observations indicated urban fill conditions from 0-8 feet bgs. Laboratory soil sample analytical results indicated metals and SVOCs above NYSDEC restricted residential and industrial SCOs.
- *Phase II ESA by BE3/AMD in April 2023.* This investigation was completed for BCP application purposes. The assessment found that fill exists across the Site at depths up to 8 feet bgs. Laboratory results of the fill showed elevated levels of metals and SVOCs, mostly PAHs. Some VOCs were detected in the fill materials, however, none were above unrestricted SCOs (see **Table 7 and Figure 2-** Phase II ESA Soil Sample Results).
- *Geotechnical Evaluation by Foundation Design P.C. in March 2023.* This evaluation confirmed the fill depth ranges from 0-7 feet bgs and depth to bedrock is approximately 11 feet bgs. It was also noted that the existing fill is not suitable structural material for the proposed structure.
- *Remedial Investigation by BE3/AMD in October-November 2024.* See next section.

2.2 REMEDIAL INVESTIGATION (RI)

The RI tasks were completed in accordance with a defined scope of work and approved RIWP. The following provides a summary of the investigation activities:

- A geophysical survey was conducted in the area identified by past ESAs as UST locations;
- Assessment of fill/native soil material by installing 20 soil borings across the Site and one test trench in the UST area. A total of 24 soil samples were collected;
- Two sediment samples were collected from each of the two identified drains beneath the existing floor slab;
- Assessment of groundwater conditions by installing four on-site groundwater monitoring wells in soil boring locations (three into bedrock and one in the overburden) and collecting a total of four groundwater samples including a duplicate sample of RI MW-3;
- Performed laboratory analysis on all soil/water samples. Analysis included Part 375 metals (including hexavalent chromium), target compound list (TCL) VOCs plus tentatively identified compounds (TICs), TCL SVOCs plus TICs, pesticides/polycyclic biphenyls (PCBs), herbicides (silvex), total cyanide, and 1,4-Dioxane/Per- and polyfluoroalkyl substances (PFAS);
- Assessment of sub-slab SVI by installing soil vapor probes and collecting four subsurface soil vapor samples. Performed laboratory analysis on all air samples for Target Organic (TO)-15 VOCs.

See **Figure 3** for the RI Investigation/Sample Location Plan.

Soil Results Summary

The results of the RI soils investigation indicated that several SVOC compounds (primarily PAHs) and metal compounds (zinc, lead, mercury, barium, and cadmium) were detected throughout soil/fill material at variable concentrations above restricted residential and/or unrestricted SCOs. VOCs (methylene chloride, tetrachloroethylene [PCE], and trichloroethylene [TCE]) were detected in one sample above unrestricted SCOs. One pesticide (4,4'-DDT) and one PFAS were detected above unrestricted SCOs in single samples. No PCBs, herbicides or cyanide were detected in Site soils. See **Table 2** and **Figure 4** for soil sample analytical results.

One perforated steel UST was uncovered during the test trench excavation in the northwest corner of the Site. The UST is an approximately 4-foot diameter 1000-gallon steel tank. The UST was visually inspected through multiple perforations (ranging from 0.5 to 1 inch in diameter) in the shell, which allowed for some observation of the interior. Although no liquid product, sludge, or residual petroleum odors were observed inside the tank during inspection, the existence of any material within the tank is still unknown at this time. The UST was re-covered with existing soil and will be removed during remediation.

The results of the floor drain samples detected several metal compounds at concentrations above restricted residential and/or unrestricted SCOs. See **Table 5** and **Figure 15** for analytical results.

Groundwater Results Summary

The groundwater analytical results indicate a concentration of one VOC (PCE) and one metal (sodium) above Technical and Operational Guidance Series (TOGS) values. Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) were also detected above guidance values as presented in NYSDEC – Sampling, Analysis, and Assessment of PFAS Under NYSDEC’s Part 375 Remedial Programs – April 2023 guidance document. See **Table 4** and **Figure 5b** for groundwater sample analytical results. PCE and PFOA contours are provided on **Figures 6** and **7** respectively. Groundwater elevation contours are provided on **Figure 8**.

No SVOCs, PCBs, or herbicides were detected in Site groundwater samples.

Soil Vapor Results Summary

The following provides a summary of the results of the RI soil vapor sample analytical program. All soil vapor samples were collected in accordance with the NYSDOH Final Guidance for Evaluating Soil Vapor in The State of New York (2006) with updates (SVI Guidance)

A total of four sub-slab soil vapor samples were analyzed for TCL VOCs by EPA method TO-15 and the results are provided on **Table 3** and **Figure 5a**. New York State does not establish standards, criteria, or guidance values for contaminants in soil vapor. The NYSDOH Air Guideline Values (AGVs) pertain to indoor air, and the decision matrices are intended to be applied using paired indoor air and sub-slab vapor data to assess potential exposure to building occupants. Because only sub-slab vapor samples were collected during the RI, the decision matrices and AGVs are not directly applied here.

The following summarizes detected VOCs of interest from the TO-15 analyte list:

- **Methylene chloride** – Detected in three samples (RI VP 1, RI VP-3, and RI VP-4) with the highest concentration of 4.93 ug/m³.
- **Tetrachloroethylene** – Detected in all samples. The highest detection was 184 ug/m³ in RI VP-1 location.
- **Trichloroethene** – Detected in three samples (RI VP 1, RI VP-3, and RI VP-4). The highest detection was 155 ug/m³ in RI VP-1 location.
- **Trichlorofluoromethane (Freon-11)** – Detected in all samples, with the highest concentration at RI-VP-4 (1360 ug/m³), which was significantly greater than concentrations measured at the other sampling locations (**Table 3**).
- **Cis-1,2-Dichloroethene (c-1,2-DCE)** – Detected in one sample (RI VP-1), with a concentration of 0.642 ug/m³ versus a mitigation value of 60 ug/m³.
- **1,1-Dichloroethene (1,1-DCE)** – Not detected in any sample.
- **Carbon Tetrachloride** – Detected in three samples (RI VP-1, RI VP-3, RI VP-4) with the highest concentration of 2.54 ug/m³ versus a mitigation value of 60 ug/m³.
- **Tetrachloroethene (PCE)** – Detected in all samples, with three samples detected at a concentration that requires mitigation without the need for indoor air samples (RI VP-1,

RI VP-3, RI VP-4). The highest detection was 184 ug/m3 in RI VP-1 location.

- **1,1,1-Trichloroethane (1,1,1-TCA)** – Not detected in any sample.
- **Vinyl Chloride** – Not detected in any sample.
- **Benzene** – Detected in two samples (RI VP-1 and RI VP-4), with the highest concentration of 37.1 ug/m3 versus a mitigate value of 600 ug/m3.
- **Ethylbenzene** – Detected in one sample (RI VP-4), with a concentration of 1.43 ug/m3 versus a mitigate value of 600 ug/m3.
- **Naphthalene** – Not detected in any sample.
- **Cyclohexane** – Detected in two samples (RI VP-1 and RI VP-4), with the highest concentration of 198 ug/m3 versus a mitigation value of 600 ug/m3.
- **Isooctane (2,2,4-trimethylpentane)** – Not detected in any sample.
- **1,2,4-trimethylbenzene** – Detected in one sample (RI VP-4), with a concentration of 2.36 ug/m3 versus a mitigation value of 600 ug/m3.
- **1,3,5-trimethylbenzene** – Detected in one sample (RI VP-4), with a concentration of .579 ug/m3 versus a mitigation value of 600 ug/m3.
- **o-xylene** – Detected in one sample (RI VP-4), with a concentration of 1.94 ug/m3 versus a mitigation value of 600 ug/m3.
- **m,p-xylene** – Detected in one sample (RI VP-4), with a concentration of 4.6 ug/m3 versus a mitigation value of 2000 ug/m3.
- **Heptane** – Detected in two samples (RI VP-2 and RI VP-4), with the highest concentration of 39.2 versus a mitigation value of 2000 ug/m3.
- **Hexane** – Detected in three samples (RI VP-1, RI VP-2, and RI VP-4), with the highest concentration of 258 ug/m3 versus a mitigation value of 2000 ug/m3.
- **Toluene** – Detected in one sample (RI VP-4), with a concentration of 14 ug/m3 versus a mitigation value of 3000 ug/m3.

Trichloroethene was detected at a concentration that requires mitigation without the need for indoor air samples in RI VP-1 with a concentration of 155 ug/m3.

See **Table 3** and **Figure 5a** for soil vapor sample analytical results.

2.3 SUPPLEMENTAL RI

A supplemental RI was conducted off-site in what is currently the northern adjacent parking lot to the Site which is the former location of a historic drycleaner. A bedrock monitoring well was installed at this location for the primary purpose of assessing if this off-site area is a potential source of contaminants migrating through the Site. Two soil vapor points were also installed off-site, one directly north of the Site and one south of the Site.

The primary contaminants of concern (COCs) identified during RI activities on The Nest Site in groundwater and vapor were TCE, PCE, PFOS, and PFOA. The concentrations of TCE and PCE in groundwater and vapor found during the off-site investigation were lower than those found on The Nest Site. The results of the off-site investigation indicate that the historic dry cleaner may have contributed to some contamination on the Site since the PFAS contamination off-site is higher than the on-site contamination, but since the on-site CVOC exceedances are higher it is equally plausible that the on-site contamination is from former on-site leather manufacturing operations. Based on a comparison of the on-site vapor points and the location of the off-site RI-VP-1 in a downgradient location from the BCP Site, there is a low possibility that COCs are migrating off the BCP Site.

Because only sub-slab vapor samples were collected during the off-site investigation, the previously referenced decision matrices and AGVs are not directly applied here. The following summarizes detected VOCs of interest from the two additional off-site soil vapor samples:

- **1,2,4-trimethylbenzene** – Detected in one sample (RI-VP-2), with a concentration of 6.6 ug/m³ versus a mitigation value of 600 ug/m³.
- **2-Hexanone** – Detected in both samples. The highest detection was 210 ug/m³ in the RI-VP-2 location.
- **2-Butanone** – Detected in both samples. The highest detection was 5600 ug/m³ in the RI-VP-1 location.
- **Butane** – Detected in both samples. The highest detection was 320 ug/m³ in the RI-VP-2 location.
- **Heptane** – Detected in both samples. The highest concentration was 45 ug/m³ in the RI-VP-1 location versus a mitigation value of 2000 ug/m³.
- **Hexane** – Detected in both samples. The highest concentration was 30 ug/m³ in the RI-VP-1 location versus a mitigation value of 2000 ug/m³.
- **Tetrachloroethylene** – Detected in both samples. Both locations had a detection of 51 ug/m³ versus a mitigate value of 1,000 ug/m³.
- **Trichloroethene** – Detected in only the RI-VP-2 location with a concentration of 8.5 ug/m³ versus a mitigate value of 60 ug/m³.
- **Trichlorofluoromethane (Freon-11)** – Detected in both samples. The highest concentration was 12 ug/m³ at the RI-VP-1 location.

- **Vinyl Chloride** – Not detected in any sample.
- **Toluene** – Detected in both samples. The highest concentration was 240 ug/m3 at the RI-VP-2 location versus a mitigation value of 3000 ug/m3.

See **Tables 8 and 9** and **Figure 16** for off-site groundwater and soil vapor sample analytical results.

3.0 REMEDIAL OBJECTIVES AND REMEDY

3.1 REMEDIAL ACTION OBJECTIVES

The final remedial measures for the Site must satisfy Remedial Action Objectives (RAOs). RAOs are site-specific statements that convey the goals for minimizing or eliminating substantial risks to public health and the environment. The primary RAOs identified for the Site are:

Soil

Human Health Protection RAOs

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

Environmental Protection RAOs

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

Soil Vapor

Human Health Protection RAOs

- Mitigate impacts to public health resulting from existing, or the potential for, SVI into buildings at a Site.

Groundwater

Human Health Protection RAOs

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

Environmental Protection RAOs

- Remove the source of ground or surface water contamination.

3.2 IDENTIFICATION OF STANDARDS, CRITERIA AND GUIDANCE

Standards, Criteria, and Guidance (SCG) are promulgated requirements (i.e., standards and criteria) and non-promulgated guidance that govern activities that may affect the environment and are used by the NYSDEC at various stages in the investigation and remediation of a Site. The following are the primary SCGs for this project:

- NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, December 31, 2025.
- NYSDEC DER-10 Technical Guidance for Site Investigations and Remediation, May 2010.
- NYSDEC Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998.
- NYSDEC Commissioner Policy (CP)-51 Soil Cleanup Guidance, October 2010.

- NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances, Under NYSDEC's Part 375 Remedial Programs, April 2023.
- NYSDEC 6 NYCRR 360 Solid Waste Management Facilities General Requirements, August 2020.
- New York State Department of Health (NYSDOH) Final Guidance for Evaluating Soil Vapor in The State of New York (2006) with updates (SVI Guidance).

3.3 REMEDY

The RA includes:

1. Excavation

Excavation and off-site disposal of all on-site soils which exceed unrestricted SCOs, as defined by 6 NYCRR Part 375-6.8. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy. Approximately 12,500 cubic yards of contaminated soil will be removed to an approximate depth of 7 feet below ground surface. Collection and analysis of confirmation samples at the remedial excavation depths will be used to verify that SCOs for the site have been achieved. If confirmation/ documentation sampling indicates that SCOs were not achieved at the stated remedial depth, the DEC will be notified, sample results will be submitted and, in consultation with DEC, a determination will be made if further remedial excavation is necessary. See **Figure 17** for proposed locations of confirmation samples. Further excavation for development will proceed after confirmation samples demonstrate that SCOs for the site have been achieved. The remedy is depicted in **Figure 13** - Track 1 Unrestricted Use remedy and preliminary new development civil construction plans are provided in **Appendix H**. To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. See **Appendix I** for the site specific work plan for the means and methods of the planned excavation.

Removal and proper closure of an abandoned empty UST uncovered during the RI. The UST is an approximate 4-foot diameter, 1000-gallon steel tank. Closure shall be completed in accordance with NYSDEC DER-10 Section 5.5. The location of the UST is shown on **Figure 3**.

2. Soil Vapor Intrusion Evaluation

A passive SSDS will be installed in the new building as a precautionary green remediation measure with the capability to make it an active system. As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed in any future on-site buildings once the lowest level is complete with active HVAC and prior to occupancy. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

3. Groundwater Assessment

As part of the Track 1 remedy, groundwater will be sampled following remedial actions to determine if contaminants meet applicable standards. The evaluation will include a provision for implementing actions to address exposures related to groundwater in the event that applicable standards are not met.

4. Conditional Track 1 Soil Vapor Intrusion Evaluation

The intent of the remedy is to achieve a Track 1 unrestricted use. If the soil vapor intrusion (SVI) evaluation is not completed prior to completion of the Final Engineering Report (FER), then a Site Management Plan (SMP) and Environmental Easement (EE) will be required to address the SVI evaluation and implement actions as needed. If a mitigation or monitoring action is needed, a Track 1 cleanup can only be achieved if the mitigation system or other required action is no longer needed within 5 years of the date of the Certificate of Completion. It is important to note that these activities are not covered by this RAWP and separate work plans will be submitted if needed. In the event that Track 1 unrestricted use is not achieved, the below items five through eight contingent remedial elements will be required and included in a separate SMP, and the remedy will achieve a Track 2 residential cleanup.

5. Conditional Track 1 Groundwater Remedy

Any groundwater contamination which remains after excavation of potential source material will be addressed with monitored natural attenuation (MNA) if a Track 1 cleanup is not achieved. The monitoring plan will be detailed in the Site Management Plan (SMP). Groundwater will be monitored for site related contamination and also for MNA indicators which will provide an understanding of the (biological activity) breaking down the contamination. It is anticipated that contamination will decrease to levels below the Class GA ambient water quality standards (AWQS) concentrations or to asymptotic levels that are acceptable to the Department within a five (5) year period. Reports of the attenuation will be provided yearly for five years, and active remediation will be proposed if it appears that natural processes alone will not address the contamination.

6. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property.

7. Site Management Plan

A Site Management Plan will be required which includes the following:

- A. An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and engineering controls remain in place and effective: Institutional Controls: The Environmental Easement discussed in Remedial Element 4 above Engineering Controls: The Groundwater MNA discussed in Remedial Element 5 and an active sub-slab depressurization system (SSDS) if the SVI evaluation discussed in Remedial Element 2 indicates that mitigation is required.
- B. A Monitoring Plan to assess the performance and effectiveness of the remedy.

8. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31 and Section 4.7 below.

4.0 REMEDIAL APPROACH

The remedial program will achieve a cleanup level that will allow the Site to be used for any purpose without any restrictions as described in 6 NYCRR Part 375-1.8(g)(1)(i). However, assuming that the groundwater and soil vapor impacts are not resolved prior to Certificate of Completion, a “conditional” Track 1 remedy will be required and include ICs, ECs and an SMP for post remediation monitoring as discussed herein. The Track 1 – Unrestricted Use Remedy is depicted on **Figure 13**.

4.1 FILL/SOILS REMOVAL AND REPLACEMENT

4.1.1 Soil Sampling for Disposal Purposes

12 waste characterization samples were taken across the Site on April 3rd, 2025, in accordance with the approved *Supplemental Remedial Investigation Work Plan (RIWP) [revised April 3, 2025]*. The number of samples and analysis was completed in accordance with the approved recipient waste disposal facility’s requirements for the anticipated volume of soil to be removed from the Site.

4.1.2 Soil/Building Slab/Foundation Excavation

Prior to excavation activities at the Site, an underground utility location service will be contacted by the remediation contractor to obtain utility clearances.

The contractor’s erosion and sediment controls shall be in place (silt fences/erosion soxx, berms, etc.) before any excavation begins to prevent contaminated water and/or sediment from leaving the Site and rainwater from entering excavations. If rainwater is encountered in any of the excavation areas the contractor will collect and pump the water into drums or a “Frac” tank depending on quantity. The contractor will have any collected water sampled for disposal characterization for either disposal at an approved off-site facility or possible on-site treatment (carbon filtered, etc.) for disposal to the local municipal sewer system. For disposal to a municipal sewer system the contractor will perform all required testing by the municipality and secure appropriate permits for discharge.

Building concrete floor slabs/foundations will be removed and, after cleaning (as necessary), examination and testing (if required), will be sent to either a NYSDEC approved landfill or recycler. All soil above bedrock with concentrations exceeding unrestricted use SCOs will be excavated and transported off-site to a NYSDEC approved disposal facility. Confirmation samples will be collected from sidewalls and bottom per DER-10 requirements to confirm all impacted material that exceeds unrestricted use SCOs has been removed. If all soil above bedrock is excavated, no confirmatory bottom samples will be required. Side wall samples will be collected at the interface of the remedial boundary and neighboring parcels in accordance with DER-10 Section 5.4(b) to assess the surrounding soils. A vertical delineation barrier will be installed along this boundary and a delineation barrier installed at the excavation bottom that is not bedrock. Confirmatory soil samples will be collected for analysis as described in Section 4.1.4 Soil Confirmation Sampling. Confined space entry requirements for excavation areas, where applicable, will meet requirements of American Society for Testing and Materials (ASTM) 29 CFR1910.146.

Geological profiles of the subsurface based on RI boring data are provided on **Figures 10, 11 and 12**. A plan view of cross section locations is provided on **Figure 9**.

The excavation areas will be surveyed by the contractor for soil removal and fill quantities which will also be required for the Final Engineering Report (FER). The excavation will be backfilled with clean soil and hardscape to match existing or new development requirements. Backfill for proposed hardscape areas will include approved clean stone/gravel base and asphalt/concrete. Backfill for proposed greenspace areas will be with approved clean soil/stone and topsoil all to meet Part 375-6.8(a) unrestricted SCOs. In general, clean fill or hardscape will be placed over the Site in areas where the Site will be raised to meet final Site grades or to backfill excavated areas where unrestricted use SCOs have been achieved.

Impacted soil will be directly loaded to trucks for off-site disposal at a NYSDEC approved landfill. If impacted soil needs to be stockpiled for any reason before off-site transport, the soil will be placed on minimum 6-mil plastic sheeting and covered with 6-mil plastic upon completion of stockpiling. All trucks for transport will be 9-A approved permitted trucks to haul non-hazardous waste.

Excavated clean fill from the Site identified through visual, olfactory and photoionization detector (PID) screening processes will be stockpiled on Site on 6-mil plastic sheeting for potential reuse as clean fill per the requirements set forth in DER-10 Table 5.4(e)4 Reuse of Soil. This material will be covered to prevent wind and rain erosion. The material will be sampled and analyzed to meet unrestricted use SCOs before reuse.

Dust, VOC and odor control measures along with air monitoring are discussed in Section 4.6 below.

4.1.3 Fill Material

All imported fill material required to backfill excavations or to establish Site grades shall be obtained from “virgin” sources and be tested to ensure that they meet imported soil requirements of DER-10 Appendix 5 Allowable Constituent Levels for Imported Fill for unrestricted use requirements. DER-10 imported fill requirements are provided in **Appendix E**. NYSDEC and the owners’ representative will approve all backfill material and sources before being brought to the Site. Crushed stone to be used for backfilling from a NYSDEC and New York State Department of Transportation (NYSDOT) approved quarry will not require testing if approved by NYSDEC.

4.1.4 Confirmation Sampling

Confirmatory soil samples will be collected from the excavation bottom and sidewalls unless excavation is to bedrock. All confirmation soil samples from the excavations will be collected in conformance with DER-10 Section 5.4(b) 2 through 5 to determine final frequency and sample locations. Where the sidewalls of the excavation are at the property boundary and the inspection reveals possible impacts, confirmation soil samples will be collected as noted above and analyzed for TCL VOCs, TCL SVOCs, and target analyte list (TAL) metals to assess if soils exceeding 6 NYCRR Part 375 unrestricted use SCOs extend off-site. Note that this will not affect the completion of the remedy but will be used by NYSDEC for information and future assessment purposes only.

The collection of soil samples for laboratory analysis will be performed pursuant to the FSP provided in **Appendix D** and NYSDEC guidance. The sample locations will be flagged or staked so that the exact locations are known. Samples will be field global positioning system (GPS) located and the extent of the excavations will be surveyed by the contractor for as built conditions and inclusion in the FER. All confirmation soil samples will be analyzed for CVOCs, PAHs and TAL metals. The results will be compared to 6 NYCRR Part 375 unrestricted use SCOs. All sample analysis will comply with the QA/QC Plan provided in **Appendix C**. The NYSDEC will be notified prior to the collection of confirmation samples.

4.2 UST REMOVAL AND CLOSURE

The approximate location of the UST uncovered during the RI is shown on **Figure 3**. The UST is an approximate 4-foot diameter, 1000-gallon empty steel tank. Closure shall be completed in accordance with NYSDEC DER-10 Section 5.5 including assessment and sampling of adjacent soils deemed impacted during removal and field inspection. Any sampled soils that exceed unrestricted SCOs will be removed for off-site disposal. If other USTs are encountered, the USTs, fuel dispensers, underground piping or other structures associated with a source of contamination will be excavated and properly disposed of at an approved off-site facility in accordance with DER-10 Section 5.5. If underground piping/structures related to the UST extend beyond the BCP boundary or additional USTs are observed offsite the NYSDEC will be notified and the NYSDEC will make a determination on what further remedial action may be required, if any.

4.3 GROUNDWATER MONITORING

The remedy will include short term IC/EC and an SMP for post-remediation monitoring of contaminants in the Site groundwater (see Section 4.5). Monitoring wells RI-MW-1 and RI-MW-2 installed during the RI (see **Figure 13**) will be preserved during the remediation and sampled on a quarterly basis for the first year following remediation. RI-MW-3 installed during the RI will be decommissioned in accordance with NYSDEC CP-43: Groundwater Monitoring Well Decommissioning Policy, specifically Section 3.1 – Bedrock Wells, due to interference from planned future construction. This well will be relocated and redrilled, as necessary. Prior to any remedial excavation adjacent to RI-MW-1 and RI-MW-2 wells each well will be construction staked by the contractor (at approximately 5 feet from each well) to denote the limit to where heavy excavation equipment will be allowed. The soil material within the staked area of each well will be removed by hand or small equipment and backfilled with clean fill around each well using small equipment and tampers to meet required grades.

As noted above RI-MW-3 will be decommissioned in accordance with NYSDEC CP-43 and will include grouting in-place. Grouting in-place will involve filling the casing with grout to the unrestricted soil removal level (7+/- feet bgs), cutting the well casing at this depth, and removing the top portion of the casing and associated well materials from the ground. The area will be restored to meet remediation backfill and new development requirements. Below is an outline of the general procedures to be followed.

- Remove the protective concrete and/or road box associated with RI-MW-3, using care not to break the PVC riser.
- Remove bentonite seal, sand pack, and associated well materials using care not to break the PVC riser.
- Perforate the bottom of the well.
- Prior to grouting, the depth of the well will be measured and recorded to determine if any

silt or debris has plugged the well. If plugging has occurred, all reasonable attempts to clear it will be made before grouting.

- Prepare the grout mixture consisting of Type I Portland Cement with a bentonite content of four percent by weight. The special mixture provided in Section 6.2 – Special Mixture is anticipated as excessive loss of the standard grout mix is possible based on the significant fracturing observed.
- Mobilize an excavator for the removal of the 2-inch PVC well materials via lifting while at the same time grouting the wells from the bottom to the top by means of a tremie hose or pipe extending from the grout supply to the bottom of each well in accordance with Section 6.4 – Grout Placement of CP-43.
- Grout will be introduced into the well as the PVC casing is removed.
- Upon completion of grouting, ensure that the final grout elevation is equal to the unrestricted soil removal layer (7+/- feet bgs).
- At the completion of grouting, cut the 4-inch stainless steel casing and remove the top portion of the casing and associated well materials from the ground.
- Fill the remaining area with backfill meeting remediation and new development criteria.
- Complete Monitoring Well Field Inspection Logs and Well Decommissioning Records and submit to NYSDEC.
- All solid waste materials generated during the decommissioning process will be scraped clean of soil and properly recycled and/or disposed of as municipal trash.

The primary method for well decommissioning is to pull the casings and tremie grout. If either the outer or inner casings cannot be removed without breaking, an alternative method under CP-43 will be chosen (e.g. sheering the steel casing below grade or grouting in place) utilizing the flow chart presented in Figure 2 of CP-43. This well will then be relocated and redrilled approximately 10 +/- feet west of its current location at the westerly property boundary. The exact location will be determined once new development buried utilities are marked out in this area.

As no groundwater impacts requiring monitoring were noted in the off-site bedrock monitoring well, it will be decommissioned via grouting in-place as follows:

- Remove the protective concrete and/or road box associated with the off-site well, using care not to break the PVC riser.
- Perforate the bottom of the well.
- Prior to grouting, the depth of the well will be measured and recorded to determine if any silt or debris has plugged the well. If plugging has occurred, all reasonable attempts to clear it will be made before grouting.
- Prepare the grout mixture consisting of Type I Portland Cement with a bentonite content of four percent by weight. The standard mixture provided in Section 6.1 – Standard Grout Mixture is anticipated.
- Grout the well from the bottom to the top by means of a tremie hose or pipe extending from the grout supply to the bottom of the well in accordance with Section 6.4 – Grout Placement of CP-43.
- Fill the casing with grout to a level of five feet below the land surface.
- Cut the well casing at the five-foot depth and remove the top portion of the casing and associated well materials from the ground. Fill the remaining five feet of the borehole with material physically similar to the natural soils or imported fill used during BCP remedial activities in accordance with Section 7.0 – Backfilling and Restoration of CP-43.

- The surface of the borehole will be restored to the condition of the area surrounding the borehole which is currently a grassy area. Seed will then be placed once weather conditions allow to ensure the seed will take.
- Complete Monitoring Well Field Inspection Logs and Well Decommissioning Records and submit to NYSDEC.
- All solid waste materials generated during the decommissioning process will be scraped clean of soil and properly recycled and/or disposed of as municipal trash.

In the event monitoring wells are damaged during remedial activities, the wells will be decommissioned following the same procedure outlined above in respect to RI-MW-3. The affected wells will be redrilled proximate to the original location in accordance with the attached Field Sampling Plan.

The first sampling round will be conducted at the completion of remediation and as part of this RAWP. Samples will be analyzed for CVOCs and PFAS. Sampling and analysis will conform to the requirements of the **Appendix C** QA/QC Plan. Analytical results will be compared to Class GA Groundwater Quality Standards (NYSDEC TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations - June 1998).

Groundwater data will be collected during remediation and as part of this RAWP to generate a contoured groundwater flow map.

4.4 BUILDING SUB-SLAB SOIL VAPOR MITIGATION

A passive SSDS will be installed in the new building as a precautionary green remediation measure with the capability to make it an active system. Prior to building occupancy, indoor air will be sampled to assess if elevated VOCs exist through SVI. If sampling reveals indoor air VOC contamination the SSDS in the new building will be changed to an active system which will protect human health during the conditional period. The system and any vapor intrusion monitoring must no longer be needed within 5 years of the date of the Certificate of Completion or the remedy would default to a Track 2 Restricted Residential Cleanup. Soil vapor mitigation as outlined in this section will be detailed/fulfilled with a supplemental work plan. Requirements for vapor intrusion monitoring for the assessment period will be provided in the SMP.

4.5 SHORT TERM IC/EC AND SMP

Assuming that the groundwater and soil vapor impacts are not resolved prior to obtaining the Certificate of Completion, a "conditional" Track 1 remedy will be required and include short term IC/EC and SMP for post remediation monitoring. It is important to note that these activities are not covered by this RAWP and separate work plans will be submitted if needed. and the IC/EC and SMP would include the following:

Imposition of an IC in the form of an Environmental Easement (EE) for the controlled property that:

- Requires the remedial party or Site owner to complete and submit to the NYSDEC a periodic certification of IC/EC in accordance with NYSDEC Part 375-1.8(h)(3) during the short term period;
- Allows the use and development of the controlled property for restricted residential as defined by Part 375-1.8(g)., although land use is subject to local zoning laws;

- Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH;
- Monitoring of sub-slab vapor extraction, if required, for a set period of time; and
- Requires compliance with the approved SMP.

An SMP is required that includes the following:

- An IC/EC Plan that identifies all use restrictions and ECs for the Site and details the steps and media specific requirements necessary to ensure the IC and/or ECs remain in place and effective. The ICs are as discussed above, and the ECs include groundwater and soil vapor monitoring;
- A monitoring plan for the vapor mitigation systems;
- A monitoring plan for bedrock monitoring wells to ensure natural attenuation of target VOC Site contamination;
- Descriptions of the provisions of the EE including any land use or groundwater use restrictions;
- Provisions for the management and inspection of the identified ECs;
- Maintaining Site access controls and NYSDEC notifications; and,
The steps necessary for the periodic reviews and certifications of the IC/ECs.

4.6 CAMP AND CERP REQUIREMENTS

Dust, VOC, and odor control measures with air monitoring will be implemented during all ground intrusive and soil handling activities to minimize inhalation exposures and create a public record. Air monitoring will be in accordance with the CAMP provided in **Appendix B**. CAMP data will be provided daily to the NYSDEC and NYSDOH and notification of any exceedances will be sent separately to NYSDEC and NYSDOH within 24-hours, including any corrective actions taken. The requirements of the CERP in **Appendix G** and the CAMP in **Appendix B** will be implemented for managing VOCs, odors and particulates during all work activities that involve the excavation and handling of Site soils. A minimum of three total CAMP stations will be utilized. Station locations will include an upwind, downwind, and a fixed station adjacent to the nearest entrance of the church, located just south of the site. See **Figure 18** for CAMP locations.

4.7 GREEN REMEDIATION

Green and Sustainable Remediation (GSR) techniques have been evaluated as described in NYSDEC DER-31 Green Remediation. It is important to note that these activities are not covered by this RAWP and separate work plans will be submitted if needed. It is anticipated that, at a minimum, the following techniques will be used at the Site:

- Reduce vehicle idling – all vehicles, both on and off road (including construction equipment) will be shut off when not in use for more than 5 minutes, consistent with 6 NYCRR Part 217 Motor Vehicle Emissions, Subpart 217-3 Idling Prohibition For Heavy Duty Vehicles.
- Design cover systems, to the extent possible, to be usable for alternate uses such as habitat or passive recreation, require minimal maintenance (e.g. less mowing), allow for infiltration of storm water and/or be integrated with the next use of the Site.

- Minimize hardscape cover systems as much as practical to reduce the carbon footprint and replace with natural vegetated green space.
- Beneficially recycle/reuse materials that would otherwise be considered a waste including recycled crushed clean concrete as base or fill, scrap metal to metal recycler or recycling of used petroleum products.

5.0 OVERSIGHT AND REPORTING

As required by BCP regulations, the owner's remedial engineer will provide oversight of implementation of the RAWP and all other related remedial tasks.. An FER will be completed at the end of construction in the NYSDEC template format. The FER will describe all construction details and include copies of contractor submittals, disposal records and daily field reports (DFRs). A certification that all work was completed in conformance with the approved work plan will be signed and stamped by a professional engineer licensed in the State of New York. All reports will be provided electronically in a format deemed acceptable to NYSDEC and NYSDOH. A BCP Project Schedule is provided in **Appendix F**.

All soil confirmation samples and groundwater samples collected during remediation will be submitted to an approved third-party data validation company, for preparation and submission of Data Usability Summary Reports (DUSRs). BE3 will prepare Electronic Data Deliverables (EDDs) for all samples that incorporate laboratory and DUSR data. The EDDs will be uploaded to the NYSDEC EQUIS system.

NYSDEC's project manager will be notified if any confirmation samples do not meet Site SCOs to determine if additional sampling or remedial work is required.

WORK PLAN CERTIFICATION

I, Jason M. Brydges, certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).



Jason M. Brydges, P.E.

TABLES



TABLE 1
TEST PIT, BORING, AND MONITORING WELL GPS COORDINATES

Number	Latitude	Longitude
Test Pits		
RI TT-1	43.087153	-79.061557
Soil Vapor		
RI VP-1	43.087121	-79.061375
RI VP-2	43.087146	-79.060904
RI VP-3	43.086995	-79.061369
RI VP-4	43.086995	-79.060891
Borings		
RI BH-1	43.087212	-79.06105
RI BH-2	43.087206	-79.061537
RI BH-3	43.087231	-79.060757
RI BH-4	43.086983	-79.061516
RI BH-5	43.08708	-79.060882
RI BH-6	43.08718	-79.060722
RI BH-7	43.086915	-79.06110
RI BH-8	43.086954	-79.060738
RI BH-9	43.087072	-79.061071
RI BH-10	43.086954	-79.060915
RI BH-11	43.087005	-79.060822
RI BH-12	43.086917	-79.060819
Monitoring Wells		
RI MW-1	43.08720	-79.0613
RI MW-2	43.08711	-79.06071
RI MW-3	43.08690	-79.06158
RI MW-4	43.087122	-79.061586

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS



Parameter Tested	Sample Identification, Approximate Sample Depth in Feet Below Ground Surface, and Sample Date									NYSDEC Soil Cleanup Objectives (SCOs)		
	RI-BH-4	RI BH-5	RI BH-6	RI BH-6	RI-BH-7	RI BH-8	RI BH-9	RI BH-10	RI BH-11	Unrestricted	Residential	Restricted Residential
	2-4' 10/28/2024	2-6' 11/1/2024	2-4' 11/1/2024	7-8' 11/1/2024	2-4' 10/28/2024	2-6' 11/1/2024	4-6' 11/1/2024	2-4' 10/29/2024	0-2' 10/31/2024			
METALS/INORGANICS												
Aluminum	5800	625	10200	16500	4540	7740	1880	3670	2360 F1 F1	-	-	-
Arsenic	4.00	ND	5.50	2.40	2.50	3.40	1.4 J	3.00	ND	16	16	16
Barium	119.0	3.6	85.5	38.9	41.7	415.0	12.2	82.3	12.9	350	400	400
Beryllium	0.260	ND	0.470	0.650	0.200	0.350	0.10 J	0.230	0.11 J	7.2	14	72
Cadmium	1.30	0.52	0.70	0.57	0.66	0.44	1.40	0.48	0.84	2.5	2.5	4.3
Calcium	77900	195000.00	39000.00	15000.00	10400.00	142000.00	181000.00	103000.00	192000.00	-	-	-
Chromium	8.7	1.8	14.6	18.6	5.9	9.6	3.5	7.5	4.5	30	30	110
Cobalt	2.8	0.33 J	6.4	9.9	2.2	3.4	0.69	2.7	1.0	-	-	-
Copper	14.5	1.3	35.3	7.7	102.0	14.5	3.7	15.5	4.0	50	270	270
Iron	12200	1670.0	13300.0	19200.0	5720.0	8740.0	3940.0	5370.0	4260 F2	-	-	-
Lead	155	5.8	484.0	14.8	95.9	188.0	21.5	89.3	16.4	63	400	400
Magnesium	39400.0	114000.0	24000.0	13500.0	56600.0	71100.0	105000.0	41600.0	115000.0	-	-	-
Manganese	382	368	472	262	464	428	417	284	768	1,600	2,000	2,000
Mercury	0.790	0.020	0.500	0.014	0.390	0.070	0.160	0.410	0.020	0.18	0.81	0.81
Nickel	6.8	0.92 J	14.9	24.2	5.9	8.2	2.1 J	7.2	2.8	30	140	310
Potassium	1610	230	2040	4380	1240	1790	688	922	460	-	-	-
Silver	ND	ND	0.46 J	ND	ND	ND	ND	ND	ND	2	36	180
Sodium	260	175	155 J	189	475	609	158 J	250	178	-	-	-
Thallium	0.90 J	1.3 J	ND	1.2 J	0.87 J	1.0 J	1.3 J	ND	0.91 J	-	-	-
Vanadium	12.2	1.4	20.6	25.8	8.5	13.4	4.0	9.8	4.6	-	-	-
Zinc	401	87.5	365.0	996.0	357.0	193.0	282.0	148.0	150 F1	109	2,200	10,000
METALS/INORGANICS												
Total Cyanide	ND	ND	ND	-	ND	ND	ND	ND	ND	27	27	27
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)												
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Acenaphthene	0.81 J	ND	ND	ND	0.73 J	ND	ND	ND	ND	20	100	100
Acenaphthylene	ND	ND	0.029 J	ND	1.9 J	ND	ND	ND	ND	100	100	100
Anthracene	2.1	ND	0.086 J	ND	3.6	ND	ND	ND	ND	100	100	100
Benzo[a]anthracene	3.9	ND	0.28	ND	8.2	0.92 J	ND	1.4 J	0.14 J	1	1	1
Benzo[a]pyrene	3	ND	0.18 J	ND	7.4	0.95 J	ND	1.5 J	0.15 J	1	1	1
Benzo[b]fluoranthene	3.3	ND	0.15 J	ND	8.4	1.1 J	ND	1.9 J	0.2 J	1	1	1
Benzo[g,h,i]perylene	1.7	ND	ND	ND	4.6	0.69 J	ND	1.2 J	0.1 J	100	100	100
Benzo[k]fluoranthene	1.9	ND	ND	ND	4.1	0.52 J	ND	0.71 J	ND	0.8	1	3.9
Bis(2-ethylhexyl) phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Butyl benzyl phthalate	ND	ND	ND	ND	ND	0.46 J	ND	ND	ND	-	-	-
Carbazole	0.92 J	ND	0.031 J	ND	0.78 J	ND	ND	ND	ND	-	-	-
Chrysene	3.3	ND	0.27	ND	8	0.9 J	ND	1.5 J	ND	1	1	3.9
Dibenz(a,h)anthracene	0.53 J	ND	0.05 J	ND	1.2 J	ND	ND	ND	ND	0.33	0.33	0.33
Dibenzofuran	0.44 J	ND	ND	ND	0.86 J	ND	ND	ND	ND	7	14	59
Fluoranthene	8.9	ND	0.55	ND	21	2	ND	3.1 J	0.26 J	100	100	100
Fluorene	0.86 J	ND	0.026 J	ND	1.5 J	ND	ND	ND	ND	30	100	100
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Indeno[1,2,3-cd]pyrene	1.5	ND	0.14 J	ND	3.9	0.54 J	ND	0.98 J	ND	0.5	0.5	0.5
Naphthalene	0.19 J	ND	ND	ND	0.92 J	ND	ND	ND	ND	12	100	100
Phenanthrene	7.2	ND	0.4	ND	14	1.0 J	ND	2.3 J	ND	100	100	100
Pyrene	6.8	ND	0.53	ND	16	1.7	ND	2.5 J	0.23 J	100	100	100

Notes: All units in parts per million (ppm), except for PFAS (ppt)
 ND Analyte not detected
 90.3 Analyte detected
 118 Reported concentration greater than or equal to the NYSDEC Unrestricted SCO
 3.75 Reported concentration greater than or equal to the NYSDEC Residential SCO
 21.7 Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO
 J Estimated concentration
 F1 MS and/or MSD recovery exceeds control limits
 F2 MS/MSD RPD exceeds control limits

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS



Parameter Tested	Sample Identification, Approximate Sample Depth in Feet Below Ground Surface, and Sample Date									NYSDEC Soil Cleanup Objectives (SCOs)		
	RI BH-4 2-4'	RI BH-5 2-6'	RI BH-6 2-4'	RI BH-6 7-8'	RI BH-7 2-4'	RI BH-8 2-6'	RI BH-9 4-6'	RI BH-10 2-4'	RI BH-11 4-6'	Unrestricted	Residential	Restricted Residential
	10/28/2024	11/1/2024	11/1/2024	11/1/2024	10/28/2024	11/1/2024	11/1/2024	10/29/2024	10/31/2024			
VOLATILE ORGANIC COMPOUNDS (VOCs)												
2-Butanone (MEK)	ND	ND	ND	-	ND	ND	ND	ND	ND	0.12	100	100
Acetone	0.014 J vs	ND	0.008 J*1 vs	-	ND	0.0059 J*1vs	0.007 J vs*1	ND	ND	0.05	100	100
Benzene	0.00036 J vs	0.0031 J vs	ND	-	ND	ND	0.00038 J vs	0.00029 J vs	ND	0.06	2.9	4.8
Chloroform	0.00076 J vs B	0.00067 J vs B	0.00078 JB	-	0.00059 J vs B	0.0007 JB vs	0.00062 J vs B	0.00055 J B	0.00056 J B vs	0.37	10	49
Ethylbenzene	ND	0.0015 J vs	ND	-	ND	ND	0.007 J vs	0.00062 J vs	ND	1	30	41
Methyl acetate	ND	ND	ND	-	ND	ND	0.0039 J vs	ND	ND	-	-	-
Methylcyclohexane	ND	ND	ND	-	ND	ND	0.00145 J vs	ND	ND	-	-	-
Methylene Chloride	0.011 vs B	0.013 vs B	0.023 B vs	-	0.0095 vs B	0.019 B vs	0.017 vs B	0.0026 J vs	ND	0.05	51	100
m-Xylene & p-Xylene	ND	0.012	ND	-	ND	0.0012 J	0.0027 J	0.0036 J	ND	0.26	100	100
o-Xylene	ND	0.0039 J	ND	-	ND	ND	0.0012 J	0.0016 J	ND	0.26	100	100
Tetrachloroethene	0.0015 J vs	ND	ND	-	ND	ND	ND	ND	ND	1.3	5.5	19
Toluene	0.00085 J vs	0.0035 J vs	0.00044 J vs	-	0.00049 J vs	0.00068 J vs	0.0021 J vs	0.0033 J vs	0.0012 J vs	0.7	100	100
Trichloroethene	ND	ND	ND	-	ND	ND	ND	ND	ND	0.47	10	21
Xylenes, Total	ND	0.016 vs	ND	-	ND	0.0012 J	0.0039 J vs	0.0052 J	0.001 J vs	0.26	100	100
ORGANOCHLORINE PESTICIDES												
4,4'-DDT	ND	ND	0.0044 J	ND	0.0086 J	0.02 J	0.00078 J	0.012 JB	ND	0.0033	1.7	7.9
alpha-BHC	0.0087 JB	ND	ND	ND	0.011 JB	ND	ND	0.0038 J	ND	0.02	0.097	0.48
delta-BHC	ND	ND	ND	ND	0.0086 JB	ND	ND	0.0046 J	ND	0.04	100	100
Lindane	0.0076 JB	ND	ND	ND	0.0085 JB	ND	ND	ND	ND	0.026	0.28	1.3
POLYCHLORINATED BIPHENYLS (PCBs)												
PCBs	ND	ND	ND	ND	ND	ND	ND	ND	ND			
HERBICIDES												
2,4,5-TP (Silvex)	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.8	58	100
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)												
D3-NMeFOSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
d3-NMeFOSAA	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
N-ethylperfluorooctanesulfonamidoacetic acid	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorobutanoic acid (PFBA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorodecanoic acid (PFDA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluoroheptanoic acid (PFHpA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorohexanesulfonic acid (PFHxS)	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorohexanoic acid (PFHxA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorononanoic acid (PFNA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorooctanesulfonamide (PFOSA)	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorooctanesulfonic acid (PFOS)	ND	ND	ND	230	260	190	250	160 J	140 J	880	8800	44000
Perfluorooctanoic acid (PFOA)	ND	ND	ND	ND	93 J	ND	ND	ND	ND	660	6600	33000
Perfluoropentanoic acid (PFPeA)	ND	ND	ND	ND	240 J	ND	ND	ND	ND	-	-	-

Notes: All units in parts per million (ppm), except for PFAS (ppt)

ND Analyte not detected

90.3 Analyte detected

118 Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

3.75 Reported concentration greater than or equal to the NYSDEC Residential SCO

vs Reported analyte concentrations are below 200 ug/kg and may be biased low due to the sample not being collected according to 5035A-L low-level specifications

- Not applicable or sample not tested for this analyte

21.7 Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO

J Estimated concentration

F1 MS and/or MSD recovery exceeds control limits

F2 MS/MSD RPD exceeds control limits

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS



Parameter Tested	Sample Identification, Approximate Sample Depth in Feet Below Ground Surface, and Sample Date							NYSDEC Soil Cleanup Objectives (SCOs)		
	RI BH-12	RI VP-1	RI VP-2	RI VP-3 Native	RI VP-3	RI VP-4 QA/QC	RI VP-4	Unrestricted	Residential	Restricted Residential
	2-4' 10-31/2024	2-4' 10/29/2024	2-4' 10/29/2024	8-9' 10/29/2024	2-4' 10/29/2024	2-4' 10/29/2024	2-4' 10/29/2024			
METALS/INORGANICS										
Aluminum	6610	3480	1830	3390	9050	7150	5280	-	-	-
Arsenic	2.80	2.3 F1	1.1 J	1.9 J	4.00	2.60	1.8 J	16	16	16
Barium	91.3	44 F1	7.1	15.5	136 F F2	31.2	30.5	350	400	400
Beryllium	0.280	0.15 J F1	0.079	0.14 J	0.36 F1 F2	0.260	0.22 J	7.2	14	72
Cadmium	0.34	0.65 F1	0.49	0.72	0.546 F1 F2	1.20	0.99 J	2.5	2.5	4.3
Calcium	74000.00	131000.00	167000.00	133000.00	108000 F2	121000.00	111000.00	-	-	-
Chromium	8.2	4.6 F1	2.5	3.8	12.3	7.3	5.5	30	30	110
Cobalt	3.5	1.9 F1	0.5	1.7	4.3 F1 F2	3.0	2.2	-	-	-
Copper	14.2	37.3 F1 F2	2.6	9.3	21.5 F1 F2	5.1	9.0	50	270	270
Iron	8730.0	4740.0	2570.0	4920.0	12200 F2	8250.0	5990.0	-	-	-
Lead	118.0	68.9	7.2	47.2	176 F1 F2	33.1	46.9	63	400	400
Magnesium	285000.0	68800.0	104000.0	79000.0	45500 F2	71500.0	66900.0	-	-	-
Manganese	383	378	347	429	461 F1 F2	875	696	1,600	2,000	2,000
Mercury	0.470	0.120	0.062	0.039	4.500	0.089	0.170	0.18	0.81	0.81
Nickel	8.6	4.1 J F1	1.7 J	4.0 J	9.8 F1 F2	5.9	4.9 J	30	140	310
Potassium	1660	943	1	1100	2.3 F1 F2	1110	1070	-	-	-
Silver	ND	ND	ND	ND	ND	ND	ND	2	36	180
Sodium	283	186	180	166	547 F1 F2	238	197	-	-	-
Thallium	ND	ND	0.95 J	1.0 J	ND	0.99 J	0.93 J	-	-	-
Vanadium	12.9	7.5 F1	3.2	7.0	16.9 F1 F2	12.7	9.6	-	-	-
Zinc	148.0	205 F1	175.0	156.0	177 F1 F2	386.0	395.0	109	2,200	10,000
METALS/INORGANICS										
Total Cyanide	ND	ND	ND	ND	ND	ND	ND	27	27	27
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)										
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	-	-	-
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	20	100	100
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	100	100	100
Anthracene	ND	ND	ND	ND	ND	ND	ND	100	100	100
Benzo[a]anthracene	0.27 J	1.0 J F1 F1	ND	ND	2.5 J F1 F2	ND	ND	1	1	1
Benzo[a]pyrene	0.27 J	1.1 J F1 F2	ND	ND	ND	ND	ND	1	1	1
Benzo[b]fluoranthene	0.35 J	1.3 J F1 F2	ND	ND	ND	ND	ND	1	1	1
Benzo[g,h,i]perylene	0.21 J	0.72 J F1 F2	ND	ND	ND	ND	0.19 J	100	100	100
Benzo[k]fluoranthene	0.13 J	0.52 J F1 F2	ND	ND	ND	ND	ND	0.8	1	3.9
Bis(2-ethylhexyl) phthalate	ND	ND	ND	ND	ND	ND	0.51 J	-	-	-
Butyl benzyl phthalate	ND	ND	ND	ND	ND	ND	ND	-	-	-
Carbazole	ND	ND	ND	ND	ND	ND	ND	-	-	-
Chrysene	0.28 J	0.98 J F1 F2	ND	ND	ND	ND	ND	1	1	3.9
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	0.33	0.33	0.33
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	7	14	59
Fluoranthene	0.6 J	2.3 J F1 F2	ND	0.027 J	5.7 J F2	ND	0.13 J	100	100	100
Fluorene	ND	ND	ND	ND	ND	ND	ND	30	100	100
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	-	-	-
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	-	-	-
Indeno[1,2,3-cd]pyrene	0.17 J	0.55 J F1 F2	ND	ND	ND	ND	ND	0.5	0.5	0.5
Naphthalene	ND	ND	ND	ND	ND	ND	ND	12	100	100
Phenanthrene	0.32 J	1.3 J F1 F2	ND	ND	4.0 J F1	ND	ND	100	100	100
Pyrene	0.46 J	1.8 J F1 F2	ND	0.022 J	4.3 J F1	ND	0.15 J	100	100	100

Notes: All units in parts per million (ppm), except for PFAS (ppt)

ND Analyte not detected

90.3 Analyte detected

118 Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

3.75 Reported concentration greater than or equal to the NYSDEC Residential SCO

21.7 Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO

J Estimated concentration

F1 MS and/or MSD recovery exceeds control limits

F2 MS/MSD RPD exceeds control limits

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS



Parameter Tested	Sample Identification, Approximate Sample Depth in Feet Below Ground Surface, and Sample Date							NYSDEC Soil Cleanup Objectives (SCOs)		
	RI BH-12 2-4' 10/31/2024	RI VP-1 2-4' 10/29/2024	RI VP-2 2-4' 10/29/2024	RI VP-3 Native 8-9' 10/29/2024	RI VP-3 2-4' 10/29/2024	RI VP-4 QA/QC 2-4' 10/29/2024	RI VP-4 2-4' 10/29/2024	Unrestricted	Residential	Restricted Residential
	VOLATILE ORGANIC COMPOUNDS (VOCs)									
2-Butanone (MEK)	ND	ND	ND	ND	ND	ND	ND	0.12	100	100
Acetone	ND	0.009 J F1 vs	0.0065 J vs	ND	ND	0.005 J vs	0.0049 J vs	0.05	100	100
Benzene	ND	ND	ND	ND	ND	ND	ND	0.06	2.9	4.8
Chloroform	0.00065 JB vs	0.00051 J B vs	ND	0.00059 J vs	0.00062 J B F1	0.00058 J B vs	0.00055 JB vs	0.37	10	49
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	1	30	41
Methyl acetate	ND	ND	ND	ND	ND	ND	ND	-	-	-
Methylcyclohexane	ND	ND	ND	ND	ND	ND	ND	-	-	-
Methylene Chloride	ND	0.0024 J vs	ND	ND	ND	0.0028 J vs	ND	0.05	51	100
m-Xylene & p-Xylene	ND	0.0014	0.00097	ND	ND	0.0015 J	0.0026 J	0.26	100	100
o-Xylene	ND	0.00072	ND	ND	ND	ND	0.00072 J	0.26	100	100
Tetrachloroethene	ND	0.0039 J vs	ND	ND	ND	ND	ND	1.3	5.5	19
Toluene	ND	0.002 J vs	0.0013 J vs	ND	0.00077 J vs	0.0019 J vs	0.0021 J vs	0.7	100	100
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	0.47	10	21
Xylenes, Total	ND	0.0021 J	0.00097 J	ND	ND	0.0015 J vs	0.00332	0.26	100	100
ORGANOCHLORINE PESTICIDES										
4,4'-DDT	0.0032 J	0.0058 J B	0.00077 JB	0.00095 JB	0.04 J B	0.0087 JB	ND	0.0033	1.7	7.9
alpha-BHC	ND	ND	ND	ND	ND	ND	ND	0.02	0.097	0.48
delta-BHC	ND	0.002 J vs	ND	ND	ND	ND	ND	0.04	100	100
Lindane	ND	ND	0.00058 J	ND	ND	ND	ND	0.026	0.28	1.3
POLYCHLORINATED BIPHENYLS (PCBs)										
PCBs	ND	ND	ND	ND	ND	ND	ND			
HERBICIDES										
2,4,5-TP (Silvex)	ND	ND	ND	ND	ND	ND	ND	3.8	58	100
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)										
D3-NMeFOSA	ND	ND	ND	ND	ND	ND	ND	-	-	-
d3-NMeFOSAA	ND	ND	ND	ND	ND	ND	ND	-	-	-
N-ethylperfluorooctanesulfonamidoacetic acid	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorobutanoic acid (PFBA)	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorodecanoic acid (PFDA)	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluoroheptanoic acid (PFHpA)	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorohexanesulfonic acid (PFHxS)	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorohexanoic acid (PFHxA)	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorononanoic acid (PFNA)	ND	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorooctanesulfonamide (PFOSA)	74 J	ND	ND	ND	ND	ND	ND	-	-	-
Perfluorooctanesulfonic acid (PFOS)	89 J	110 J	ND	ND	ND	ND	80 J	880	8800	44000
Perfluorooctanoic acid (PFOA)	ND	ND	ND	ND	ND	ND	66 J	660	6600	33000
Perfluoropentanoic acid (PFPeA)	ND	ND	ND	ND	ND	ND	ND	-	-	-

Notes: All units in parts per million (ppm), except for PFAS (ppt)

ND Analyte not detected

90.3 Analyte detected

118 Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

3.75 Reported concentration greater than or equal to the NYSDEC Residential SCO

vs

Reported analyte

- Not applicable or sample not tested for this analyte

21.7 Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO

J Estimated concentration

F1 MS and/or MSD recovery exceeds control limits

F2 MS/MSD RPD exceeds control limits

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS



Parameter Tested	Sample Identification, Approximate Sample Depth in Feet Below Ground Surface, and Sample Date									NYSDEC Soil Cleanup Objectives (SCOs)		
	RI TT-1 (TANK LOCATION) 6-7'	RI MW-3 2-4'	RI MW-1 2-4'	RI MW-4 1-3'	RI MW-4 10-12'	RI MW-2 2-4'	RI BH-1 4-6'	RI BH-2 2-4'	RI BH-3 2-4'	Unrestricted	Residential	Restricted Residential
	11/13/2024	10/15/2024	10/17/2024	10/18/2024	10/18/2024	10/18/2024	10/31/2024	10/28/2024	11/1/2024			
METALS/INORGANICS												
Aluminum	7580	8190 F2	6520	3220	4830	5260	1970	6600	5430.0	-	-	-
Arsenic	2.1 J	4.9	2.4 J	2.3	2.7	4.3 F1	ND	3.00	4.9	16	16	16
Barium	25	161 F1 F2	21.1	15.6	31.0	25.8 F1	11	41.2	154	350	400	400
Beryllium	0.35	0.390	0.270	0.17 J	0.21 J	0.23 F1	0.094 J	0.28	0.280	7.2	14	72
Cadmium	1.3 B	0.79	1.50	0.51	0.72	2.9 F1	0.55	0.860	3	2.5	2.5	4.3
Calcium	104000	68800	149000	178000	160000.00	140000.00	197000.00	90700	147000.00	-	-	-
Chromium	8.5	11.4	7.2	5.2	10.1	7.1 F1	4.0	9.2	9.7	30	30	110
Cobalt	4.7	4.6	3.6	1.5	2.4	2.7 F1	0.8	3.5	9.3	-	-	-
Copper	9.5	31	15.4	5.4	9.6	8.3 F1	4.0	16.1	38.4	50	270	270
Iron	9980	11600	7930	4960	6520	9090.0	3530.0	8140	8390.0	-	-	-
Lead	29.1	144	105	66.4	76.9	47.9 F1	8.9	119	291.0	63	400	400
Magnesium	62900	23200	85300	99100	75600.0	64900.0	119000	41100	69500.0	-	-	-
Manganese	434	405	585	372	470	444	590.00	448	449	1,600	2,000	2,000
Mercury	0.024	0.087	0.015 J	0.014 J	0.041	0.03	0.027	0.1300	0.68	0.18	0.81	0.81
Nickel	9.8	13.3	8.3	5.1 J	7.0	7.9 F1	3.0	8.80	11.00	30	140	310
Potassium	2110	1890	2270	1710	1970.0	1910 F1	704.0	1810	1360.00	-	-	-
Silver	ND	ND	ND	ND	ND	0.21 J F1	ND	ND	ND	2	36	180
Sodium	164 J	467	204	256	340	241 F1	187	315	224.000	-	-	-
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Vanadium	13.7	17.4	12.9	6.7	8.1	8.0 F1	3.7	12.40	10.800	-	-	-
Zinc	521	229 F1 F2	335	147	175	643.0	149.0	303	1020	109	2,200	10,000
INORGANICS												
Total Cyanide	ND	ND	ND	ND	ND	ND	ND	ND	ND	27	27	27
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)												
2-Methylnaphthalene	ND	ND	0.23 J	ND	ND	ND	ND	ND	ND	-	-	-
Acenaphthene	ND	ND	0.79 J	ND	ND	ND	ND	ND	0.48 J	20	100	100
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	0.32 J	100	100	100
Anthracene	ND	ND	1.7	ND	ND	ND	ND	ND	1.7 J	100	100	100
Benzo[a]anthracene	ND	ND	2.2	ND	ND	ND	ND	0.44 J F1	7.3	1	1	1
Benzo[a]pyrene	0.045 J	ND	2.2	ND	ND	ND	ND	ND	8.3	1	1	1
Benzo[b]fluoranthene	0.056 J	ND	2.5	ND	ND	ND	ND	0.64 J	9.8	1	1	1
Benzo[g,h,i]perylene	0.041 J	ND	1.6	ND	ND	ND	ND	0.4 J	4.9	100	100	100
Benzo[k]fluoranthene	ND	ND	0.94 J	ND	ND	ND	ND	ND	3.4	0.8	1	3.9
Bis(2-ethylhexyl) phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Butyl benzyl phthalate	ND	ND	0.19 J	0.32 J	5.2	1.8	ND	ND	ND	-	-	-
Carbazole	ND	ND	0.64 J	ND	ND	ND	ND	ND	0.77 J	-	-	-
Chrysene	ND	ND	2.3	ND	ND	ND	ND	ND	6.4	1	1	3.9
Dibenz(a,h)anthracene	ND	ND	0.39 J	ND	ND	ND	ND	ND	1.9	0.33	0.33	0.33
Dibenzofuran	ND	ND	0.46 J	ND	ND	ND	ND	ND	0.37 J	7	14	59
Fluoranthene	ND	ND	6.3	ND	0.15 J	ND	ND	1.1 J F1	10	100	100	100
Fluorene	ND	ND	0.72	ND	ND	ND	ND	ND	0.48 J	30	100	100
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Hexachlorobutadiene	0.047 J	ND	0.39 J	ND	ND	ND	ND	ND	ND	-	-	-
Indeno[1,2,3-cd]pyrene	0.058 J	ND	1.2	ND	ND	ND	ND	ND	4.1	0.5	0.5	0.5
Naphthalene	ND	ND	0.32 J	ND	ND	ND	ND	ND	0.35 J	12	100	100
Phenanthrene	ND	ND	6.1	ND	ND	ND	ND	0.63 J F1	6.8	100	100	100
Pyrene	ND	ND	5.1	ND	0.14 J	ND	ND	0.89 J F1	8.5	100	100	100

Notes: All units in parts per million (ppm), except for PFAS (ppt)

ND Analyte not detected

90.3 Analyte detected

118 Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

3.75 Reported concentration greater than or equal to the NYSDEC Residential SCO

21.7 Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO

J Estimated concentration

F1 MS and/or MSD recovery exceeds control limits

F2 MS/MSD RPD exceeds control limits

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS



Parameter Tested	Sample Identification, Approximate Sample Depth in Feet Below Ground Surface, and Sample Date									NYSDEC Soil Cleanup Objectives (SCOs)		
	RI TT-1 (TANK LOCATION)	RI MW-3	RI MW-1	RI MW-4	RI MW-4	RI MW-2	RI BH-1	RI BH-2	RI BH-3	Unrestricted	Residential	Restricted Residential
	6-7'	2-4'	2-4'	1-3'	10-12'	2-4'	4-6'	2-4'	2-4'			
	11/13/2024	10/15/2024	10/17/2024	10/18/2024	10/18/2024	10/18/2024	10-31-2024	10/28/2024	11/1/2024			
VOLATILE ORGANIC COMPOUNDS (VOCs)												
2-Butanone (MEK)	ND	0.0064 J F1 F2 vs	ND	ND	0.0042 J vs	ND	ND	ND	ND	0.12	100	100
Acetone	0.0084 J vs	ND	ND	0.0066 J vs	0.022 J vs	ND	ND	0.0051 J vs	0.0091 J*1vs	0.05	100	100
Benzene	ND	ND	ND	0.00039 J vs	0.00047 J vs	ND	ND	ND	0.00027 Jvs	0.06	2.9	4.8
Chloroform	0.00065 J B vs	0.00047 J vs	ND	0.00050 J vs B	0.00049 J vs B	0.00053 J vs	0.00057 JB vs	0.00072 J vs B	0.00064 JB	0.37	10	49
Ethylbenzene	ND	0.0005 J vs	ND	ND	0.0021 J vs	ND	ND	ND	ND	1	30	41
Methyl acetate	ND	ND	0.41 J	ND	ND	ND	ND	ND	ND	-	-	-
Methylcyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Methylene Chloride	ND	ND	0.073 JB	ND	ND	ND	ND	0.013 vs B	0.019 JB vs	0.05	51	100
m-Xylene & p-Xylene	ND	0.0023	ND	ND	ND	ND	ND	ND	0.00089 J	0.26	100	100
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.26	100	100
Tetrachloroethene	0.0038 J vs	ND	1.8	ND	ND	ND	ND	0.0025 J vs	ND	1.3	5.5	19
Toluene	ND	0.0014 J vs	0.06 J	0.0016 J vs	0.006 vs	ND	0.0012 J vs	0.00092 J vs	0.0011 J vs	0.7	100	100
Trichloroethene	ND	ND	1.7	ND	ND	ND	ND	0.0019 J vs	ND	0.47	10	21
Xylenes, Total	ND	0.0031 J vs	ND	0.0013 J vs	0.02 vs	ND	0.0011 J vs	ND	0.00089 J vs	0.26	100	100
ORGANOCHLORINE PESTICIDES												
4,4'-DDT	0.0012 J B	ND	ND	ND	ND	0.011 JB	ND	ND	0.016 J	0.0033	1.7	7.9
alpha-BHC	ND	ND	0.0091 JB	ND	ND	ND	ND	0.0078 J B	ND	0.02	0.097	0.48
delta-BHC	ND	ND	ND	0.00064 J	ND	ND	ND	ND	ND	0.04	100	100
Lindane	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.026	0.28	1.3
POLYCHLORINATED BIPHENYLS (PCBs)												
PCBs	ND	ND	ND	ND	ND	ND	ND	ND	ND			
HERBICIDES												
2,4,5-TP (Silvex)	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.8	58	100
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)												
D3-NMeFOSA	ND	ND	150 J	ND	-	ND	ND	ND	ND	-	-	-
d3-NMeFOSAA	ND	ND	560	ND	-	ND	ND	ND	ND	-	-	-
N-ethylperfluorooctanesulfonamidoacetic acid (N-EthylPFOSAA)	ND	ND	ND	ND	-	82 J	ND	ND	ND	-	-	-
Perfluorobutanoic acid (PFBA)	ND	190 J	ND	ND	-	ND	190 J	ND	ND	-	-	-
Perfluorodecanoic acid (PFDA)	ND	ND	120 J	ND	-	ND	ND	ND	ND	-	-	-
Perfluoroheptanoic acid (PFHpA)	ND	ND	88 J	ND	-	ND	ND	ND	ND	-	-	-
Perfluorohexanesulfonic acid (PFHxS)	ND	ND	52 J	ND	-	ND	ND	ND	ND	-	-	-
Perfluorohexanoic acid (PFHxA)	ND	ND	330	ND	-	ND	ND	ND	ND	-	-	-
Perfluorononanoic acid (PFNA)	ND	ND	100 J	ND	-	ND	ND	ND	ND	-	-	-
Perfluorooctanesulfonamide (PFOSA)	ND	ND	520	ND	-	ND	ND	ND	ND	-	-	-
Perfluorooctanesulfonic acid (PFOS)	ND	110	770	78 J	-	45 J	900	110 J	96 J	880	8800	44000
Perfluorooctanoic acid (PFOA)	ND	ND	340	58 J	-	ND	59 J	ND	ND	660	6600	33000
Perfluoropentanoic acid (PFPeA)	ND	ND	220 J	ND	-	ND	ND	ND	ND	-	-	-

Notes: All units in parts per million (ppm), except for PFAS (ppt)

ND Analyte not detected

90.3 Analyte detected

118 Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

3.75 Reported concentration greater than or equal to the NYSDEC Residential SCO

vs concentrations are

- Not applicable or sample not tested for this analyte

21.7 Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO

J Estimated concentration

F1 MS and/or MSD recovery exceeds control limits

F2 MS/MSD RPD exceeds control limits

**TABLE 3 - SUMMARY OF
SOIL VAPOR ANALYTICAL RESULTS**



aminants	dentification, Type of Sample, and Date Analyzed			
	VP-1	VP-2	VP-3	VP-4
	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor
	11/6/2024			
Volatile Organic Compounds (TO-15)				
1,2,4-Trimethylbenzene	ND	ND	ND	2.36
1,2-Dichloroethane	ND	ND	ND	0.579 J
1,3,5-Trimethylbenzene	ND	ND	ND	2.43
1,3-Butadiene	0.164 J	ND	ND	4.25
2-Butanone	0.672 J	0.764 J	0.448 J	ND
4-Ethyltoluene	ND	ND	ND	1.67
Acetone	4.13	4.35	3.75	2.95
Benzene	0.668	ND	ND	37.1
Carbon disulfide	0.906	1.27	ND	14.4
Carbon tetrachloride	0.673 J	ND	1.47	2.54
Chloroform	8.01	0.488 J	3.69	2.17
Chloromethane	0.182 J	0.248 J	0.312 J	0.324 J
cis-1,2-Dichloroethene	0.642 J	ND	ND	ND
Cyclohexane	0.854	ND	ND	198
Dichlorodifluoromethane	2.57	8.75	4.94	15.1
Ethylbenzene	ND	ND	ND	1.43
Freon-113	ND	ND	0.399 J	0.429 J
Heptane	ND	0.697 J	ND	39.2
Hexachlorobutadiene	2.31	ND	ND	16.3
Isopropanol	3.15	ND	6.32	ND
Methylene chloride	0.855 J	ND	0.459 J	4.93
n-Hexane	1.03	0.730 J	ND	258
o-Xylene	ND	ND	ND	1.94
p/m-Xylene	ND	ND	ND	4.6
Tetrachloroethene	184	5.71	46.5	132
Tetrahydrofuran	0.490 J	ND	0.970 J	ND
Toluene	ND	ND	ND	14
trans-1,2-Dichloroethene	0.515 J	ND	ND	ND
Trichloroethene	155	ND	23	6.56
Trichlorofluoromethane	82	22.5	389	1360
Vinyl Chloride	ND	ND	ND	ND

NO FURTHER ACTION No further action is required.

MITIGATE

Above guideline values as compared to Table 3.1 Indoor Air derived by NYSDOH

ND Not detected

- Not applicable

J Estimated concentration

**TABLE 4
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**



Parameter Tested	Sample Identification and Sample Date				NYSDEC TOGS 1.1.1 GA
	RI MW-3	RI MW-3 DUP	RI MW-2	RI MW-1	
	10/30/2024				
METALS					
Barium	50	48	37	39	1000
Cadmium	4.4	4.3	ND	2.5	5
Calcium	120000	117,000	89,800	115,000	-
Chromium, Trivalent	1.9 J	1.5	ND	2.7 J	50
Cobalt	0.89 J	0.63 J	0.75 J	0.76 J	-
Copper	ND	ND	ND	1.8 J	200
Iron	ND	33 J	ND	ND	600
Lead	ND	4.4 J	ND	ND	25
Magnesium	33,100	32,200	20,300	22,300	35,000
Manganese	2.5 JB	2.7 JB	53 B	12 B	600
Nickel	2.7 J	3.0 J	3.4 J	2.6 J	100
Potassium	19,100	18.8	18,200	22,800	-
Sodium	267,000	263,000	345,000	297,000	20,000
Zinc	1,400 B F1	1,400 B	340 B	520 B	2000
TOTAL CYANIDE					
Total Cyanide	4.1 J	ND	ND	5.7 J	200
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)					
SVOCs	ND	ND	ND	ND	Various
VOLATILE ORGANIC COMPOUNDS (VOCs)					
Carbon tetrachloride	ND	0.29 J	ND	ND	5
Chloroform	2.3	1.9	0.39 J	1.9	7
sec-Butylbenzene	ND	ND	0.81 J	ND	5
Tetrachloroethene	12 F1	11	2.3	7.0	5
Trichloroethene	3.5	3.2	1.1	2.2	5
CHLORINATED PESTICIDES					
4,4'-DDE	ND	ND	ND	0.013 J	0.2
4,4'-DDT	0.024 JB	0.022 JB	0.018 JB	0.041 JB	0.2
delta-BHC	ND	ND	ND	0.011 JB	0.04
Endosulfan II	0.013 JB	ND	0.026 JB	0.014 JB	-
Lindane	ND	ND	0.010 JB	ND	-
POLYCHLORINATED BIPHENYLS (PCBs)					
PCBs	ND	ND	ND	ND	Various
HERBICIDES					
Silvex (2,4,5-TP)	ND	ND	ND	ND	0.26

Notes: All units in micrograms per liter (µg/L)
 NYSDEC New York State Department of Environmental Conservation
 TOGS Technical and Operational Guidance Series
 ND Analyte not detected
 9.58 Analyte detected
 128 Analyte exceeds NYSDEC TOGS guidance value
 J Estimated concentration
 B Compound was found in the blank and sample
 F1 MS and/or MSD recovery exceeds control limits
 I Value is EMPC (Estimate Maximum Possible Concentration)
 - Not applicable or sample not tested for this analyte
 ~ Duplicate of Sample MW2

**TABLE 4
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**



Parameter Tested	Sample Identification and Sample Date				NYSDEC Sampling, Analysis, and Assessment of PFAS Guidance
	MW-3	MW-3 DUP~	RI MW-2	RI MW-1	
	10/30/2024				
PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)					
Perfluorobutanoic acid (PFBA)	17	17	11	17	100
Perfluoropentanoic acid (PFPeA)	19	19	12	37	100
Perfluorohexanoic acid (PFHxA)	18	18	16	38	100
Perfluoroheptanoic acid (PFHpA)	9.3	10	8.9	27	100
Perfluorooctanoic acid (PFOA)	16	16	21	42	6.7
Perfluorononanoic acid (PFNA)	1.5 J	1.4 J	3.3	4.3	100
Perfluorodecanoic acid (PFDA)	0.81 J	0.84 J	2.8	2.9	100
Perfluorobutanesulfonic acid (PFBS)	3.1	3.3	4.4	4.8	100
Perfluoropentanesulfonic acid (PFPeS)	0.5 J	0.54 J	0.74 J	1.3	100
Perfluorohexanesulfonic acid (PFHxS)	2	1.9	2.1 J	4.4	100
Perfluorooctanesulfonic acid (PFOS)	5.2	5.2	8.8	13	2.7
Total PFOA/PFOS	21.2	21.2	29.8	55	-

Notes: All units in micrograms per liter (µg/L)
 NYSDEC New York State Department of Environmental Conservation
 TOGS Technical and Operational Guidance Series
 ND Analyte not detected
 9.58 Analyte detected
128 Analyte exceeds NYSDEC Sampling, Analysis and Assessment of PFAS Guidance
 J Estimated concentration
 B Compound was found in the blank and sample
 F1 MS and/or MSD recovery exceeds control limits
 I Value is EMPC (Estimate Maximum Possible Concentration)
 - Not applicable or sample not tested for this analyte
 ~ Duplicate of Sample RI MW-3

**TABLE 5
SUMMARY OF SOIL ANALYTICAL RESULTS**



Parameter Tested	Sample Identification, Approximate Sample Depth in Feet Below Ground Surface, and Sample Date				NYSDEC Soil Cleanup Objectives (SCOs)		
	Drain 1 2-3'	Drain 2 2-3'	Drain 3 2-3'	Drain 4 2-3'	Unrestricted	Residential	Restricted Residential
METALS/INORGANICS							
Arsenic	13.6	4.5	3.1	2.0	13	16	16
Barium	227	59.8	59.2	40.5	350	350	400
Beryllium	1	0.310	0.330	0.240	7.2	14	72
Cadmium	4.7	1.20	0.81	1.10	2.5	2.5	4.3
Chromium	46.9	11.3	11.4	15.0	30	36	180
Copper	54.9	19	21.5	12.6	50	270	270
Lead	552	144	148	113.0	63	400	400
Manganese	3180	471	546	550	1,600	2,000	2,000
Mercury	0.12	0.130	0.250	0.069	0.18	0.81	0.81
Nickel	31.8	11.2	9.2	8.9	30	140	310
Selenium	ND	0.88	ND	ND	3.9	36	180
Silver	ND	ND	ND	ND	2	36	180
Zinc	1260	373	267	316	109	2,200	10,000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)							
Benzo[a]anthracene	ND	ND	0.26	ND	1	1	1
Benzo[a]pyrene	ND	0.4	0.3	ND	1	1	1
Benzo[b]fluoranthene	ND	0.54	0.29	ND	1	1	1
Benzo[g,h,i]perylene	ND	0.36	0.22	ND	100	100	100
Benzo[k]fluoranthene	ND	0.3	0.27	ND	0.8	1	3.9
Chrysene	ND	ND	0.28	ND	1	1	3.9
Fluoranthene	.550	0.86	0.54	ND	100	100	100
Indeno[1,2,3-cd]pyrene	ND	0.34	0.18	ND	0.5	0.5	0.5
Phenanthrene	ND	0.34	0.23	ND	100	100	100
Pyrene	.430	0.65	0.43	ND	100	100	100
VOLATILE ORGANIC COMPOUNDS (VOCs)							
Chloroform	0.00067	0.00064	0.00063	0.00067	0.37	10	49

Notes: All units in parts per million (ppm)

ND Analyte not detected

90.3 Analyte detected

118 Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

3.75 Reported concentration greater than or equal to the NYSDEC Residential SCO

4.7 Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO

TABLE 6
Sample and Analysis Summary



Soil

Sample ID	Analyses
RI-BH-1 through RI-BH-12	Target Compound List (TCL) VOCs + TICs (subsurface samples only), TCL SVOCs, Target Analyte List (TAL) Metals (Including total mercury, total cyanide, and hexavalent chromium), PCBs, TCL Pesticides, 1,4-dioxane, and Per & Polyfluoroalkyl Substances (PFAS)
RI-VP-1 through RI-VP-4 RI-VP-3 Native RI-VP-4 QA/QC	Target Compound List (TCL) VOCs + TICs (subsurface samples only), TCL SVOCs, Target Analyte List (TAL) Metals (Including total mercury, total cyanide, and hexavalent chromium), PCBs, TCL Pesticides, 1,4-dioxane, and Per & Polyfluoroalkyl Substances (PFAS)
RI-MW-1 through RI-MW-4	Target Compound List (TCL) VOCs + TICs (subsurface samples only), TCL SVOCs, Target Analyte List (TAL) Metals (Including total mercury, total cyanide, and hexavalent chromium), PCBs, TCL Pesticides, 1,4-dioxane, and Per & Polyfluoroalkyl Substances (PFAS)
RI-TT-1 (Tank Location)	Target Compound List (TCL) VOCs + TICs (subsurface samples only), TCL SVOCs, Target Analyte List (TAL) Metals (Including total mercury, total cyanide, and hexavalent chromium), PCBs, TCL Pesticides, 1,4-dioxane, and Per & Polyfluoroalkyl Substances (PFAS)
Drain 1 through Drain 4	TCL VOCs, SVOCs and Metals
D1 through D12	TCLP Metals, TCLP VOCs, and TCLP SVOCs

Vapor

Sample ID	Analyses
VP-1 through VP-4	TO-15 VOCs

Groundwater

Sample ID	Analyses
RI-MW-1 through RI-MW-3 and RI-MW-3 DUP	(TCL) VOCs + CP-51 list VOCs and TICs, TCL SVOCs, TAL Metals + Cyanide, PCBs, TCL Pesticides, 1,4-dioxane, and Per & Polyfluoroalkyl Substances (PFAS)

TABLE 7
PHASE II ESA - SUMMARY OF SOIL
ANALYTICAL RESULTS



Parameter Tested	BE3 Phase II Report April 2023 - Sample Identification, Sample Depth in feet below ground surface (bgs), and Sample Date								NYSDEC Soil Cleanup Objectives (SCOs)				
	BH1	BH4	BH5	BH6	BH7	BH8	BH9	BH10	Unrestricted	Residential	Restricted Residential	Commerical	Industrial
	3-6	1-2	3-6	2-4	1-4	2-4	2-4	2-4					
	3/9/2023				4/3/2023								
METALS/INORGANICS													
Arsenic	1.8	5.1	4.5	4.9	4.0	4.7	6.0	3.6	13	16	16	16	16
Barium	20.9	885	827	4950	63	87.7	73	128	410	410	410	410	10,000
Beryllium	0.5	0.40	0.17 J	0.43	0.31	0.45	0.45	0.24	4.4	8.8	43	670	750
Cadmium	1.1	0.66	0.58	0.98	0.56	0.87	1.40	0.67	2.5	2.5	2.5	3.7	4.4
Chromium	4.9	13.7	14.6	18.4	9.8	16.0	13.2	15.8	30	30	110	1,700	2,000
Copper	8.9	18.7	16.1	25.6	16.8	22.8	19.0	17.7	50	280	280	280	10,000
Lead	65	490	100	904	115	154	134	185	63	400	400	1,000	3,900
Manganese	647	495 B	464 B	585 B	425 B	556 B	589 B	505 B	1,600	2,000	2,000	10,000	10,000
Mercury	0.43	0.13	0.33	0.58	0.24	0.46	0.53	0.76	0.18	0.26	0.26	1.1	1.1
Nickel	3.6 J	10.0	7.7	9.5	8.7	12.8	13.5	7.3	30	44	210	320	3,400
Selenium	1.2 J	ND	ND	ND	ND	ND	0.61 J	ND	4	22	110	1,700	2,000
Silver	ND	ND	0.27 J	0.34	ND	0.35 J	0.42 J	ND	2	22	110	1,700	2,000
Zinc	324	394	476	638	241	331	441	241	109	1,300	6,600	10,000	10,000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)													
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	20	100	100	500	1,000
Acenaphthylene	ND	0.42 J	ND	2.7 J	0.27 J	ND	ND	ND	100	100	100	500	1,000
Anthracene	ND	1.1 J	ND	2.8 J	0.57 J	ND	0.93 J	ND	100	100	100	500	1,000
Benzo(a)anthracene	ND	3	ND	9.8	1.9	0.89 J	1.8 J	ND	1	1	1.4	37	37
Benzo(a)pyrene	ND	2.8	ND	8.2	2.0	0.79 J	1.7 J	0.41 J	1	1	1	3.7	3.7
Benzo(b)fluoranthene	ND	2.8	ND	11.0	2.3	0.9 J	1.7 J	0.46 J	1	1	1.4	37	37
Benzo(g,h,i)perylene	ND	2	ND	5.40	1.30	0.53 J	0.82 J	0.23 J	0.64	1.2	4.9	47	78
Benzo(k)fluoranthene	ND	1.7 J	ND	4.70	0.88	0.5 J	1.0 J	0.28 J	0.8	1.2	4.9	47	78
Chrysene	ND	2.6	ND	10	1.8	0.81 J	1.6 J	0.44 J	1	1.2	4.9	47	78
Dibenz(a,h)anthracene	ND	0.47 J	ND	2.1 J	0.38 J	ND	ND	ND	0.33	0.33	0.33	3.7	3.7
Dibenzofuran	ND	0.24 J	ND	0.48 J	ND	ND	ND	ND	2.1	4.2	18	180	290
Fluoranthene	0.31 J	7.1	ND	22.0	4.0	1.8 J	4.1	1.1 J	85	100	100	500	1,000
Fluorene	ND	0.3 J	ND	ND	ND	ND	0.29 J	ND	30	100	100	500	1,000
Indeno(1,2,3-cd)pyrene	ND	1.8	ND	5.3	1.1 J	0.45 J	0.76 J	ND	0.5	0.5	1.4	37	37
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	12	84	100	500	1,000
Phenanthrene	ND	4.7	ND	13.0	1.9	0.77 J	3.0	0.56 J	1.1	1.2	4.9	47	78
Pyrene	0.26 J	4.6	ND	14.0	2.7	1.3 J	2.9	0.7 J	64	100	100	500	1,000
VOLATILE ORGANIC COMPOUNDS (VOCs)													
1,2,4-Trimethylbenzene	-	-	-	-	-	ND	ND	-	0.51	0.51	0.52	2.2	2.2
1,3,5-Trimethylbenzene	-	-	-	-	-	ND	ND	-	0.51	0.51	0.52	2.2	2.2
2-Butanone (MEK)	-	-	-	-	-	ND	0.0059 J	-	0.1	100	100	500	1,000
Acetone	-	-	-	-	-	0.009 J	0.052	-	0.03	100	100	500	1,000
Benzene	-	-	-	-	-	ND	0.00027 J	-	0.06	1.2	3.7	20	20
Chloroform	-	-	-	-	-	0.00051	0.00049 J	-	0.37	4.8	24	180	180
Ethylbenzene	-	-	-	-	-	ND	ND	-	1	32	76	390	390
Toluene	-	-	-	-	-	ND	ND	-	0.7	100	100	500	1,000
Xylenes, Total	-	-	-	-	-	ND	ND	-	0.26	100	100	500	1,000

ND Analyte not detected
 - Not Applicable or sample not tested for this analyte
 J Estimated Concentration
 B Analyte detected in method blank
 K Result is reported as Benzo(b)fluoranthene
 E Results exceeded calibration range
 T Result is Tentatively Identifies Compound and an estimated value

Analyte detected
 Reported concentration greater than or equal to the NYSDEC Unrestricted SCO
 Reported concentration greater than or equal to the NYSDEC Residential SCO
 Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO
 Reported concentration greater than or equal to the NYSDEC Commercial SCO
 Reported concentration greater than or equal to the NYSDEC Industrial SCO

TABLE 8 - OFF SITE GROUNDWATER SAMPLING RESULTS
June 2025 Supplemental RIWP



Parameter Tested	Sample Identification and Sample Date		NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1)
	OFFsite Well-1	OW-1 Resample	
	4/28/2025	5/30/2025	
SVOCS (ug/L)			
4-Chloroaniline	0.86	ND	5
Benzaldehyde	1.3	ND	NS
Di-n-butyl phthalate	ND	0.4	50
Naphthalene	0.92	ND	10
VOCS (ug/L)			
1,2,4-Trichlorobenzene	ND	4.8	5
1,2,4-Trimethylbenzene	77	ND	5
Acetone	ND	6.1	50
Chloroform	1.7	1.1	7
cis-1,2-Dichloroethene	ND	1.2	5
Cyclohexane	1.1	0.63	NS
Isopropylbenzene	12	0.8	5
m,p-Xylene	3.6	ND	5
N-Propylbenzene	14	0.95	5
o-Xylene	ND	ND	5
sec-Butylbenzene	5.1	ND	5
Styrene	ND	ND	5
Total TICs	270	5.2	NS
Tetrachloroethene	ND	4.6	5
Toluene	ND	ND	5
Trichloroethene	ND	2.2	5
Trichlorofluoromethane	ND	ND	5
PFAS (ng/L)			
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOA)	7	3	NS
N-methylperfluorooctanesulfonamidoacetic acid (NMFPA)	2.4	0.87	NS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	ND	NS
Perfluorobutanesulfonic acid (PFBS)	3.8	2.7	NS
Perfluorobutanoic acid (PFBA)	7.5	5.6	NS
Perfluoroheptanesulfonic acid (PFHpS)	0.89	0.46	NS
Perfluoroheptanoic acid (PFHpA)	3.5	2.5	NS
Perfluorohexanesulfonic acid (PFHxS)	4.2	2.8	NS
Perfluorohexanoic acid (PFHxA)	5.7	4.7	NS
Perfluorononanoic acid (PFNA)	1.3	1.1	NS
Perfluorooctanesulfonamide (PFOSA)	1.4	0.64	NS
Perfluorooctanesulfonic acid (PFOS)	86	49	2.7
Perfluorooctanoic acid (PFOA)	28	16	6.7
Perfluoropentanesulfonic acid (PFPeS)	1	ND	NS
Perfluoropentanoic acid (PFPeA)	3.9	4.9	NS

Notes:
 ND Not Detected
 NS No Standard
 TICs Tentatively Identified Compounds

TABLE 9 - OFF SITE VAPOR SAMPLING RESULTS
June 2025 Supplemental RIWP

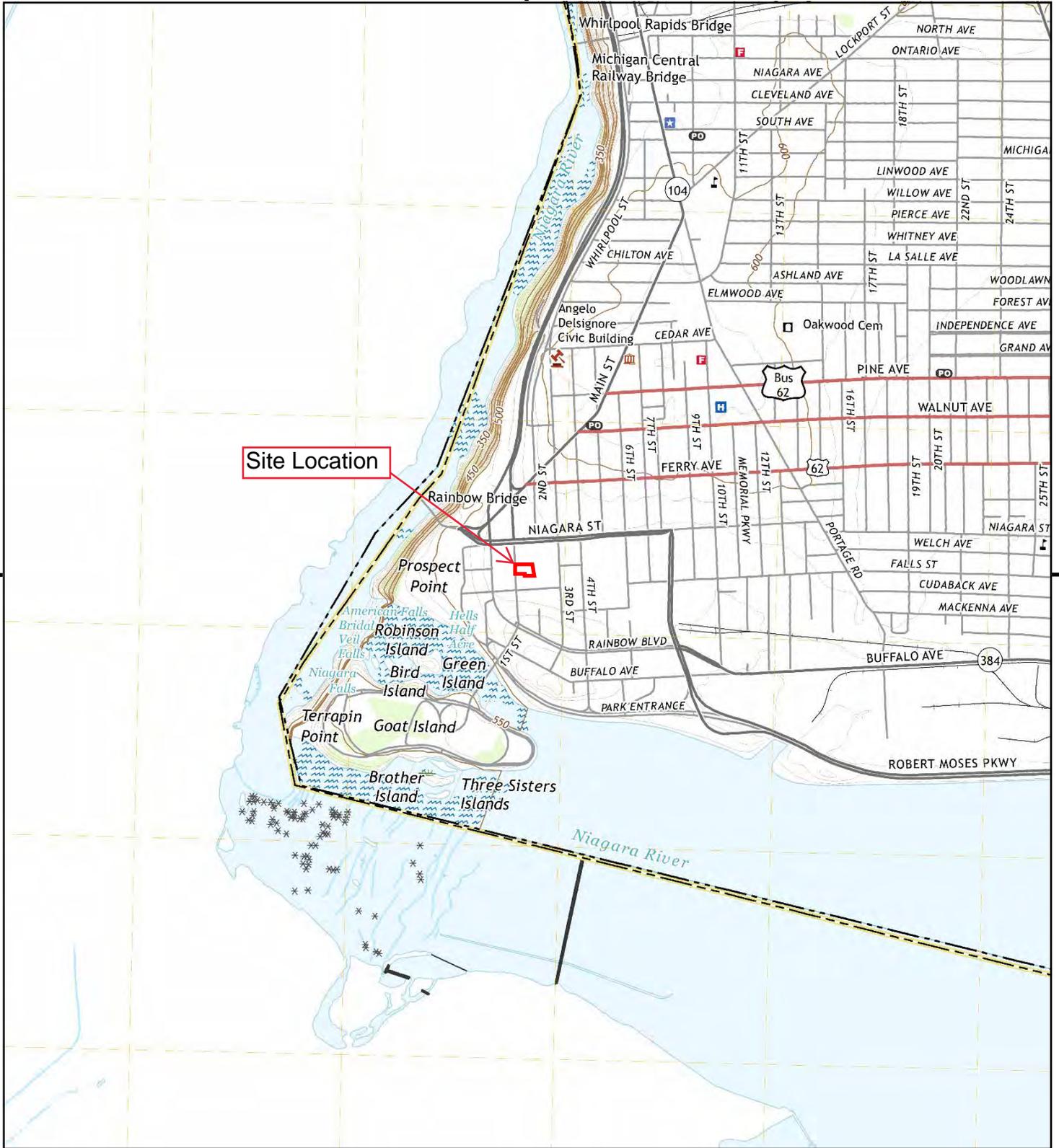


Contaminants	Sample Identification, Type of Sample, and Date Analyzed	
	RI-VP-1	RI-VP-2
	4/14/2025	4/24/2025
	Volatile Organic Compounds (TO-15)	
1,2,4-Trimethylbenzene	ND	6.6
1,3-Butadiene	2.4	1.1
Acetone	2900	1100
Benzene	12	7.0
Carbon disulfide	11	29
Chloroform	22	ND
Cyclohexane	39	4.0
Dichlorodifluoromethane	ND	36
Ethylbenzene	4.6	2.2
m,p-Xylene	15	8.2
Methyl Butyl Ketone (2-Hexanone)	200	210
Methyl Ethyl Ketone (2-Butanone)	5600	3500
n-Butane	290	320
n-Heptane	45	28
n-Hexane	30	21
o-Xylene	ND	3.8
Tetrachloroethene	51	51
Toluene	15	240
Trichloroethene	ND	8.5
Trichlorofluoromethane	12	11
Vinyl chloride	ND	ND

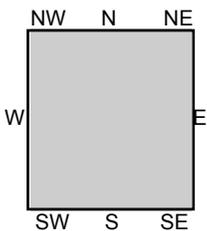
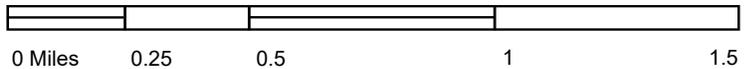
Notes:

- (1) All values are in micrograms per cubic meter (ug/m³)
- ND Not detected

FIGURES



This report includes information from the following map sheet(s).

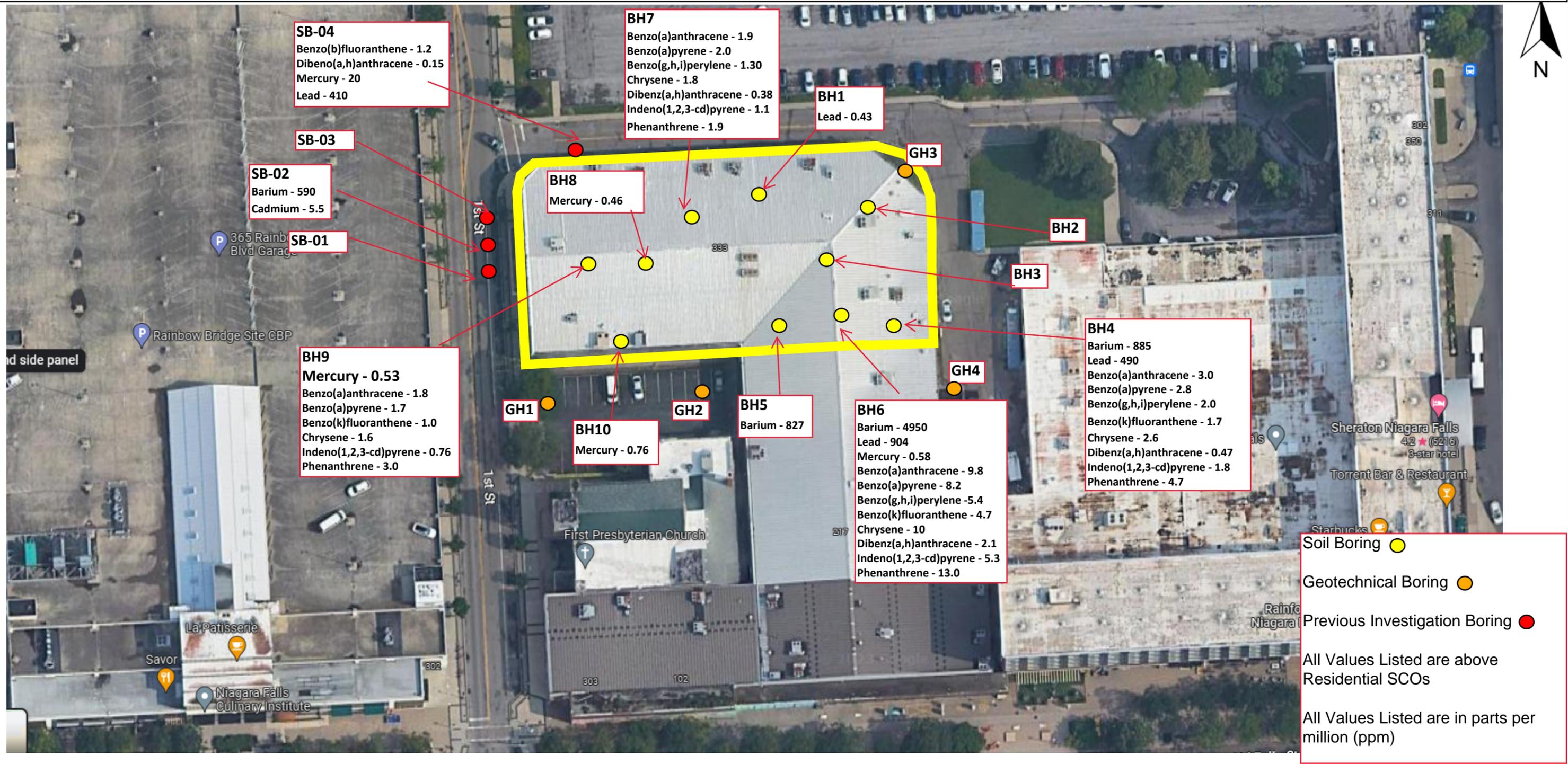


TP, Niagara Falls, 2019, 7.5-minute

SITE NAME: Old Falls
 ADDRESS: 333 1st Street
 NIAGARA FALLS, NY 14303
 CLIENT: BE3

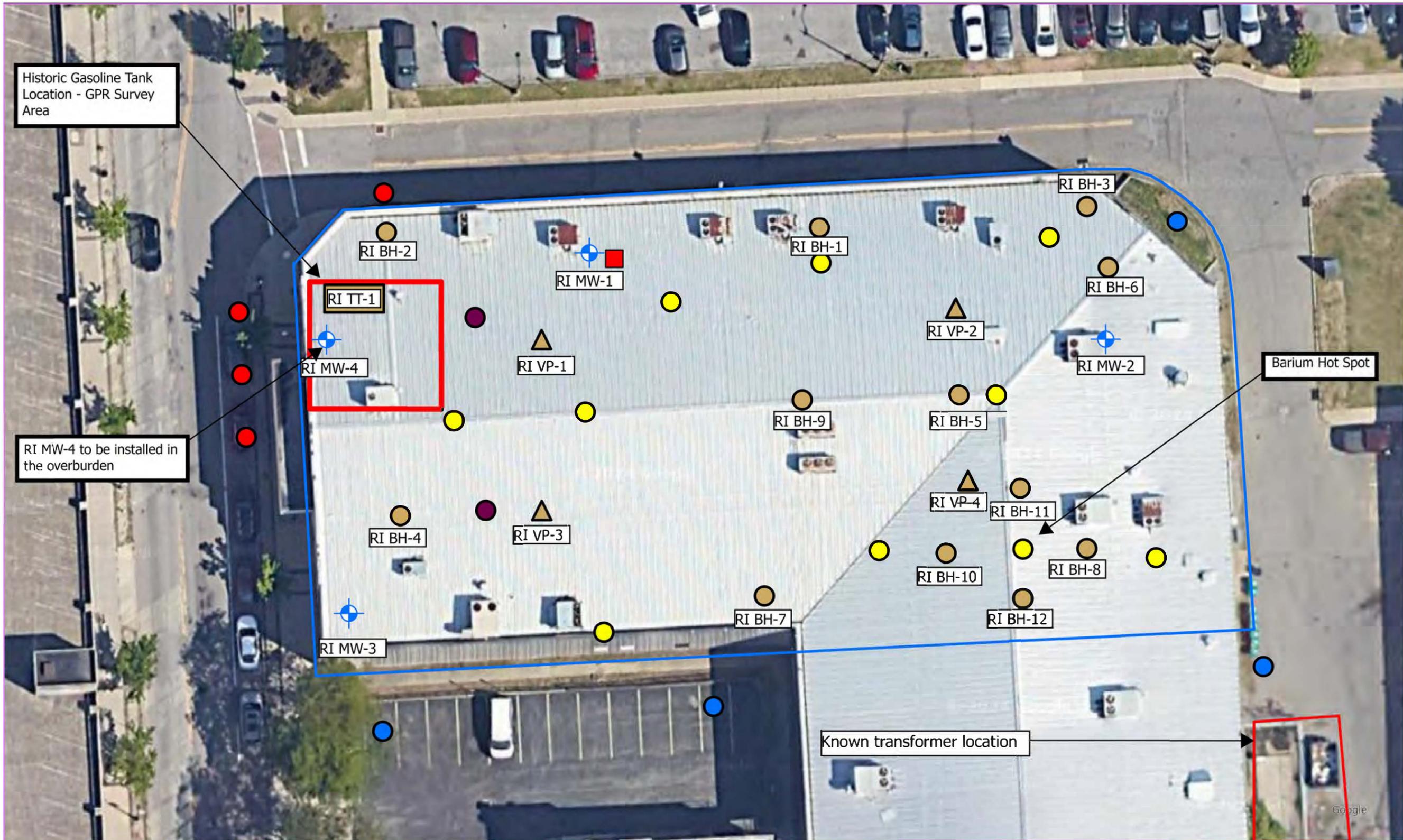


Figure 2: Phase II ESA Sample Analytical Data



Old Falls Street
 Niagara Falls, New York

4/3/2023
 Edgemere



Historic Gasoline Tank Location - GPR Survey Area

RI MW-4 to be installed in the overburden

Barium Hot Spot

Known transformer location

LEGEND

LiRo 2019 Phase II Soil Boring	Project Boundary	Proposed RI Soil Boring	Existing Floor Drain
BE3 2023 Soil Boring	Foundation Design 2023 Geotechnical Boring	Proposed RI Vapor Point	
LiRo 2019 Phase II Vapor	Proposed RI Bedrock Monitoring Well	Proposed RI Test Trench/Pit	



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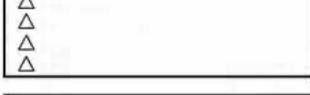
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SEVENTH HOUSING

Figure 3 - RI Sampling Plan With Previous Investigation Locations

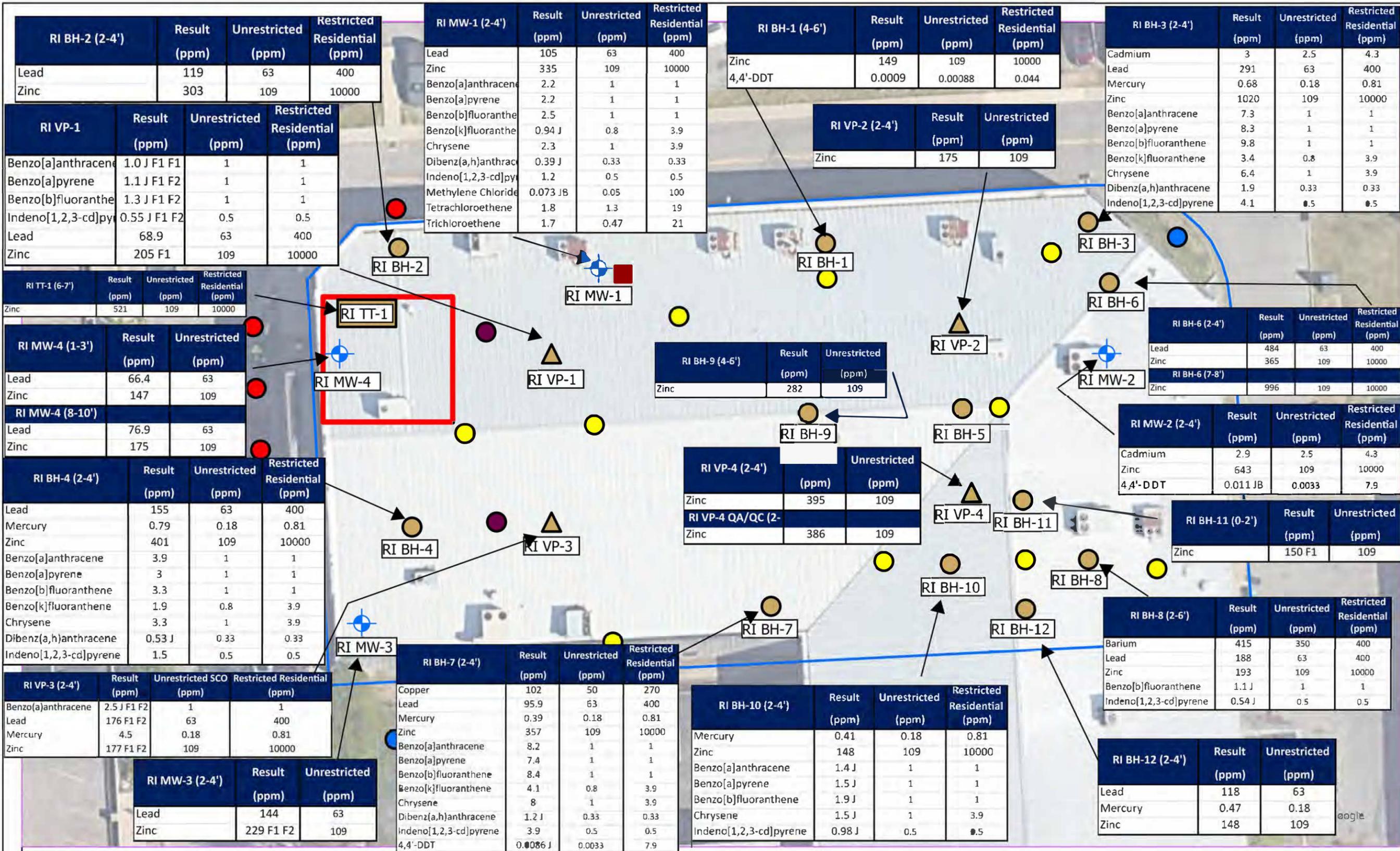
The Nest Site
333 1st Street,
Buffalo, NY 14203



DATE ISSUED:
May 3, 2024



Scale: 1" = 30'



RI BH-2 (2-4')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Lead	119	63	400
Zinc	303	109	10000

RI VP-1	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Benzo[a]anthracene	1.0 J F1 F1	1	1
Benzo[a]pyrene	1.1 J F1 F2	1	1
Benzo[b]fluoranthene	1.3 J F1 F2	1	1
Indeno[1,2,3-cd]pyrene	0.55 J F1 F2	0.5	0.5
Lead	68.9	63	400
Zinc	205 F1	109	10000

RI TT-1 (6-7')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Zinc	521	109	10000

RI MW-4 (1-3')	Result (ppm)	Unrestricted (ppm)
Lead	66.4	63
Zinc	147	109

RI MW-4 (8-10')	Result (ppm)	Unrestricted (ppm)
Lead	76.9	63
Zinc	175	109

RI BH-4 (2-4')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Lead	155	63	400
Mercury	0.79	0.18	0.81
Zinc	401	109	10000
Benzo[a]anthracene	3.9	1	1
Benzo[a]pyrene	3	1	1
Benzo[b]fluoranthene	3.3	1	1
Benzo[k]fluoranthene	1.9	0.8	3.9
Chrysene	3.3	1	3.9
Dibenz[a,h]anthracene	0.53 J	0.33	0.33
Indeno[1,2,3-cd]pyrene	1.5	0.5	0.5

RI VP-3 (2-4')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Benzo[a]anthracene	2.5 J F1 F2	1	1
Lead	176 F1 F2	63	400
Mercury	4.5	0.18	0.81
Zinc	177 F1 F2	109	10000

RI MW-3 (2-4')	Result (ppm)	Unrestricted (ppm)
Lead	144	63
Zinc	229 F1 F2	109

RI MW-1 (2-4')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Lead	105	63	400
Zinc	335	109	10000
Benzo[a]anthracene	2.2	1	1
Benzo[a]pyrene	2.2	1	1
Benzo[b]fluoranthene	2.5	1	1
Benzo[k]fluoranthene	0.94 J	0.8	3.9
Chrysene	2.3	1	3.9
Dibenz[a,h]anthracene	0.39 J	0.33	0.33
Indeno[1,2,3-cd]pyrene	1.2	0.5	0.5
Methylene Chloride	0.073 JB	0.05	100
Tetrachloroethene	1.8	1.3	19
Trichloroethene	1.7	0.47	21

RI BH-1 (4-6')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Zinc	149	109	10000
4,4'-DDT	0.0009	0.00088	0.044

RI VP-2 (2-4')	Result (ppm)	Unrestricted (ppm)
Zinc	175	109

RI BH-3 (2-4')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Cadmium	3	2.5	4.3
Lead	291	63	400
Mercury	0.68	0.18	0.81
Zinc	1020	109	10000
Benzo[a]anthracene	7.3	1	1
Benzo[a]pyrene	8.3	1	1
Benzo[b]fluoranthene	9.8	1	1
Benzo[k]fluoranthene	3.4	0.8	3.9
Chrysene	6.4	1	3.9
Dibenz[a,h]anthracene	1.9	0.33	0.33
Indeno[1,2,3-cd]pyrene	4.1	0.5	0.5

RI BH-6 (2-4')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Lead	484	63	400
Zinc	365	109	10000

RI BH-6 (7-8')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Zinc	996	109	10000

RI BH-9 (4-6')	Result (ppm)	Unrestricted (ppm)
Zinc	282	109

RI VP-4 (2-4')	Result (ppm)	Unrestricted (ppm)
Zinc	395	109

RI VP-4 QA/QC (2-4')	Result (ppm)	Unrestricted (ppm)
Zinc	386	109

RI MW-2 (2-4')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Cadmium	2.9	2.5	4.3
Zinc	643	109	10000
4,4'-DDT	0.011 JB	0.0033	7.9

RI BH-11 (0-2')	Result (ppm)	Unrestricted (ppm)
Zinc	150 F1	109

RI BH-8 (2-6')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Barium	415	350	400
Lead	188	63	400
Zinc	193	109	10000
Benzo[b]fluoranthene	1.1 J	1	1
Indeno[1,2,3-cd]pyrene	0.54 J	0.5	0.5

RI BH-10 (2-4')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Mercury	0.41	0.18	0.81
Zinc	148	109	10000
Benzo[a]anthracene	1.4 J	1	1
Benzo[a]pyrene	1.5 J	1	1
Benzo[b]fluoranthene	1.9 J	1	1
Chrysene	1.5 J	1	3.9
Indeno[1,2,3-cd]pyrene	0.98 J	0.5	0.5

RI BH-7 (2-4')	Result (ppm)	Unrestricted (ppm)	Restricted Residential (ppm)
Copper	102	50	270
Lead	95.9	63	400
Mercury	0.39	0.18	0.81
Zinc	357	109	10000
Benzo[a]anthracene	8.2	1	1
Benzo[a]pyrene	7.4	1	1
Benzo[b]fluoranthene	8.4	1	1
Benzo[k]fluoranthene	4.1	0.8	3.9
Chrysene	8	1	3.9
Dibenz[a,h]anthracene	1.2 J	0.33	0.33
Indeno[1,2,3-cd]pyrene	3.9	0.5	0.5
4,4'-DDT	0.0086 J	0.0033	7.9

LEGEND

- LiRo 2019 Phase II Soil Boring
- BE3 2023 Soil Boring
- LiRo 2019 Phase II Vapor
- Project Boundary
- Foundation Design 2023 Geotechnical Boring
- Proposed RI Bedrock Monitoring Well
- Proposed RI Soil Boring
- ▲ Proposed RI Vapor Point
- Proposed RI Test Trench/Pit
- Existing Floor Drain

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Figure 4 - RI Soil Analytical Results Summary
 The Nest Site
 333 1st Street,
 Buffalo, NY 14203

DATE ISSUED:
 Dec 15, 2024

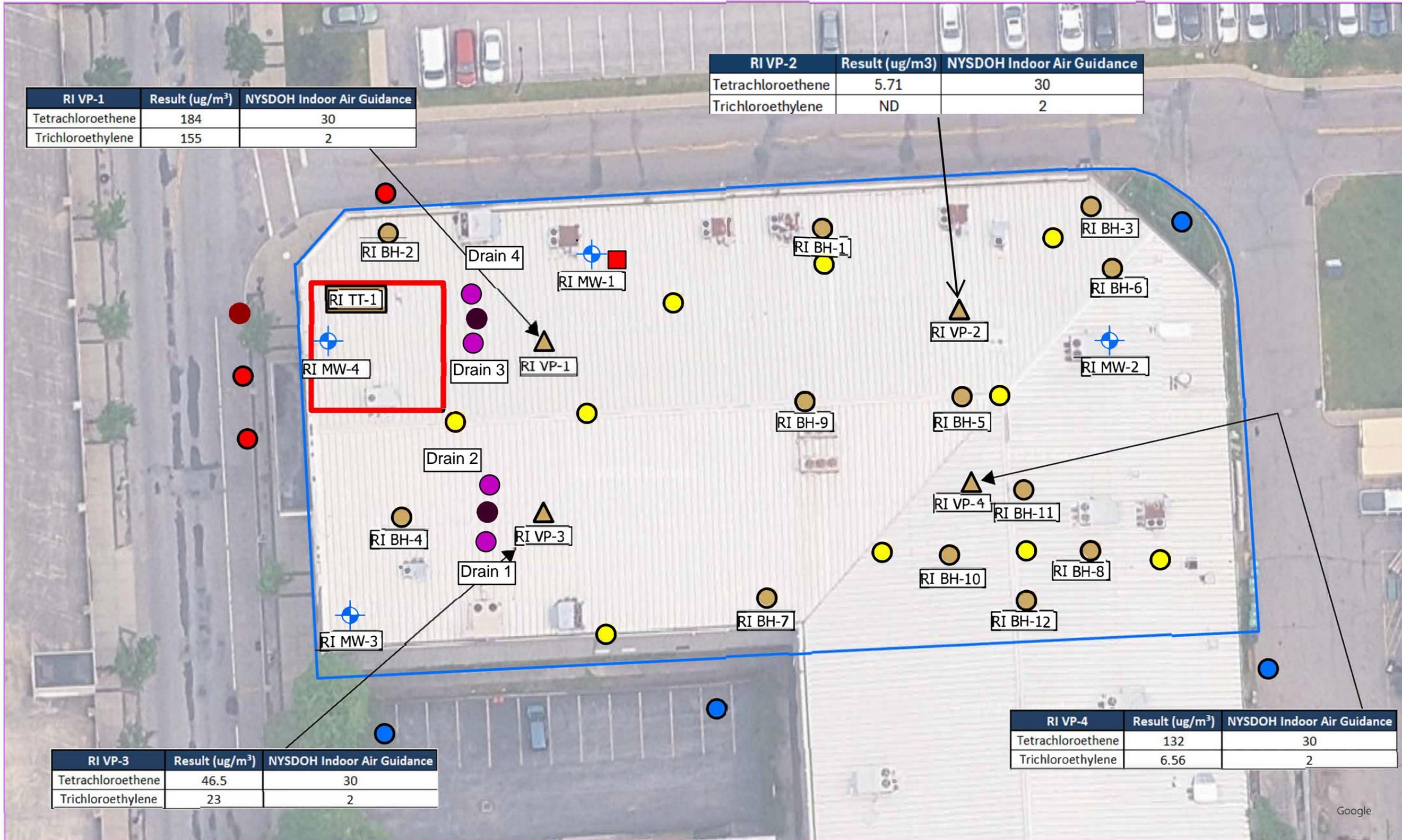
Scale: 1" = 30'

RI VP-1	Result (ug/m ³)	NYSDOH Indoor Air Guidance
Tetrachloroethene	184	30
Trichloroethylene	155	2

RI VP-2	Result (ug/m ³)	NYSDOH Indoor Air Guidance
Tetrachloroethene	5.71	30
Trichloroethylene	ND	2

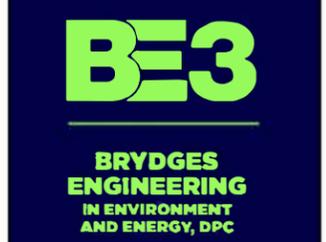
RI VP-3	Result (ug/m ³)	NYSDOH Indoor Air Guidance
Tetrachloroethene	46.5	30
Trichloroethylene	23	2

RI VP-4	Result (ug/m ³)	NYSDOH Indoor Air Guidance
Tetrachloroethene	132	30
Trichloroethylene	6.56	2



LEGEND

- LiRo 2019 Phase II Soil Boring
- BE3 2023 Soil Boring
- LiRo 2019 Phase II Vapor
- Project Boundary
- Foundation Design 2023 Geotechnical Boring
- ⊕ RI Bedrock Monitoring Well
- RI Soil Boring
- ▲ RI Vapor Point
- RI Test Trench/Pit
- Existing Floor Drain
- BE3 2025 Floor Drain Sample

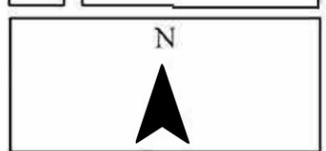


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Figure 5a - RI Soil Vapor
Analytical Results Summary

The Nest Site
333 1st Street,
Buffalo, NY 14203



DATE ISSUED:
Dec 15, 2024

Scale: 1" = 30'

RI MW-1	Result (ppb)	TOGS Guidance
Tetrachloroethylene	7	5
Sodium	297000	20000
	Result (ppt)	NYSDEC AWQGV's (ppt)
PFOA	42	6.7
PFOS	13	2.7

RI MW-2	Result (ppb)	TOGS Guidance
Sodium	345000	20000
	Result (ppt)	NYSDEC AWQGV's (ppt)
PFOA	21	6.7
PFOS	8.8	2.7

RI MW-3 DUP	Result (ppt)	NYSDEC AWQGV's (ppt)
PFOA	16	6.7
PFOS	5.2	2.7

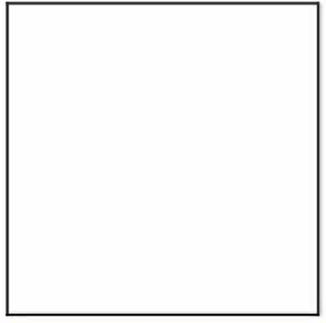
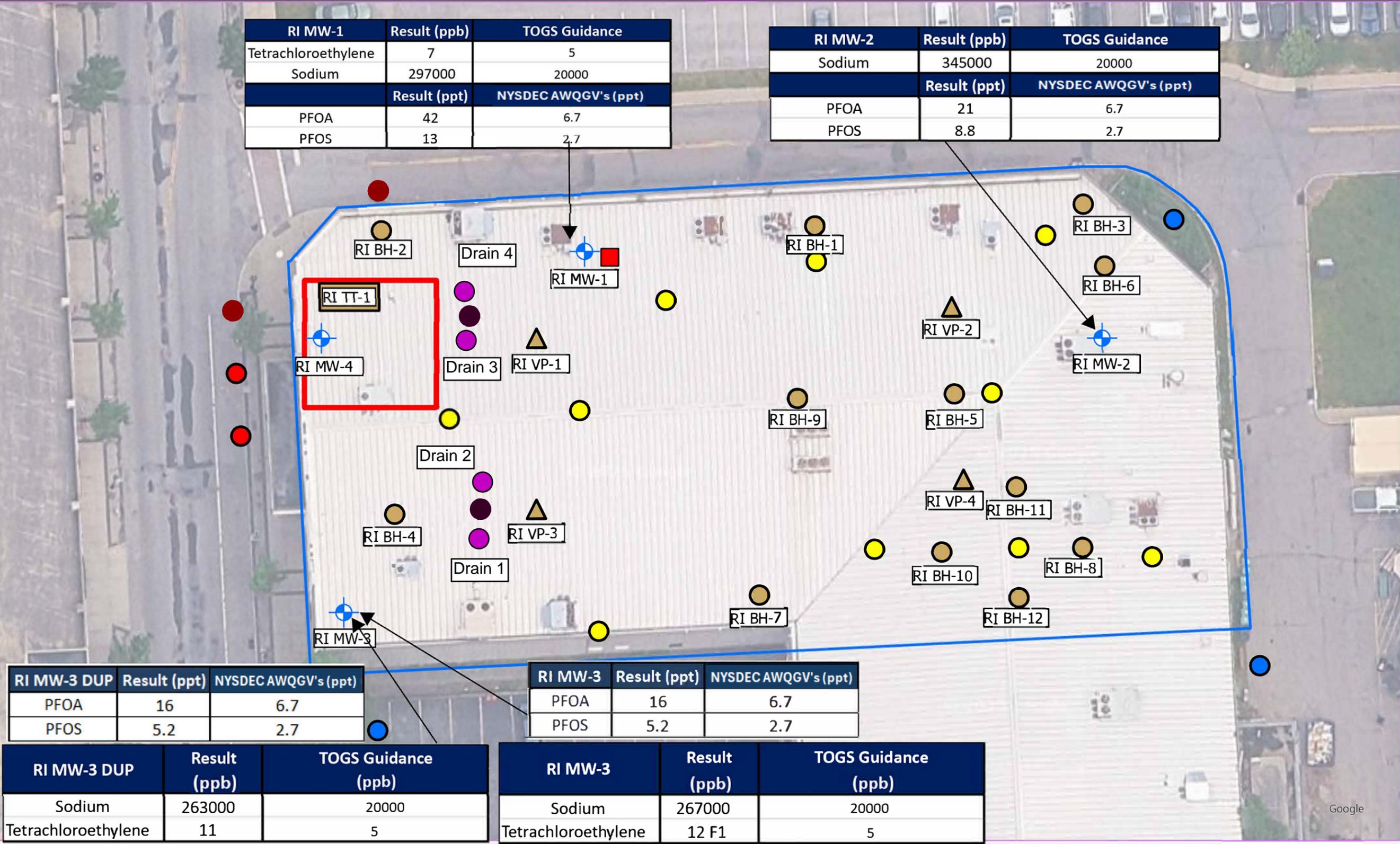
RI MW-3	Result (ppt)	NYSDEC AWQGV's (ppt)
PFOA	16	6.7
PFOS	5.2	2.7

RI MW-3 DUP	Result (ppb)	TOGS Guidance (ppb)
Sodium	263000	20000
Tetrachloroethylene	11	5

RI MW-3	Result (ppb)	TOGS Guidance (ppb)
Sodium	267000	20000
Tetrachloroethylene	12 F1	5

LEGEND

- LiRo 2019 Phase II Soil Boring
- BE3 2023 Soil Boring
- LiRo 2019 Phase II Vapor
- Project Boundary
- Foundation Design 2023 Geotechnical Boring
- RI Bedrock Monitoring Well
- RI Soil Boring
- ▲ RI Vapor Point
- RI Test Trench/Pit
- Existing Floor Drain
- BE3 2025 Floor Drain Sample

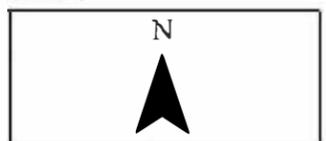


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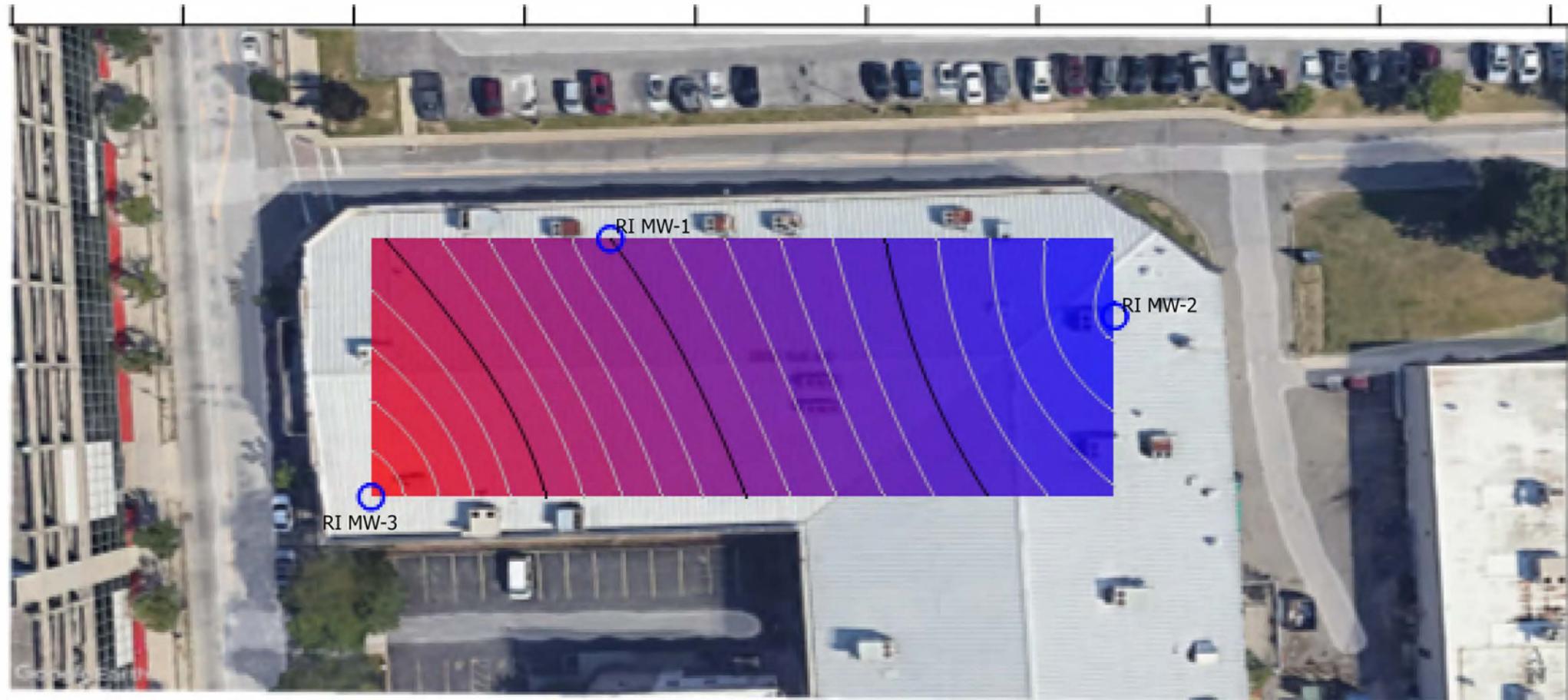
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Figure 5b - RI Groundwater Analytical Results Summary
 The Nest Site
 333 1st Street,
 Buffalo, NY 14203

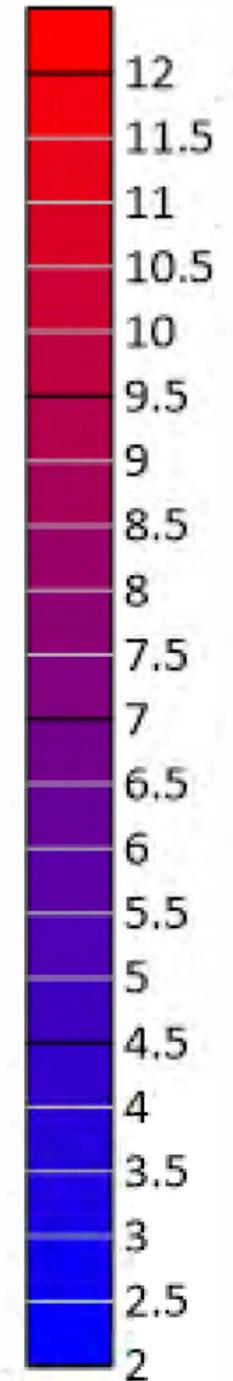


DATE ISSUED:
 Dec 15, 2024

Scale: 1" = 30'



PCE Concentration



Units: parts per billion (ppb)

LEGEND

-  RI Monitoring Well Location
-  Minor Contour Line
-  Major Contour Line

NOTES
Groundwater Samples were taken on 10/28/2024.



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Figure 6 - RI PCE Contour
The Nest Site
333 1st Street,
Buffalo, NY 14203



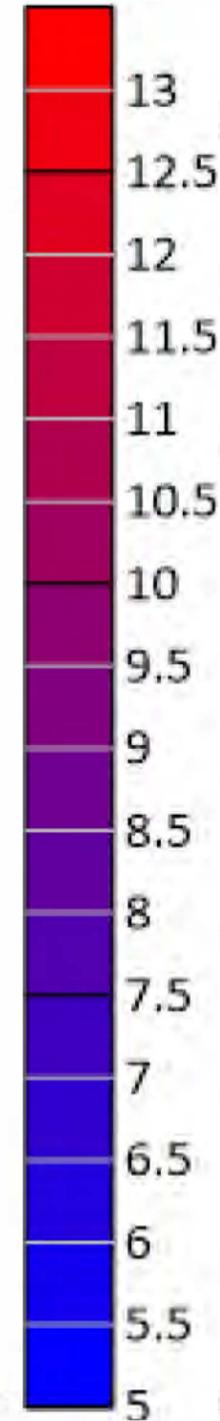
DATE ISSUED:
Dec 12, 2024



Scale: 1" = 40'



PFOS Concentration



Units: parts per trillion (ppt)

LEGEND

-  RI Monitoring Well Location
-  Minor Contour Line
-  Major Contour Line

NOTES

Groundwater Samples were taken on 10/28/2024.



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Figure 7 - RI PFOS Contour
The Nest Site
333 1st Street,
Buffalo, NY 14203

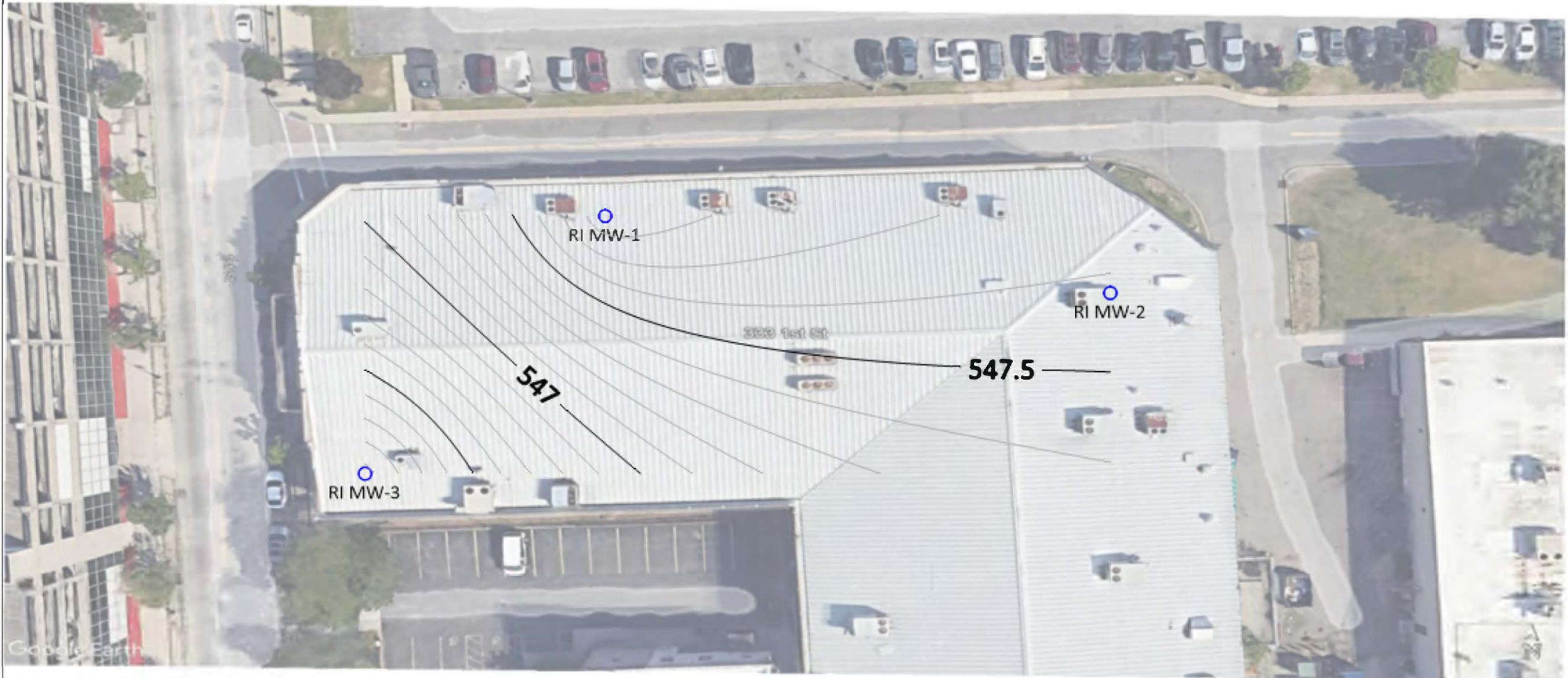
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DATE ISSUED:
Dec 12, 2024



Scale: 1" = 40'



Note: Water level elevations were adapted from Site survey (12/20/2024) and field measurement data (10/28/2024)

LEGEND

 RI Monitoring Well Location
  Minor Contour Line
 Major Contour Line

RI Monitoring Well Survey Elevations:

RI MW-1: 569.18' ASL (above sea level)
 RI MW-2: 569.48' ASL
 RI MW-3: 569.26' ASL

Water Level Elevations:

RI MW-1: 547.88' ASL (above sea level)
 RI MW-2: 547.58' ASL
 RI MW-3: 546.08' ASL



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Figure 8 - RI Groundwater Elevation Contour

The Nest Site
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Buffalo, NY 14203

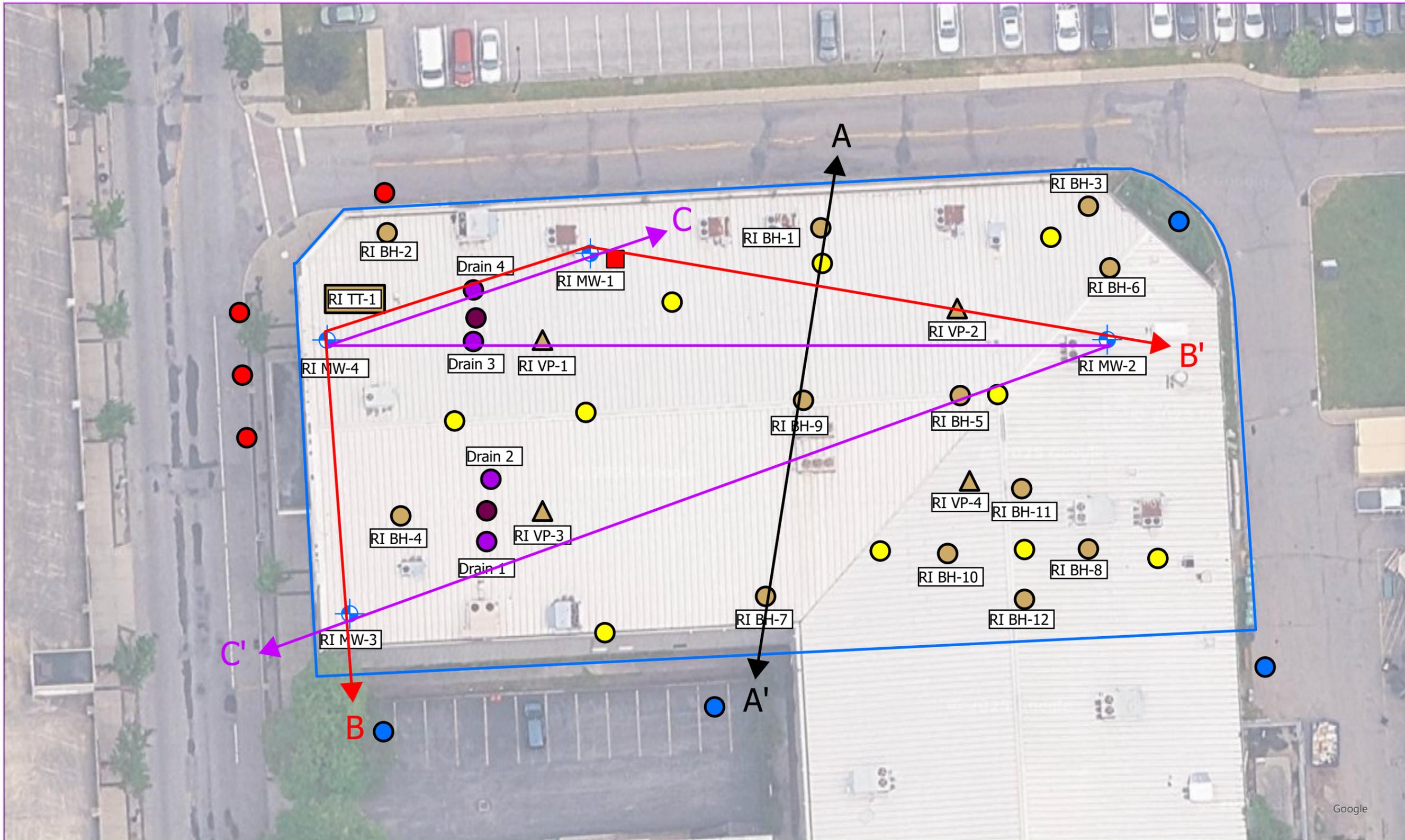
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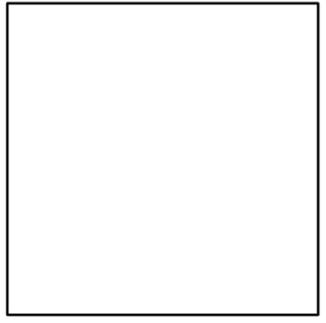
DATE ISSUED:
Dec 12, 2024

△
△
△

Scale: 1" = 31'



LEGEND				
● LiRo 2019 Phase II Soil Boring	— Project Boundary	● RI Soil Boring	● Existing Floor Drain	↔ Cross Section B View
● BE3 2023 Soil Boring	● Foundation Design 2023 Geotechnical Boring	▲ RI Vapor Point	● Floor Drain Samples	↔ Cross Section C View
■ LiRo 2019 Phase II Vapor	⊕ RI Bedrock Monitoring Well	■ RI Test Trench/Pit	↔ Cross Section A View	



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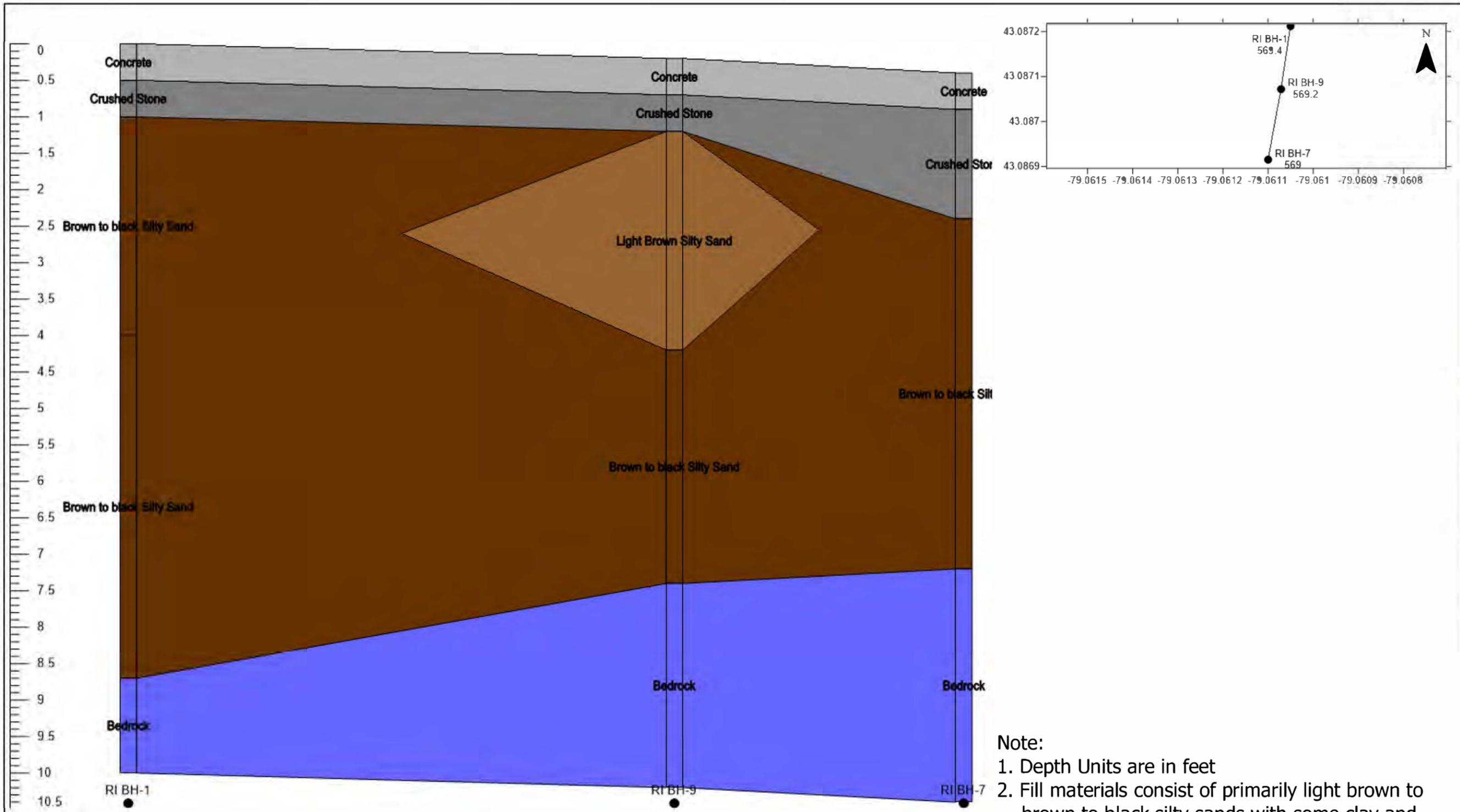
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Figure 9 - Cross Section Call Outs
 The Nest Site
 333 1st Street,
 Buffalo, NY 14203



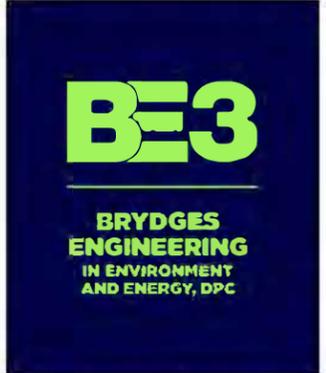
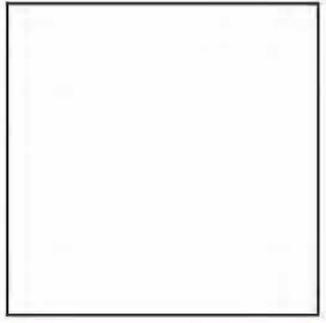
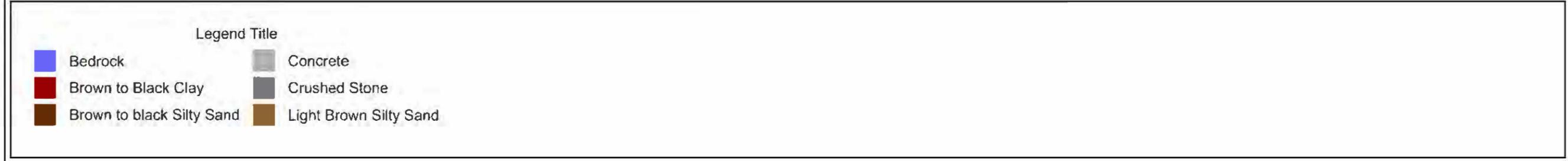
DATE ISSUED:
 October 17, 2025

Scale: 1" = 30'



Note: Depth Units are in feet

- Note:
1. Depth Units are in feet
 2. Fill materials consist of primarily light brown to brown to black silty sands with some clay and various debris (brick, concrete, and glass, etc.)



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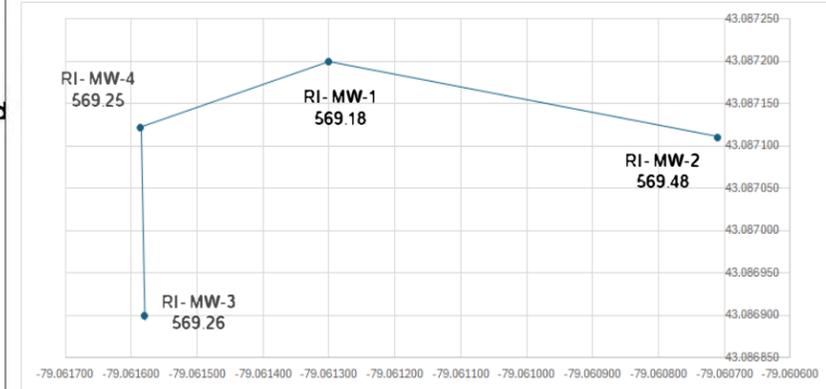
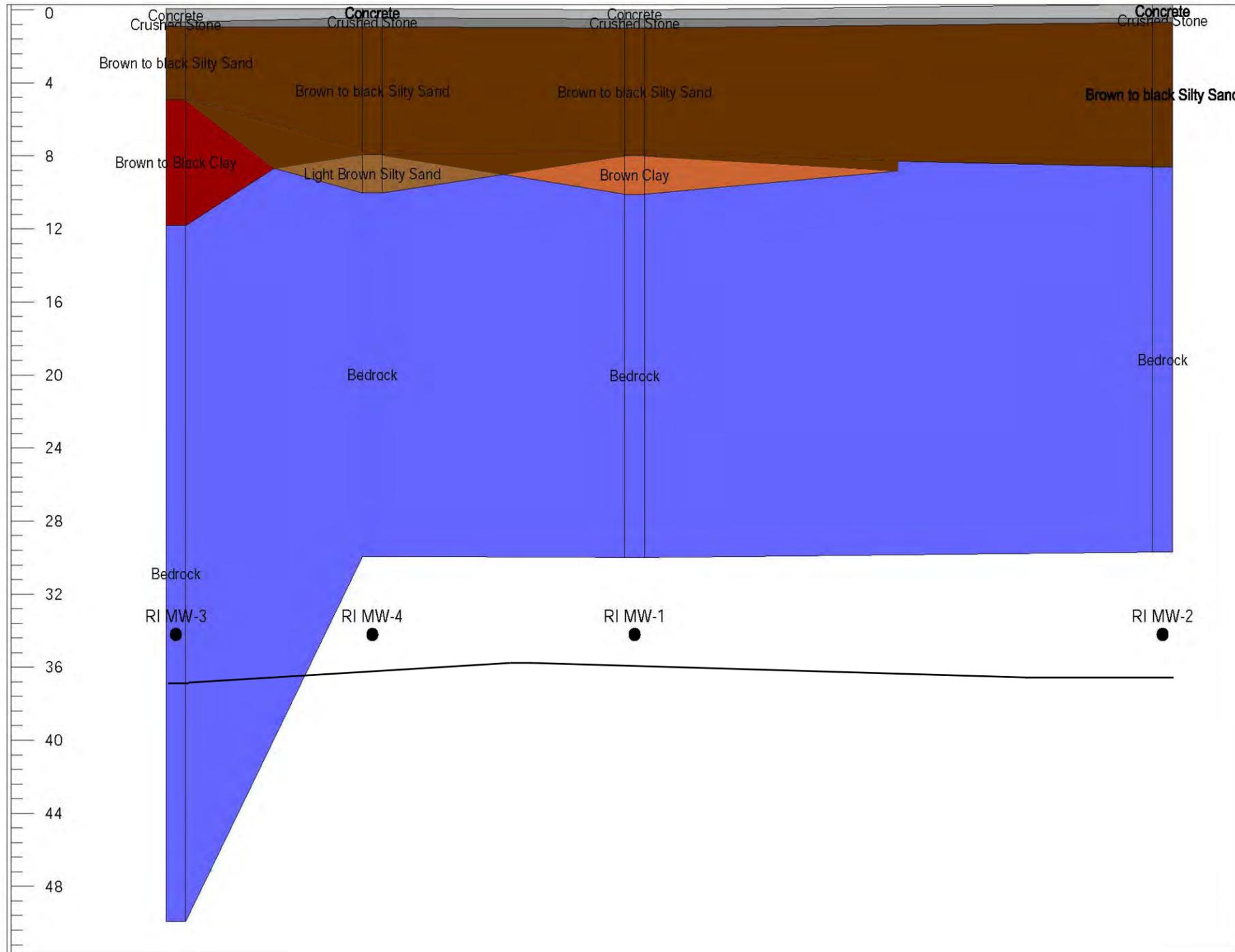
Figure 10 - RI Geological Cross Section A
 The Nest Site
 333 1st Street,
 Buffalo, NY 14203



DATE ISSUED:
 Dec 27, 2024

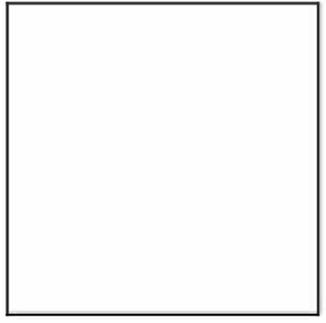
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Legend Title	
	Bedrock
	Brown Clay
	Brown to Black Clay
	Brown to black Silty Sand
	Concrete
	Crushed Stone
	Light Brown Silty Sand

Note:
 1. Depth Units are in feet
 2. Fill materials consist of primarily light brown to brown to black silty sands with some clay



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Figure 11 - RI Geological Cross Section B

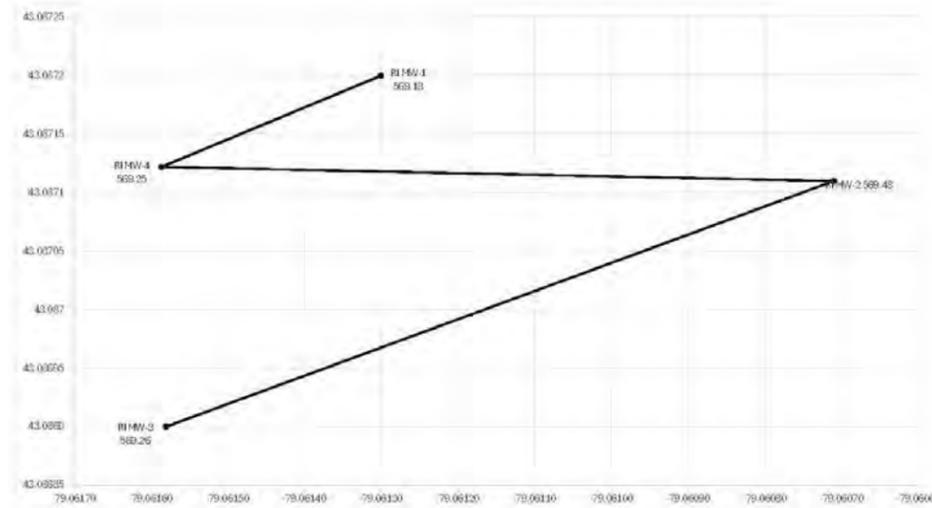
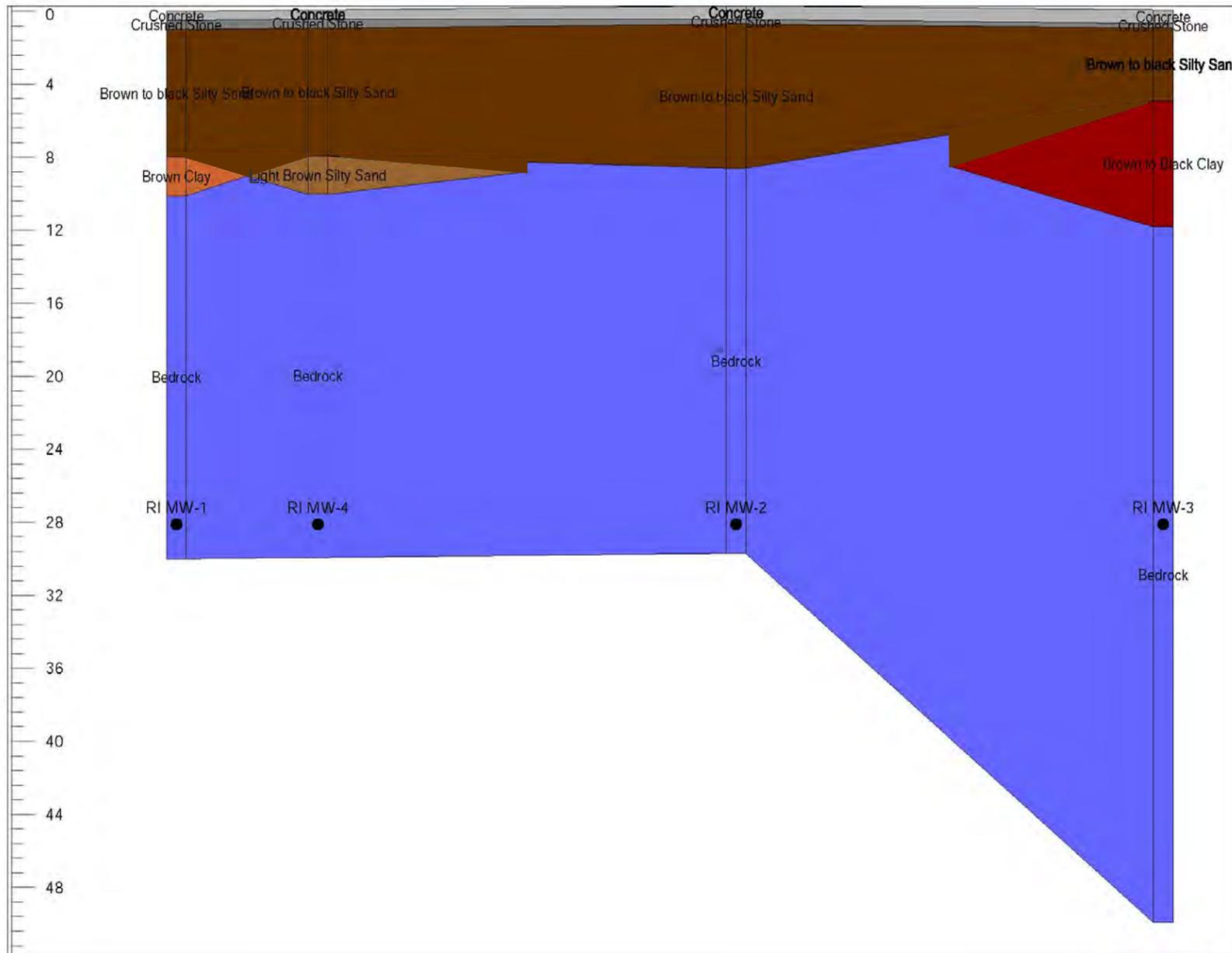
The Nest Site
 333 1st Street,
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DATE ISSUED:
 Dec 27, 2024

△
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LEGEND

- Bedrock
- Brown Clay
- Brown to Black Clay
- Brown to Black Silty Sand
- Concrete
- Crushed Stone
- Light Brown Silty Sand

NOTES

1. Depth Units are in feet
2. Fill materials consist of primarily light brown to brown to black silty sands with some clay



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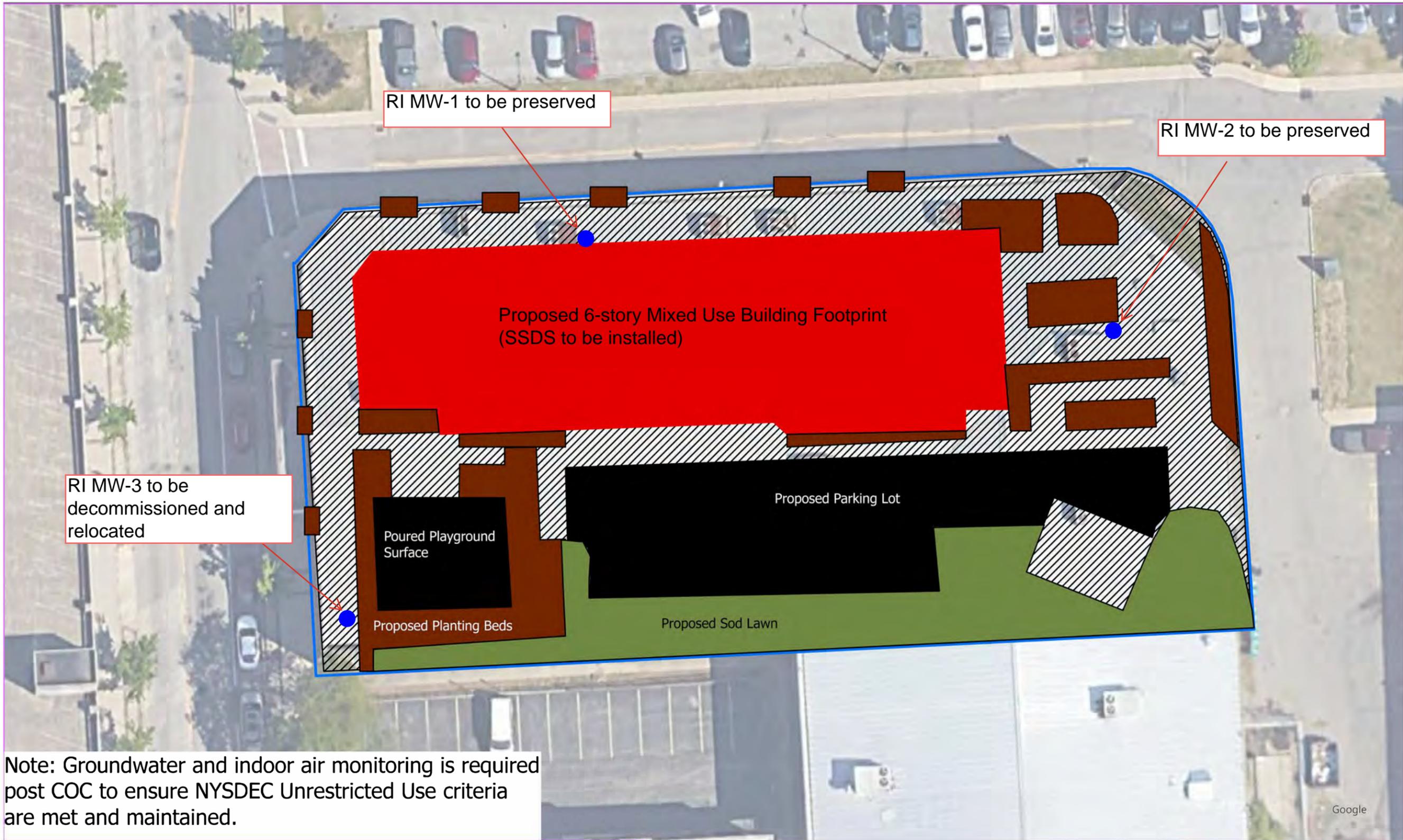
CLIENT: COMMUNITY SERVICES
SEVENTH HOUSING

Figure 12 - RI Geological Cross Section C

revised 9/9/2025
The NEST Site
333 1st Street
Buffalo, NY 14203

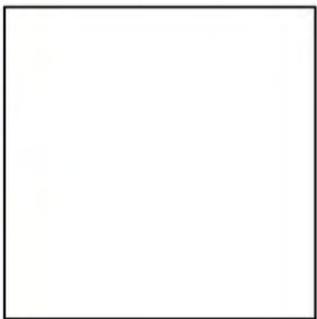
DATE ISSUED:
December 27, 2024

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Note: Groundwater and indoor air monitoring is required post COC to ensure NYSDEC Unrestricted Use criteria are met and maintained.

LEGEND		New Building Footprint - 13,635 sq ft. Asphalt - 10,000 sq ft. Concrete - 9,500 sq ft. Playground - 1462 sq ft. Sod Lawn and Planting - 7,500 sq ft. -Remove approximately 1 feet of hardscape and underlying subbase -Remove approximately 7 feet of soil fill to native material or bedrock. -Replace with clean soil
— Project Boundary ■ Proposed Planting Beds ■ Proposed Sod Lawn ▨ Proposed Concrete/Aggregate Hardscape	■ Proposed Building Footprint ■ Proposed Asphalt Hardscape	



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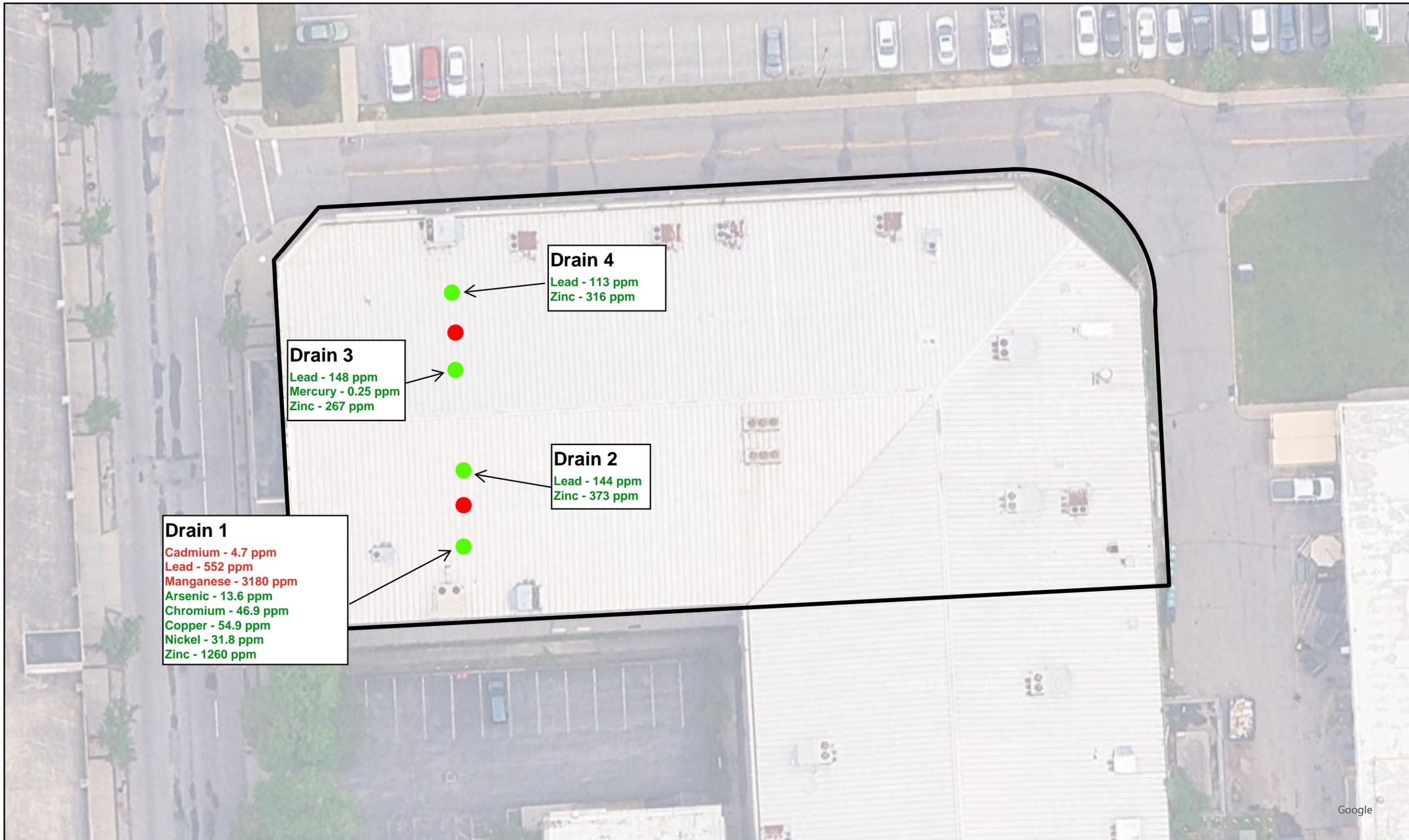
Figure 13 - Conditional Track 1 Unrestricted Use Remedy
The Nest Site
333 1st Street,
Buffalo, NY 14203



DATE ISSUED:
Dec 12, 2024

△
△
△

Scale: 1" = 30'



LEGEND

- BCP Project Boundary
- Drain Sample Location
- Floor Drain

Notes

- Red = Restricted Residential SCO Exceedance
- Green = Unrestricted SCO Exceedance



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FIGURE 15
 Drain Sampling Location
 and Results Map
 333 1st Street
 Niagara Falls, NY 14303



DATE ISSUED:
 April 28, 2025

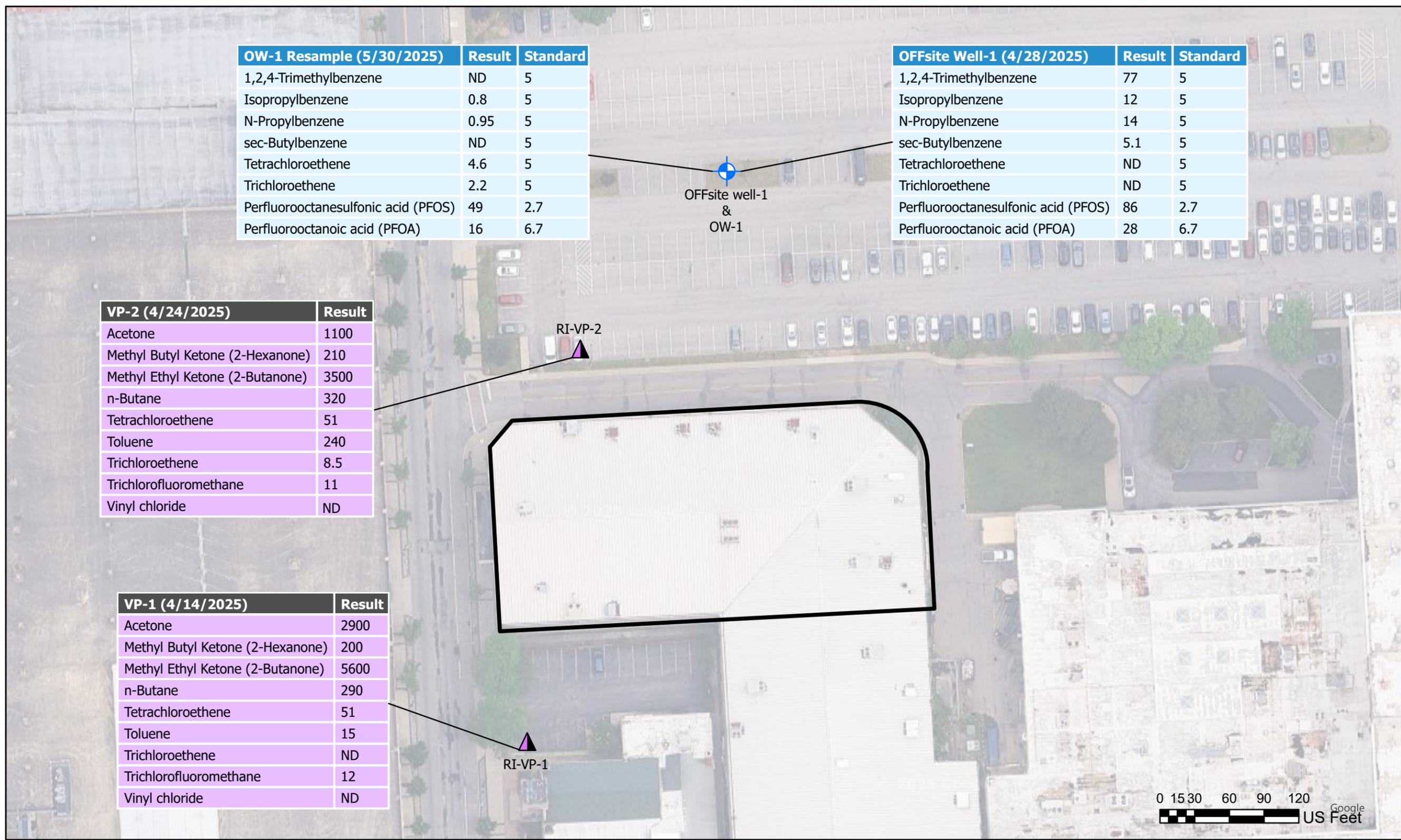
SCALE: 1:500

OW-1 Resample (5/30/2025)	Result	Standard
1,2,4-Trimethylbenzene	ND	5
Isopropylbenzene	0.8	5
N-Propylbenzene	0.95	5
sec-Butylbenzene	ND	5
Tetrachloroethene	4.6	5
Trichloroethene	2.2	5
Perfluorooctanesulfonic acid (PFOS)	49	2.7
Perfluorooctanoic acid (PFOA)	16	6.7

OFFsite Well-1 (4/28/2025)	Result	Standard
1,2,4-Trimethylbenzene	77	5
Isopropylbenzene	12	5
N-Propylbenzene	14	5
sec-Butylbenzene	5.1	5
Tetrachloroethene	ND	5
Trichloroethene	ND	5
Perfluorooctanesulfonic acid (PFOS)	86	2.7
Perfluorooctanoic acid (PFOA)	28	6.7

VP-2 (4/24/2025)	Result
Acetone	1100
Methyl Butyl Ketone (2-Hexanone)	210
Methyl Ethyl Ketone (2-Butanone)	3500
n-Butane	320
Tetrachloroethene	51
Toluene	240
Trichloroethene	8.5
Trichlorofluoromethane	11
Vinyl chloride	ND

VP-1 (4/14/2025)	Result
Acetone	2900
Methyl Butyl Ketone (2-Hexanone)	200
Methyl Ethyl Ketone (2-Butanone)	5600
n-Butane	290
Tetrachloroethene	51
Toluene	15
Trichloroethene	ND
Trichlorofluoromethane	12
Vinyl chloride	ND



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Figure 16 - Relevant Sample Results
 Supplemental RWP
 NEST BCP PROJECT C932183
 333 1st Street
 Niagara Falls, NY 14303



DATE ISSUED:
 October 7, 2025

△
 △
 △

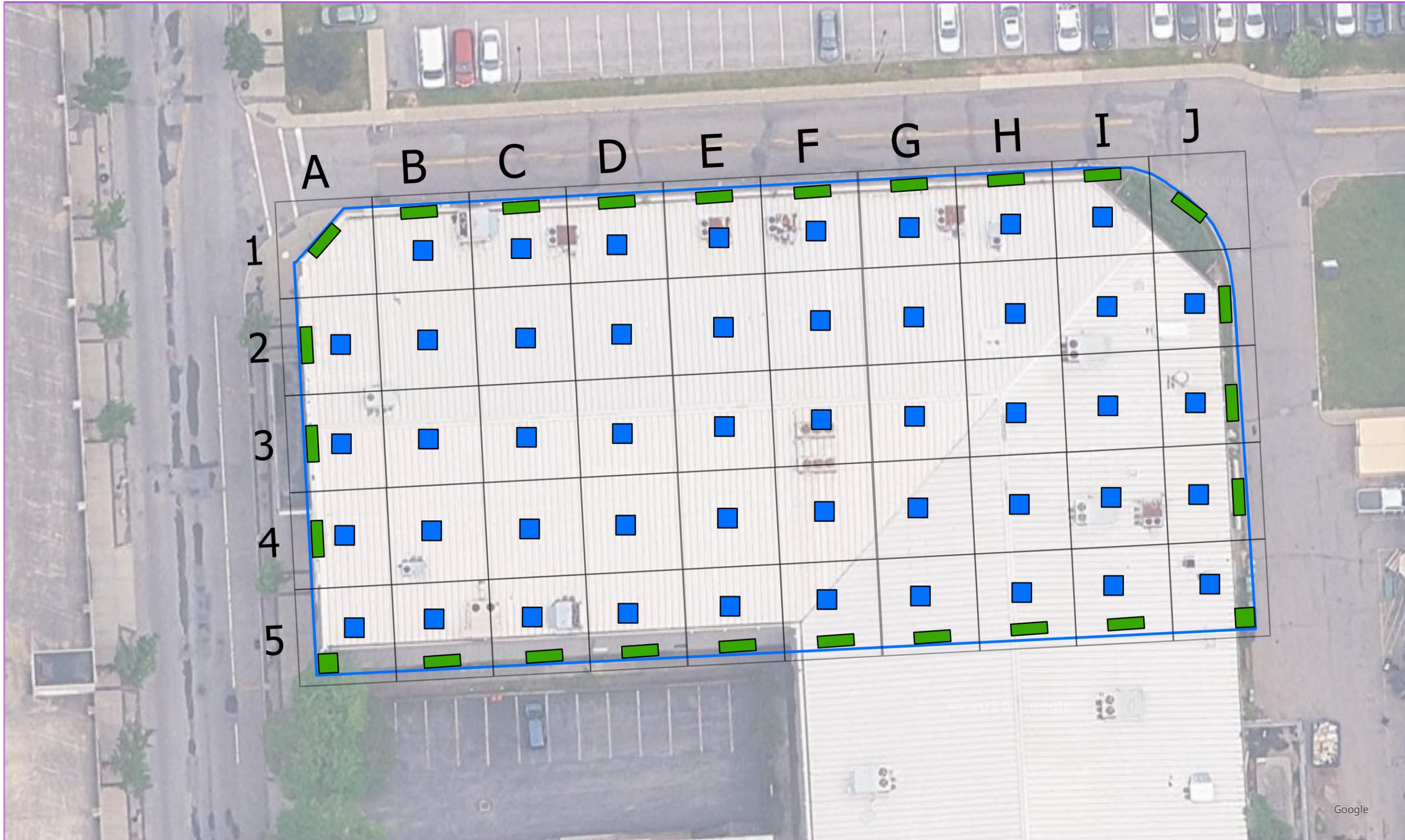
LEGEND

- BCP Property Boundary
- ⊕ Off-Site Well Location
- ▲ Vapor Point Location

NOTES

1. All concentrations of groundwater parameters are in ug/L except PFOS and PFOA. PFOS and PFOA are in parts per trillion (ppt).
2. All concentrations of vapor parameters are measured in ug/m3.
3. Groundwater results are compared to NYSDEC Ambient Water Quality Guidance Values (AWQGV's).

SCALE: 1:1,000



LEGEND

- Project Boundary
- Bottom of Excavation Confirmatory Sample
- 30' by 30' Grid
- ▭ Side Wall Confirmatory Sample

NOTES

1. Confirmation samples locations are approximate and may change based on field conditions
2. If bedrock is encountered prior to native soil, a confirmation sample will not be taken.
3. Samples will be labeled according to location on grid (i.e., B-B1 for bottom or S-B1 for side wall).



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Figure 17 - Confirmation Sampling Locations

The Nest Site
333 1st Street,
Buffalo, NY 14203



DATE ISSUED:
February 10, 2026



Scale: 1" = 30'



LEGEND

- Project Boundary
- Site Fencing
- UW Upwind CAMP Station
- DW Downwind CAMP Station
- FS Fixed CAMP Station
- └┘ Construction Entrance

NOTES
 1. Upwind and Downwind CAMP locations are based on a western wind direction and are subject to change based on changing wind directions.
 2. The fixed CAMP station location will not change.



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Figure 18 - Perimeter Security and Monitoring Map
 The Nest Site
 333 1st Street,
 Buffalo, NY 14203



DATE ISSUED:
 February 17, 2026

Scale: 1" = 70'

APPENDIX A

HEALTH AND SAFETY PLAN



HEALTH AND SAFETY PLAN for SITE INVESTIGATIONS & REMEDIAL OVERSIGHT

**The NEST Site
333 1st Street
City of Niagara Falls, New York, 14303
NYSDEC Site No. C932183**

Prepared for:

Community Services Seventh Housing LLC
180 Oak Street Buffalo, NY 14203

Prepared by:



960 Busti Avenue, Suite B-150
Buffalo, New York 14213

December 2024

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ATTACHMENTS

Attachment 1	Table of Potential Hazards and OSHA Standards
Attachment 2	Heat Stress Management Program and Procedures
Attachment 3	Trenching and Excavation Health and Safety Requirements
Attachment 4	Map to Hospital

1.0 INTRODUCTION

The following health and safety procedures apply to Brownfield Cleanup Program (BCP) project personnel, including subcontractors, performing activities described in the Remedial Investigation Work Plan (RIWP) and the Remedial Action Work Plan (RAWP). Please note, however, that contractors performing investigation/remedial work are required to either develop their own Health and Safety Plans (HASPs) meeting these requirements at a minimum or adopt this plan.

1.1 PURPOSE

Directed at protecting the health and safety of the field personnel during field activities, the following HASP was prepared to provide safe procedures and practices for personnel engaged in conducting the field activities associated with this project. The plan has been developed using the Occupational Safety and Health Administration (OSHA) 1910 and 1926 regulations and New York State Department of Environmental Conservation (NYSDEC) Brownfields Department of Environmental Remediation (DER)-10 as guidance. The purpose of this HASP is to establish personnel protection standards and mandatory safety practices and procedures for this task specific effort. This plan assigns responsibilities, establishes standard operating procedures, and provides for contingencies that may arise during the field efforts.

1.2 APPLICABILITY

The provisions of the plan are mandatory for all personnel engaged in field activities. All personnel who engage in these activities must be familiar with this plan and comply with its requirements. The plan is based on available information concerning the project area and planned tasks. If more data concerning the project area becomes available that constitute safety concerns, the plan will be modified accordingly. A member of each contractor on the BCP project will be designated as Field Safety Officer and will be responsible for field safety. Any modifications to the plan will be made by the Field Safety Officer after discussion with the Project Manager and Health and Safety Officer. All modifications will be documented and provided to the Project Manager and the Health and Safety Officer for approval. A copy of this plan will be available to all on-site personnel, including subcontractors, prior to their initial entry onto the site.

Before field activities begin, all personnel will be required to read the plan. All personnel must agree to comply with the minimum requirements of this plan, be responsible for health and safety, and sign the Statement of Compliance before site work begins.

1.3 FIELD ACTIVITIES

The work addressed by this HASP includes remedial investigation (RI) and remedial action (RA) activities such as assessment of subsurface conditions related to soil, groundwater and vapor and oversight activities related to remediation. Field work will be conducted that can include soil borings, monitoring well installation, groundwater, vapor sampling and soil sampling, soil excavation/removal etc.

1.4 PERSONNEL REQUIREMENTS

Key personnel are as follows:

Health and Safety Officer – Jason Brydges
Engineer and Project Managers – Jason M Brydges, P.E, Alexis Palumbo-Compton, EIT,
Paul Staub, EIT Geologist – John Boyd, PG
Technicians – Jim Hull
QA/QC – John Berry, P.E.

Responsibilities of some of the key personnel are as follows:

Project Manager:

- Assuring that personnel are aware of the provisions of the HASP and are proficient in work practices necessary to ensure safety and in emergencies;
- Verifying that the provisions of this plan are implemented;
- Assuring that appropriate personnel protective equipment (PPE), if necessary, is available and properly utilized by all personnel;
- Assuring that personnel are aware of the potential hazards associated with Site operations;
- Supervising the monitoring of safety performance by all personnel and ensuring that required work practices are employed; and,
- Maintaining sign-off forms and safety briefing forms.

Health and Safety Officer:

- Monitoring work practices to determine if potential hazards are present, such as heat/cold stress, safety rules near heavy equipment, etc.;
- Determining changes to work efforts or equipment to ensure the safety of personnel;
- Evaluating on-site conditions and recommend to the Project Manager modifications to work plans needed to maintain personnel safety;
- Determining that appropriate safety equipment is readily available and monitor its proper use;
- Stopping work if unsafe conditions occur or if work is not being performed in compliance with this plan;
- Monitoring personnel performance to ensure that the required safety procedures are followed.
- Documenting incident and reporting to Project Manager within 48 hours of occurrence if established safety rules and practices are violated; and,
- Conducting safety meetings as necessary.

Field Personnel, including geologists and technicians:

- Understanding the procedures outlined in this plan;
- Taking precautions to prevent injury to themselves and co-workers;
- Performing only those tasks believed to be safe;

- Reporting accidents or unsafe conditions to the Health and Safety Officer and Project Manager;
- Notifying the Health and Safety Officer and Project Manager of special medical problems (e.g., allergies, medical restrictions, etc.);
- Thinking about safety first while conducting field work; and,
- Not eating, drinking or smoking in work areas.

All Site personnel have the authority to stop work if conditions are deemed to be unsafe. Visitors will be required to report to the overall Site Project Manager or designee and follow the requirements of this plan and the Contractor's HASP (if different).

2.0 SITE DESCRIPTION AND SAFETY CONCERNS

2.1 SITE BACKGROUND AND DESCRIPTION

Approximately 95 percent of the Site contained a vacant two-story commercial building known as the Smokin' Joe's Native Center and was formerly used as a retail store and graphics center. This structure has now been demolished/removed with the exception of the floor slab and foundations. The Site is generally flat and gently sloping towards city streets and the Niagara River to the west. Groundwater flow has most likely been impacted over time by the various developments and fills as well as foundations, street beds, and utility lines. Surface water is directed to adjacent streets and storm drains within the building. In general, groundwater most likely flows west towards the Niagara River.

Historical records including street directories and Sanborn Maps suggest that the site was mixed use residential and commercial. Some of these uses include hotels, storefronts, a furniture store, a department store, auto parking, and leather good manufacturing. Two gas tanks were located on the northwest corner of the subject property from 1950-1970.

2.2 HAZARD EVALUATION

Specific health and safety concerns to the project tasks include working around low levels of heavy metals, semi-volatile organic compounds (SVOCs), and volatile organic compounds (VOCs) in soil and groundwater. Physical hazards include those associated with working near open excavations and adjacent to field equipment and heavy equipment such as back hoes and drill rigs. Contractors will have separate detailed health and safety procedures/requirements for excavations and the transportation and disposal of impacted material that will meet or exceed requirements in this plan. A table of potential hazards and OSHA Standards for consideration during investigation and remedial activities is provided in **Attachment 1**.

2.2.1 Chemical Hazards

Chemical hazards detected at the site include metals and organic compounds that were detected in soil samples and groundwater at concentrations that exceed NYSDEC Part 375 soil cleanup objectives or groundwater standards. These compounds could be encountered during the RI and remedial activities and potential routes of exposure include:

- Skin contact;
- Inhalation of vapors or particles;

- Ingestion; and,
- Entry of contaminants through cuts, abrasions or punctures.

The anticipated levels of personnel protection will include Level D PPE that includes the following:

1. Long sleeve shirt and long pants
2. Work boots with steel toe
3. Hard hats when heavy equipment or overhead hazards are present
4. Safety glasses
5. Work gloves and chemical resistant gloves when sampling potentially contaminated materials
6. High visibility vests or outer gear when Site traffic is significant

Modifications may include booties, overalls, hearing protection, or respiratory protection if air monitoring levels indicate sustained photoionization detector (PID) readings greater than 5 ppm above established background levels. If these levels are reached, work will be halted pending discussions with field and office management. If any readings are recorded above background, work will proceed with caution and breathing zone monitoring will be conducted.

2.2.2 Other Physical Hazards

Depending on the time of year, weather conditions or work activity, some of the following physical hazards could result from project activities:

- Noise
- Heat Stress
- Cold Stress
- Slips, trips, and falls
- Exposure to moving machinery during drilling and excavation activities
- Physical eye hazards
- Lacerations and skin punctures
- Back strain from lifting equipment
- Electrical storms and high winds
- Contact with overhead or underground utilities

Slips, Trips, and Falls. Field personnel shall become familiar with the general terrain and potential physical hazards that are associated with the risk of slips, trips, and falls. Special care shall be taken when working near demolition and excavation operations and material stockpiles. Workers will observe all pedestrian and vehicle rules and regulations. Extra caution will be observed while working near roadways and while driving in reverse to ensure safety.

Noise. All personnel shall wear hearing protection devices, such as earmuffs or ear plugs, if work conditions warrant. These conditions would include difficulty hearing while speaking to one another at a normal tone within three feet. If normal speech is interfered with due to work noise, the Health and Safety Officer or designee will mandate the use of hearing protection or other noise-producing equipment or events.

Heat/Cold Stress. Heat stress work modification may be necessary during ambient temperatures

of greater than 29 degrees Celsius (°C) (85 degrees Fahrenheit [°F]) while wearing normal clothing or exceeding 21°C (70°F) while wearing PPE. Because heat stress is one of the most common and potentially serious illnesses at work sites, regular monitoring and preventive measures will be utilized such as additional rest periods, supplemental fluids, restricted consumption of drinks containing caffeine, use of cooling vests, or modification of work practices. Most of the work to be conducted during the oversight and monitoring operations is expected to consist of light manual labor and visual observation. Given the nature of the work and probable temperatures, heat stress hazards are not anticipated. See **Attachment 2** for heat stress management procedures.

If work is to be conducted during winter conditions, cold stress may be a concern to the health and safety of personnel. Wet clothes combined with cold temperatures can lead to hypothermia. If the air temperature is less than 4°C (40°F) and a worker perspires, the worker should change to dry clothes. The following summary of the signs and symptoms of cold stress is provided as a guide for field personnel.

1. Incipient frostbite is a mild form of cold stress characterized by sudden blanching or whitening of the skin.
2. Chilblain is an inflammation of the hands and feet caused by exposure to cold moisture. It is characterized by a recurrent localized itching, swelling, and painful inflammation of the fingers, toes, or ears. Such a sequence produces severe spasms, accompanied by pain.
3. Second-degree frostbite is manifested by skin with a white, waxy appearance and the skin is firm to the touch. Individuals with this condition are generally not aware of its seriousness because the underlying nerves are frozen and unable to transmit signals to warn the body. Immediate first aid and medical treatment are required.
4. Third-degree frostbite will appear as blue blotchy skin. The tissue is cold, pale, and solid. Immediate medical attention is required.
5. Hypothermia develops when body temperature falls below a critical level. In extreme cases, cardiac failure and death may occur. Immediate medical attention is warranted when the following symptoms are observed:
 - Involuntary shivering
 - Irrational behavior
 - Slurred speech
 - Sluggishness

Fire and Explosion. These hazards will be minimal for activities associated with this project. All heavy equipment will be equipped with a fire extinguisher.

Trenching and Excavations. There are a variety of potential health and safety hazards associated with excavations. These include:

- Surface encumbrances, such as structures, fencing, stored materials, etc.;
- Below- and above-ground utilities, such as water and sewer lines, gas lines, telephone lines, and optical cable lines, etc.;
- Overhead power lines and other utilities;
- Vehicle and heavy equipment traffic around the excavations;
- Falling loads from lifting or digging equipment;

- Water accumulation within excavations;
- Hazardous atmospheres, such as oxygen deficiency, flammable gases, and toxic gases;
- Falling into or driving equipment into unprotected or unmarked excavations; and,
- Cave-in of loose rocks and soil at the excavation face.

OSHA requirements for trenching and excavations are contained in 29 Code of Federal Regulations (CFR), Subpart P, 1926:650 through 1926.652. See **Attachment 3** for details on excavation and trenching safety requirements, which include the following basic minimum excavation requirements:

- Personnel entry into excavations should be minimized whenever possible and no entry will occur in pits greater than 4 feet below ground surface (bgs). Sloping, shoring or equivalent means should be utilized.
- Surface encumbrances such as structures, fencing, piping, stored material etc. that may interfere with safe excavations should be avoided, removed or adequately supported prior to the start of excavations. Support systems should be inspected daily.
- Underground utility locations should be checked and determined, and permits should be obtained prior to initiating excavations. Local utility companies will be contacted at least two days in advance, advised of proposed work, and requested to locate underground installations. When excavations approach the estimated location of utilities, the exact location should be determined by careful probing or hand digging and when it is uncovered, proper supports should be provided.
- A minimum safe distance of 15 feet should be maintained when working around overhead high-voltage lines or the line should be de-energized following appropriate lock-out and tag- out procedures by qualified utility personnel.
- Excavations five feet or more, if entered, will require an adequate means of exit, such as a ladder, ramp, or steps and located to require no more than 25 feet of lateral travel. Under no circumstances should personnel exit/enter an excavation using heavy equipment.
- Personnel working around heavy equipment, or who may be exposed to public vehicular traffic should wear high visibility clothes, especially at night.
- Heavy equipment or other vehicles operating next to or approaching the edge of an excavation will require that the operator have a clear view of the edge of the excavation, or that warning systems such as barricades, hand or mechanical signals, or stop logs be used. If possible, the surface grade should slope away from the excavation.
- Personnel should be safely located in and around the trench/excavation face and should not work underneath loads handled by lifting or digging equipment.
- Hazardous atmospheres, such as oxygen deficiency (atmospheres containing less than 19.5% oxygen), flammable gases (airborne concentrations greater than 20% of the lower explosive limit), and toxic gases (airborne concentrations above the OSHA Permissible Exposure Limit or other exposure limits) may occur in excavations. Monitoring should be conducted for hazardous atmospheres prior to entry and at regular intervals. Ventilation or respiratory protection may be provided to prevent personnel exposures to oxygen deficient or toxic atmospheres. Periodic retesting (at least each shift) of the excavation will be conducted to verify that the atmosphere is acceptable. A log or field book records should be maintained.
- Personnel should not work in excavations that have accumulated water or where water is accumulating unless adequate precautions have been taken. These precautions can include shield systems, water removal systems, or safety harnesses and lifelines.

Groundwater entering the excavation should be properly directed away and down gradient from the excavation.

- Safety harnesses and lifelines should be worn by personnel entering excavations that qualify as confined spaces.
- Excavations near structures should include support systems such as shoring, bracing, or underpinning to maintain the stability of adjoining buildings, walls, sidewalks, or other structures endangered by the excavation operations.
- Loose rock, soil, and spoils should be piled at least two and preferably 5 feet or more from the edge of the excavation. Barriers or other effective retaining devices may be used to prevent spoils or other materials from falling into the excavation.
- Walkways or bridges with standard guardrails that meet OSHA specifications will be provided where employees, the public, or equipment are required to cross over excavations.
- Adequate barrier physical protection should be provided, and excavations should be barricaded or covered when not in use or left unattended. Excavations should be backfilled as soon as possible when completed.
- Safety personnel should conduct inspections prior to the start of work and as needed throughout the work shift and after occurrence that increases the hazard of collapse (i.e., heavy rain, vibration from heavy equipment, freezing and thawing, etc.).
- Personnel working in excavations should be protected from cave-ins by sloping or benching of excavation walls, a shoring system or some other equivalent means in accordance with OSHA regulations. Soil type is important in the determination of the angle of repose for sloping and benching, and the design of shoring systems.

2.2.3 Biological Hazards

Biological hazards can result from encounters with mammals, insects, snakes, spiders, ticks, plants, parasites, and pathogens. Mammals can bite or scratch when cornered or surprised. The bite or scratch can result in local infection with systemic pathogens or parasites. Insect and spider bites can result in severe allergic reactions in sensitive individuals. Exposure to poison ivy, poison oak or poison sumac results in skin rash. Ticks are a vector for several serious diseases. Dead animals, organic wastes, and contaminated soil and water can harbor parasites and pathogens. These hazards are reduced if work is conducted during the late fall and winter months. The following are highlighted because they represent more likely concerns for the site-specific tasks and location:

Bees, Ants, Wasps and Hornets. Sensitization by the victim to the venom from repeated stings can result in anaphylactic reactions. If a stinger remains in the skin, it should be removed by teasing or scraping, rather than pulling. An ice cube placed over the sting will reduce pain. An analgesic corticosteroid lotion is often useful. People with known hypersensitivity to such stings should consult with their doctor about carrying a kit containing an antihistamine and aqueous epinephrine in a pre-filled syringe when in endemic areas. Nests and hives for bees, wasps, hornets and yellow jackets often occur in the ground, trees and brush. Before any nests or hives are disturbed, an alternate sampling location should be selected. If the sample location cannot be relocated, site personnel who may have allergic reactions shall not work in these areas.

Ticks. The incidence of Lyme disease is correlated to outdoor workers in areas where the disease is widespread and heightened risk of encountering ticks infected with *B. burgdorferi*,

which varies from state to state, within states, and even within counties. Preventing tick bites is of utmost importance in preventing Lyme disease and other tickborne illnesses. Tick bite prevention strategies include avoidance or clearing of tick-infested habitats and use of personal protective measures (e.g., repellents and protective clothing). Tick checks should be done regularly, and ticks should be removed promptly. If a worker in a high-risk area develops flu-like symptoms (fever, chills, muscle aches, joint pains, neck stiffness, headache) or a bulls-eye rash, they should seek medical attention even if there is no recall of a tick bite. Workers who have experienced a tick bite should remove the tick and seek medical attention if signs and symptoms of tick-borne diseases occur.

Storm Conditions. When lightning is within 10 miles of the work site, all personnel should evacuate to a safe area.

Sun. When working in the sun, personnel should apply appropriate sun screening lotions (30 sunscreen or above), and/or wear long sleeve clothing and hats.

2.2.4 Activity Hazard Analysis

Table 1 presents a completed activity hazard analysis for the performance of an RI.

Table 1. Activity Hazard Analysis

PRINCIPAL STEPS	POTENTIAL SAFETY/HEALTH HAZARDS	RECOMMENDED CONTROLS
RI soil/groundwater investigation	Potential exposure to low levels of metals, PAHs, petroleum products and solvents	<ol style="list-style-type: none"> 1. Use of administrative controls (site control and general safety rules), work cloths, dust suppression 2. Use of real-time monitoring and action levels 3. Use Physical Hazards SOPs 4. Wear gloves when handling soil and groundwater 5. Actions levels for dust and vapors
EQUIPMENT TO BE USED	INSPECTION REQUIREMENTS	TRAINING REQUIREMENTS
Excavation and other heavy equipment, Backhoe or Geoprobe	<ol style="list-style-type: none"> 1. Daily inspection of equipment 2. Continuous safety oversight 	<ol style="list-style-type: none"> 1. Safety plan review 2. Routine safety briefings 3. PID and Dust Monitor

3.0 MONITORING

The purpose of air monitoring for potential airborne contaminants is to verify that protection levels are suitable. Monitoring will be performed for dust/particulates and volatile organic

compounds during excavation activities. Daily background and calibration readings will be recorded prior to the start of field activities. All monitoring equipment used during this investigation will be maintained and calibrated and records of calibration and maintenance will be kept in accordance with 29 CFR 1910.120(b)(4)(11)E.

3.1 PARTICULATE MONITORING

Real-time air monitoring readings are obtained from upwind and downwind locations in accordance with DER-10 for community air-monitoring. Daily field reports will be completed that document activities performed, equipment and manpower onsite, screening and monitoring results, general Site conditions, and weather conditions.

3.2 AIR MONITORING FOR WORKER PROTECTION

Real time air monitoring will be conducted whenever site soil is disturbed during sampling, excavation, grading, etc. A real time personal aerosol monitor (i.e., TSI SidePak AM5 10 Personal Aerosol monitor or equivalent) will be used. This monitor is a laser photometer that measures data as both real-time aerosol mass-concentration and 8-hour time weighted average (TWA). The monitor will be used to measure real-time concentrations in milligrams per meter cubed (mg/m^3). Action levels are based on potential exposure to calcium carbonate and will be as follows:

- 15 mg/m^3 total dust
- 5 mg/m^3 respirable fraction for nuisance dusts

Dust suppression techniques should be employed prior to exceeding the action levels. However, if these levels are exceeded, then work will be halted, and additional dust suppression techniques employed until safe levels are reached.

3.3 TOTAL VOLATILE ORGANICS MONITORING

Monitoring of VOCs will be conducted using a PID. If a sustained reading of 5 ppm above background occurs, then work will be halted, and personnel will evacuate the work area. Levels will be allowed to stabilize, and another reading will be taken in the breathing zone. If background levels continue to be exceeded, then work will not continue at that location and the project manager will be notified of the situation. Action levels will remain the same.

4.0 SAFE WORKING PRACTICES

The following general safe work practices always apply to a construction site:

- Eating, drinking, chewing gum or tobacco and smoking are prohibited within the work area.
- Contact with potentially contaminated substances should be avoided.
- Puddles, pools, mud, etc. should be avoided if possible.
- Kneeling, leaning, or sitting on equipment or on the ground should be avoided if possible.
- Upon leaving the work area, hands, face and other exposed skin surfaces should be thoroughly washed.

- Unusual site conditions shall be promptly conveyed to the project manager, health and safety officer, or site superintendent for resolution.
- A first-aid kit shall be available at the site.
- Field personnel should use all their senses to alert themselves to potentially dangerous situations (i.e., presence of strong, irritating, or nauseating odors).
- If severe dusty conditions are present, then the soil will be dampened to mitigate dust.
- All equipment will be cleaned before leaving the work area.
- Field personnel must attend safety briefings and should be familiar with the physical characteristics of the investigation, including:
 - Accessibility to personnel, equipment, and vehicles.
 - Areas of known or suspected contamination.
 - Site access.
 - Routes and procedures to be used during emergencies.
- Personnel will perform all investigation activities with a “buddy” who is able to:
 - Provide his or her partner with assistance.
 - Notify management or emergency personnel if needed.
- Excavation activities shall be terminated immediately in the event of thunder or electrical storm.
- The use of alcohol or drugs at the site is strictly prohibited.

5.0 PERSONAL SAFETY EQUIPMENT AND SITE CONTROL

5.1 PERSONAL SAFETY EQUIPMENT

As required by OSHA in 29 CFR 1920.132, this plan constitutes a workplace hazard assessment to select PPE to perform the site investigation. The PPE to be donned by on-site personnel during this investigation are those associated with the industry standard of Level D. Protective clothing and equipment to initiate the project will include:

- Work clothes, pants and long sleeves
- Work boots with steel toe
- Work gloves as necessary
- Hard hat if work is conducted near equipment
- Safety glasses
- Hearing protection as necessary

Modifications may include chemically resistant gloves, booties, and overalls. If air monitoring indicates levels are encountered that require respiratory protection (sustained readings at or above action levels above a daily established background), then work will be halted, and an adequate resolution of PPE will be made by the health and safety manager, field manager, and project manager.

5.2 SITE CONTROL

Site control will be established near each work zone by the Contractor. The purpose is to control access to the immediate work areas from individuals not associated with the project. All work zones will be fenced off with controlled access and appropriately designated as an exclusion area.

Each excavation or drilling area where heavy equipment is being utilized will be set up as a work zone and include an exclusion area and support zone. The exact configuration of each zone is dependent upon location, weather conditions, wind direction and topography. The Contractor's safety manager will establish the control areas daily at each excavation.

An area of 10 feet (as practical) around each excavation will be designated as the exclusion area. This is the area where potential physical hazards are most likely to be encountered by field personnel. The size of the exclusion area may be altered to accommodate site conditions and the drilling/excavation location. If levels of protection higher than Level D are used, this plan will be modified to include decontamination procedure. The Site excavation contractor will be required to have eye/face wash equipment/means available on-site.

A support area will be defined for each field activity where support equipment will be located. Normal work clothes are appropriate within this area. The location of this area depends on factors such as accessibility, wind direction (upwind of the operation.), and resources (i.e., roads, shelter, utilities). The location of this zone will be established daily. Excavation areas will be filled or secured (fencing) to prevent access from the public.

6.0 EMERGENCY INFORMATION

In the event of an emergency, the field personnel or the health and safety manager will employ emergency procedures. A copy of emergency information will be kept in the field and will be reviewed during the initial site briefing. Copies of emergency telephone numbers and directions to the nearest hospital will be prominently posted in the field.

6.1 MEDICAL TREATMENT AND FIRST AID

A first aid kit adequate for anticipated emergencies will be maintained in the field. If any injury should require advanced medical assistance, emergency personnel will be notified, and the victim will be transported to the hospital. The Contractor will establish his own first aid station and details will be provided in his HASP.

In the event of an injury or illness, work will cease until the field safety and oversight inspector has examined the cause of the incident and taken appropriate corrective action. Any injury or illness, regardless of extent, is to be reported to the project manager and health and safety officer.

6.2 EMERGENCY CONTACTS

Emergency telephone numbers will be posted in the field and are listed below:

- Ambulance, Fire, Police 911
- Poison Control Center 800-222-1222
- NYSDEC Spills Hotline 800-457-7362
- Jason M. Brydges, BE3 716-830-8636
- Michael Keller, EIT, NYSDEC PM 716 851-7220
- Aaron Keegan, NYSDOH 518-402-7860
- Niagara Falls Memorial 621 10th Street, Niagara Falls - **(716) 278-4000** See Attachment 4.



Verbal communications between workers or use of a vehicle horn repeatedly at intervals of three short beeps shall be used to signal all on-site personnel to immediately evacuate the area and report to the vehicle parking area.

6.3 EMERGENCY STANDARD OPERATING PROCEDURES

The following standard operating procedures are to be implemented by on-site personnel in the event of an emergency. The health and safety manager and Contractor's field manager shall manage response actions.

1. Upon notification of injury to personnel, the designated emergency signal shall be sounded. All personnel are to terminate their work activities and assemble in a safe location. The emergency facility listed above shall be notified. If the injury is minor, but requires medical attention, the Contractor's field manager or the health and safety manager shall accompany the victim to the hospital and help in describing the circumstances of the accident to the attending physician.
2. Upon notification of an equipment failure or accident, the Contractor's field manager or the health and safety manager shall determine the effect of the failure or accident on site operations. If the failure or accident affects the safety of personnel or prevents completion of the scheduled operations, all personnel are to leave the area until the situation is evaluated, and appropriate actions taken.
3. Upon notification of a natural disaster, such as tornado, high winds, flood, thunderstorm or earthquake, on-site work activities are to be terminated and all personnel are to evacuate the area.

6.4 EMERGENCY RESPONSE FOLLOW-UP ACTIONS

Following activation of an emergency response, the health and safety officer shall notify the project manager, and the Contractor's field manager shall submit a written report documenting the incident to the project manager.

6.5 MEDICAL TREATMENT

The Contractor's field manager shall be informed of any site-related injury, exposure or medical condition resulting from work activities. All personnel are entitled to medical evaluation and treatment in the event of a site accident or incident.

6.6 SITE MEDICAL SUPPLIES AND SERVICES

The Contractor's field manager or a trained first aid crew member shall evaluate all injuries at the site and render emergency first-aid treatment, as appropriate. If an injury is minor but requires professional medical evaluation, the field manager shall escort the employee to the appropriate emergency room. For major injuries occurring at the site, emergency services shall be requested. A first-aid kit shall be readily accessible, fully supplied, and maintained at specified locations used for on-site operations.

6.7 PRECAUTIONS

Universal precautions shall be followed on-site that consist of treating all human blood and

certain body fluids as being infected with Human Immune Deficiency Virus (HIV), Hepatitis B virus (HBV), or other blood borne pathogens. Clothing and first-aid materials visibly contaminated with blood or other body fluids will be collected and placed into a biohazard bag. Individuals providing first aid or cleanup of blood- or body-fluid contaminated items should wear latex gloves. If providing CPR, a one-way valve CPR device should be used. Biohazard bags, latex gloves, and CPR devices will be included in the site first-aid kits.

Work areas visibly contaminated with blood or body fluids shall be cleaned using a 1:10 dilution of household bleach. If equipment becomes contaminated with blood or body fluids, and cannot be sufficiently cleaned, the equipment shall be placed in a plastic bag and sealed. Any personnel servicing the equipment shall be made aware of the contamination, so that proper precautions can be taken.

7.0 RECORDKEEPING

The Contractor's field manager and health and safety officer are responsible for site record keeping. Prior to the start of work, they will review this Plan along with the Contractor's HASP. A Site safety briefing will be completed prior to the initiation of field activities. This shall be recorded in the field logbook. An accident report should be completed by the Field Manager if an accident occurs and forwarded to the project manager.

8.0 PERSONNEL TRAINING REQUIREMENTS

8.1 INITIAL SITE BRIEFING

Prior to site entry, the Contractor's health and safety manager shall provide all personnel (including site visitors) with site-specific health and safety training. A record of this training shall be maintained. This training shall consist of the following:

- Discussion of the elements contained within this plan
- Discussion of responsibilities and duties of key site personnel
- Discussion of physical, biological and chemical hazards present at the site
- Discussion of work assignments and responsibilities
- Discussion of the correct use and limitations of the required PPE
- Discussion of the emergency procedures to be followed at the site
- Safe work practices to minimize risk
- Communication procedures and equipment
- Emergency notification procedures

8.2 DAILY SAFETY BRIEFINGS

The Contractor's health and safety manager will determine if a daily safety briefing is required. The briefing shall discuss the specific tasks scheduled for that day and the following topics:

- Specific work plans
- Physical, chemical or biological hazards anticipated
- Fire or explosion hazards
- PPE required

- Emergency procedures, including emergency escape routes, emergency medical treatment, and medical evacuation from the site
- Weather forecast for the day
- Buddy system
- Communication requirements
- Site control requirements
- Material handling requirements

9.0 COMMUNITY AIR MONITORING PROGRAM (CAMP)

A Community Air Monitoring Program (CAMP) requires real-time monitoring for VOCs and particulates (i.e., dust) at the upwind and downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The program is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors and on-site workers not directly involved with work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. A New York State Department of Health (NYSDOH) generic CAMP obtained from NYSDEC DER-10 is presented in the **Appendix B** of the RIWP that will be followed and adhered to for work activities that could generate dust from an impacted area.

A program for suppressing fugitive dust and particulate matter monitoring will also be conducted in accordance *NYSDEC DER-10* titled *Appendix 1B Fugitive Dust and Particulate Monitoring*, which is also provided in **Appendix B**. The fugitive dust suppression and particulate monitoring program will be employed at the site during building demolition, IRM site remediation and other intrusive activities which warrant its use.

Both the CAMP and the fugitive dust and particulate monitoring program will be administered by the environmental engineer/consultant. Monitoring results of the CAMP will be reported to the NYSDEC and New York State Department of Health daily for review.

ATTACHMENT 1

Table of Potential Hazards and OSHA Standards

Potential Hazards and OSHA Standards for Consideration during IRMs

Site Exposure/Control	Potentially Applicable OSHA Standard*	
	1910 General Industry	1926 Construction
Hazard Assessment & Employee Training	29 CFR 1910.132(d)	29 CFR 1926.21(b)
Chemical Exposure	29 CFR 1910.1000	29 CFR 1926.55
Noise Exposure	29 CFR 1910.95	29 CFR 1926.52
Sanitation	29 CFR 1910.141	29 CFR 1926.51
Wiring Methods (temporary wiring)	29 CFR 1910.305(a)(2) 29 CFR 1910.333	29 CFR 1926.405(a)(2)
Electrical Hazards		29 CFR 1926.416
Emergency Action Planning	29 CFR 1910.38	29 CFR 1926.35
Excavation	covered by 1926	29 CFR 1926 Subpart P
Confined Space Entry	29 CFR 1910.146	29 CFR 1926.21(b)(6)29 CFR 1926.353(b)
Material Handling	29 CFR Subpart N	29 CFR Subpart N29 CFR 1926.600-60229 CFR 1926.604
Building Demolition	covered by 1926	29 CFR 1926 Subpart T
Site Contaminant Abatement	29 CFR 1910.1000-1029 29 CFR 1910.1043-1052	29 CFR 1926.5529 CFR 1926.6229 CFR 1926.1101-1152
Elevated Work Surfaces	29 CFR 1910 Subpart D 29 CFR 1910 Subpart F	29 CFR 1926 Subpart L29 CFR 1926 Subpart M29 CFR 1926.552
Chemical Storage	29 CFR 1910 Subpart H29 CFR 1910.1200	29 CFR 1926.5929 CFR 1926 Subpart F
Personal Protective Equipment	29 CFR 1910 Subpart I	29 CFR 1926 Subpart E
Heavy Equipment Operation	29 CFR 1910.9529 CFR 1910 Subpart N	29 CFR 1926.5229 CFR 1926 Subpart O
Tasks-Long Duration	29 CFR 1910.141-142	29 CFR 1926.51

The Federal General Industry and Construction citations are provided above

ATTACHMENT 2

Heat Stress Management Program and Procedures

INTRODUCTION

Panamerican employees engage in a variety of activities with potential exposure to excessive ambient temperatures and humidity, with the overall result being Aheat stress@. This procedure establishes the Panamerican Heat Stress Management Program. It establishes responsibilities and basic requirements for personnel who may be required to work in situations where the ambient temperature exceeds 21° C (70° F) while wearing protective equipment (e.g., hazardous waste site investigations) or when the ambient temperature exceeds 29° (85° F) while wearing normal clothing. Because heart stress is one of the most common and potentially serious illnesses at job sites and particularly hazardous waste sites, regular monitoring and other preventive measures are warranted.

There are no regulations addressing heat stress. However, it should be noted that OSHA does recognize heat stress as a potentially serious health hazard and can site employers under the Ageneral duty clause@ of the Occupational Safety Health Act if heat-related illness is occurring or likely to occur.

PROGRAM ADMINISTRATION AND RESPONSIBILITIES

The Heat Stress Management Program is administered by Panamerican Managers and Health and Safety personnel.

These Individuals:

- Oversee the implementation of the Heat Stress Management Program;
- Periodically audit and evaluate program implementation;
- Evaluate this procedure on an ongoing basis to see that it reflects current practice and regulations;
- Assist field crews in their implementation of this procedure.

Project Managers (PM) and Safety Personnel are responsible for:

- Implementing this Procedure in all field operations;
- Providing guidance to staff regarding heat stress management as described in the Procedure; and
- Providing feedback to management regarding program effectiveness.

Staff Members are responsible for:

- Complying with this Procedure as it applies to their activities; and
- Providing feed back to their supervisor regarding program effectiveness.

HEAT STRESS HAZARDS AND RISK FACTORS

Heat Stress is defined as the total net load on the body with contributions from both exposure to external sources, such as sunshine and hot surfaces, and from internal metabolic heat production. A person=s

exposure to the increased ambient temperatures and humidity produces physiological responses referred to as heat stress which are characterized by an increase in the: a) Core or deep body temperature, b) heart rate, c) blood flow to the skin, and d) water and salt loss due to sweating. Conditions of excessive heat stress may occur either when the physical work is too heavy or the environment is too hot in relation to the work being performed. If work is performed under hot environmental conditions, the work load effort must be reviewed and the heat exposure limit maintained at or below the levels to protect the worker from the risk of acute heat illness.

In general, there are four types of physiological disorders associated with heat stress. They include:

- Heat Rash - a skin reaction occurring as a result of obstructed sweat glands, often associated with impermeable clothing.
- Heat Cramps - painful muscle spasms of extremities and abdomen, resulting from inadequate balance of electrolytes which are lost from sweating.
- Heat Exhaustion - a mild form of heat stroke due to depletion of body fluids and electrolytes. Blood vessels dilate despite decreased volume of blood. Symptoms include weakness, dizziness, nausea, rapid pulse, and a small increase in body temperature.
- Heatstroke - a potentially fatal disorder resulting from failure of the body's thermoregulatory system. The classical description of heatstroke includes (1) a major disruption of central nervous function (unconsciousness or convulsions), (2) a lack of sweating (3) hot, dry, red or mottled skin, and (4) a core temperature in excess of 41°C (105.8°F). Heatstroke is a serious medical condition which calls for emergency medical action.

Seven factors play significant roles in the development of or predisposition to, heat stress disorders. These factors include:

- Acclimatization - Heat acclimatization leads to increased and quicker sweating, cooler skin due to an increase in evaporative cooling and a lower, more stable core body temperature. Maximal sweating rates in unacclimatized persons are lower, but salt concentrations in their perspiration are higher, requiring a higher rate of salt replacement.
- Age - Older individuals are generally more susceptible to heat stress than younger individuals. However, older healthy workers are able to perform well in hot jobs if permitted to proceed at a self-regulated pace.
- Gender - The average woman has a lower aerobic capacity than a similar-sized man. Nevertheless, when working at similar proportions of their maximum aerobic capacity, women perform similarly or only slightly less well than men.
- Body Fat - The lower level of physical fitness, decreased maximum work capacity and decreased cardiovascular capacity frequently associated with obesity predispose individuals to heat disorders.
- Water and Electrolyte Balance - Sustained, effective work performance in heat requires a

replacement of body water and electrolytes lost through sweating. If this water is not replaced by drinking, continued sweating will draw on water reserves from both tissues and body cells leading to dehydration.

- Use of Alcohol and Medication - Notwithstanding the potential hazards from impaired coordination and judgment, the ingestion of alcohol before or during work in the heat should not be permitted because it reduces heat tolerance and increases the risk of heat illness. Many drugs, including diuretics and antihypertensives, can interfere with the body's thermoregulation.
- Physical Fitness - Physical conditioning enhances heat tolerance by increasing the functional capacity of the cardiovascular system, and reduces the time required to develop heat acclimatization by about 50% over those not physically fit.

The factors listed above are to be taken into account by all project personnel when planning or executing a project subject to heat stress conditions. The factors should be taken into consideration for:

- the development of the project schedule;
- the ordering of supplies/equipment;
- the support facilities to be made available at the site;
- the execution of work tasks; and
- the after work hours activities.

The following is a summary of signs and symptoms of heat stress:

Heat Rash may result from continuous exposure to heat or humid air .

Heat cramps are caused by heavy sweating with inadequate electrolyte replacement. Signs and symptoms include:

- Muscle Spasms
- Pain in the hands, feet and abdomen.

Heat Exhaustion occurs from increased stress on various body organs, including inadequate blood circulation due to cardiovascular insufficiency or dehydration. Signs and symptoms include:

- Pale, cool and moist skin
- Heavy sweating
- Dizziness, fainting and nausea

Heat stroke is the most serious form of heat stress. Temperature regulation fails, and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury or death occurs. Competent medical help must be obtained. Signs and symptoms are:

- Red, hot and unusually dry skin
- Lack of or reduced perspiration
- Dizziness and confusion

- Strong, rapid pulse and coma.

HEAT AND STRESS PREVENTION

Preventive measures should be taken to prevent personnel from experiencing heat stress illness. Prevention of heat stress is also important because if an individual has experienced a heat illness incident, he has an increased likelihood of future occurrences. Preventive measures include: favorable work scheduling, acclimatization of workers to hot environments, drinking sufficient quantities of fluids, providing cool, sheltered work and rest areas, and utilizing cooling devices as appropriate of feasible. Heat stress monitoring/work rest regimens are discussed below.

Work Schedules and Activity

If possible, work should be scheduled during the coolest part of the day. Early morning and evening work can be considerably more effective than working midday when the additional time for breaks and heat stress monitoring are taken into account.

Employees should also be encouraged to maintain a certain level of activity during the work shift. Prolonged standing in hot environments can lead to heat illness because the blood pools in the lower extremities. Workers should periodically walk about to encourage blood circulation from the feet and legs.

Acclimatization of Workers

A properly designed and applied heat acclimatization program will dramatically increase the ability of workers to work at a hot job and will decrease the risk of heat-related illnesses and unsafe acts. Heat acclimatization can usually be induced in 5 to 7 days of exposure to the hot job. For workers who have had previous experience with the job, the acclimatization regimen should be exposure for 50% on day 1, 60% on day 2, 80% on day 3 and 100% on day 4. For workers new to job the schedule should be 20% on day 1 with a 20% increase in each additional day.

Acclimatization can be induced by sustained elevations of the skin and core body temperatures above levels for the same work in cool environments for an hour or more per day. Acclimatization needs periodic reinforcement such as occurs daily during the work week. Persons may show some loss of acclimatization on the first day of the new shift after being idle for two days or over a weekend. After vacations of two weeks or longer the loss of acclimatization is substantial, several days at work will be needed before heat tolerance is fully restored.

Drinking Sufficient Quantities of Fluids

Under hot conditions where sweat production may reach 6 to 8 liters per day, voluntary replacement of the water lost is usually incomplete. The normal thirst mechanism is not sensitive enough to urge us to drink enough water to prevent dehydration. Individuals are seldom aware of the exact amount of sweat they produce or how much water is needed to replace that lost in sweat; 1 liter/hour is not an uncommon rate of water loss. Every effort should be made to encourage individuals to drink water, low-sodium noncarbonated beverages or electrolyte replacement fluids (e.g., Gatorade). Lightly salted water (1 gram/liter of water (0.1%) or one level teaspoon per 15 quarts of water), should be provided to unacclimated workers. The salt should be dissolved completely and the water kept cool. Salt tablets as dietary supplements are not generally recommended.

Workers should drink at least 500 ml (one pint) of water before beginning work. The fluid should be maintained at temperatures of 10° to 15° (50 to 59° F). If possible, small quantities of fluids should be consumed at frequent intervals (e.g., 150 to 250 milliliters (ml), or at least a quarter pint, every 20 minutes) rather than the intake of 750 ml (3 cups) or more once per hour. Individuals vary, but water intake should total 4 to 8 liters (quarts) per day. When heat stress is considered a potential problem, a minimum of 1 liter/hour/person of water are to be maintained onsite. Individual paper or plastic cups will be provided in order to prevent the spread of communicable disease.

Alcohol and diuretics such as caffeine (contained in coffee, tea and soft drinks) can increase dehydration. Therefore employees with potential exposure to heat stress should be discouraged from the consumption of these types of fluids during and after working hours.

Cool, sheltered Work and Rest Areas

Exposure to direct sunlight significantly increases the overall thermal loading of the body, thereby increasing an individuals susceptibility to heat stress illnesses. Whenever possible work should be conducted under suspended tarps, in shady areas or in other sheltered areas in order to reduce thermal loading caused by the sun. Cool sheltered areas should be provided also for rest breaks. A rest area should be situated so that part of it is in the contamination reduction area so that workers can take breaks without being required to undertake a full decontamination procedure. Canopies or tarps and open air tents, are types of cool shelters which can provide shaded rest areas.

Cooling Devices

Auxiliary cooling devices can be successfully used to provide body cooling, especially to workers wearing protective garments at hazardous waste sites. Vortex coolers utilize high velocity air which is directed inside the protective clothing. Vortex coolers have been used successfully in some operations. Cooling vests utilizing Ablue ice@ type packs can provide some cooling to the torso, but add weight for the wearer and can inhibit body movements.

Newer, more sophisticated tube and refrigerant systems woven into undergarments are also available. However, some of these systems „may not be effective in situations where the work involves considerable motion, since bending and lifting can crimp the tubes, impeding the flow of refrigerant.

Heat Stress Monitoring

Several heat stress monitoring systems have been devised to help manage heat stress in hot work environments. Panamerican performs heat stress monitoring when: 1) employees are wearing normal work clothing in ambient temperatures exceeding 29° C, (85° F) and 2) employees wearing chemical protective clothing (including paper coveralls) working in ambient temperatures exceeding 21° C (70° F). The temperature differential is related to the reduced ability of a person to maintain a core temperature of $\pm 37^{\circ}$ C (98.6° F) when wearing chemical protective clothing.

It should be noted by personnel that there are no Afast and true@ methods of heat stress monitoring; likewise there are no regulations concerning heat stress monitoring. Individual susceptibility to heat stress is highly variable. Some individuals are highly susceptible to any increase in their internal body temperature while other individuals can work very well with internal body temperatures of 39°C (102.2° F) or higher.

The heat stress monitoring systems should be used by Site Safety Officers as guidelines and not necessarily as hard, fast rules. Individuals working in elevated temperatures should be queried on a regular basis regarding their perceived state of heat stress. If the calculated heat stress index value indicates that work can continue but a person states that they believe they are experiencing heat stress, the work effect should be discontinued and a rest break taken.

Likewise, if the calculated heat stress index value indicates that a rest break should be taken but the workers believe they can work longer, they should be permitted to work longer providing that their heart rates do not exceed 110 beats per minute. If the individual's heart rate rates exceed 110 beats per minute a rest break will be taken. In all cases, individual workers should not be permitted or expected to perform excessive work which could result in heat stress. If a SSO has any concerns that an individual may be pushing himself/herself past the Abreaking point@ the calculated work/rest regimen will be followed.

For strenuous field activities that are part of ongoing site work activities in hot weather, the following procedures shall be used to monitor the body's physiological response to heat, and to monitor the work cycle of each site worker. There are two phases to this monitoring: the initial work/rest cycle is used to estimate how long the first work shifts of the day should be. Heart rate monitoring of each worker will establish the length of the successive work periods. Both phases are to be used are to be used for heat stress monitoring. Failure to use either one could place workers at risk of heat-related disorders.

Phase 1 - Determination of the Initial Work - Rest Regimen

The determination of the initial work - rest regimen can be performed using either of two methods:

- The Modified Dry Bulb Index; or
- The Wet Bulb Globe Thermometer (WBGT) Index

After the initial work - rest regimen has been determined, environmental conditions must be monitored for changes which would require a modification to the work - rest regimen. This, coupled with the heart rate monitoring, determines the work cycles to be followed on a site.

The Modified Dry Bulb Index accounts for the effects caused by solar, load, air temperature, and chemical protective clothing, under a light work load (walking at approximately 3 mph). A mercury thermometer, shielded from direct sunlight, is used to measure ambient temperature. The percentages of (of time) of sunlight and cloud cover are then estimated to determine a sunshine quality factor (e.g., 100% sunshine - no cloud cover = 1.0; 50% sunshine - 50% cloud cover = 0.5; 0% sunshine - 100% cloud cover = 0.0). When these two sets of values have been obtained, they are inserted into the following equation to calculate the adjusted temperature:

$$T (^{\circ}\text{C, adjusted}) = T (^{\circ}\text{C, actual}) + (7.2 \times \text{sunshine quality factor})$$

-OR-

$$T (^{\circ}\text{F, adjusted}) = T (^{\circ}\text{F, actual}) + (13 \times \text{sunshine quality factor})$$

After the adjusted temperature has been calculated, the length of the first work shift can be determined using the following table:

Initial Break and Physiological Monitoring Cycles

ADJUSTED TEMPERATURE	NORMAL WORK CLOTHES	PROTECTIVE CLOTHING
90 ⁰ F (32.2 ⁰ C) or above	After each 45 minutes of work	After each 15 minutes of work
87.5 ⁰ -90 ⁰ F (30.8 ⁰ -32.2 ⁰ C)	After each 60 minutes of work	After each 30 minutes of work
82.5 ⁰ -87.5 ⁰ F (28.1 ⁰ -30.8 ⁰ C)	After each 90 minutes of work	After each 60 minutes of work
77.5 ⁰ -82.5 ⁰ F (25.3 ⁰ -28.1 ⁰ C)	After each 120 minutes of work	After each 90 minutes of work
72.5 ⁰ -77.5 ⁰ F (22.5 ⁰ -25.3 ⁰ C)	After each 150 minutes of work	After each 120 minutes of work

NOTE: The standard rest period is 15 minutes

WET BULB GLOBE THERMOMETER INDEX

The Wet Bulb Globe Thermometer (WBGT) Index was developed by the U.S. Army in the 1950s to prevent heat stress in army recruits. The WBGT Index accounts for the effects caused by humidity, air movement, evaporation, air temperature and work rate. It does not, however, account for the effects of chemical protective clothing, non-acclimatized workers, age, or other factors which may affect the likelihood of heat stress. Because of this, it is necessary to make adjustments to the index and conduct Heart Rate Monitoring.

WBGT measurements are usually obtained through the use of are-contained electronic devices. Such devices are easy to set up and can provide the user with the capabilities to store data and download to print out a hard copy.

Heat produced by the body and the environmental heat together determine the total heat load. Therefore, after the WBGT Index has been obtained, the anticipated work load category of each job shall be determined and the initial-rest regimen established using the table below.

The work load category may be determined by ranking each job into light, medium and heavy categories on the basis of type of operation. Examples of each category are:

- Light work: sitting or standing to control machines, performing light hand work
- Moderate work: walking about with moderate lifting and pushing; and
- Heavy work: pick and shovel work.

PERMISSIBLE HEAT EXPOSURE			
WORK-REST REGIMEN	WORK LOAD		
	LIGHT	MODERATE	HEAVY
	30.0 ⁰ C/86 ⁰ F	26.7 ⁰ C/80.1 ⁰ F	25 ⁰ C/77 ⁰ F
75% Work-25% Rest Each Hour	30.6 ⁰ C/87.1 ⁰ F	28 ⁰ C/82.4 ⁰ F	25.9 ⁰ C/78.6 ⁰ F
50% Work-50% Rest Each Hour	31.4 ⁰ C/88.5 ⁰ F	29.4 ⁰ C/85.0 ⁰ F	27.9 ⁰ C/82.2 ⁰ F
25% Work-75 % Rest Each Hour	32.2 ⁰ C/90.0 ⁰ F	31.1 ⁰ C/88.0 ⁰ F	30.0 ⁰ C/86.0 ⁰ F

The table reads as follows:

Light, continuous work is possible at any WBGT reading up to 30⁰ C (86⁰F) but above that limit work breaks

are needed to recover from the heat; light work at temperatures of between 30.0 and 30.6°C (86 to 87°F) can be conducted, but 15 minute breaks must be taken every hour, etc. It is important to note that this table is applicable primarily to healthy, acclimatized personnel; wearing standard work clothing.

NOTE: An additional 6 to 11°C (42.8 to 51.8°F) must be added to the calculated WBGT temperature for personnel wearing chemical protective clothing prior to determining the initial work - rest regimen from this table. Because the WBGT Index does not take into account unacclimatized workers, or individual susceptibilities, the addition to the WBGT value does not eliminate the requirement for Heart Rate Monitoring after work has begun.

Phase 2 - Heart Rate Monitoring

An increase in the heart rate is a significant indication of stress, whether induced by exposure to heat or through physical labor. Although baseline heart rates can vary significantly between individuals and during the day for an individual, a heart rate of 110 beats per minute or greater is an indication of physiological stress. To prevent heat stress illnesses, the heart rate (HR) should be measured by radial (wrist) or carotid (neck) pulse for 30 seconds as early as possible in the rest period. The HR at the beginning of the rest period should not exceed 110 beats/minute. If the HR is higher, the next work period should be shortened by 33 percent while the length of the rest period stays the same. If the pulse rate still exceeds 110 beats/minute at the beginning of the next rest period, the following work period should be further shortened by 33 percent while the length of the rest period stays the same.

ATTACHMENT 3

Trenching and Excavation Health and Safety Requirements

REGULATORY AUTHORITY

Excavations will be performed in accordance with OSHA 29 CFR, subpart P, 1926:650-1926.652 and USACOE EM 385-1-1 section 25 requirements as they apply to project activities.

GENERAL

- At all times the need for personnel to enter excavations will be minimized. Inspections or sample removal will be done from above the excavation, whenever possible.
- Personnel will only enter excavations after the requirements of this plan have been met.
- Personnel protective equipment including hard hat, safety glasses and steel-toe work boots may be required.

SURFACE ENCUMBRANCES

Surface encumbrances such as structures, fencing, piping, stored material etc. which may interfere with safe excavations will be avoided, removed or adequately supported prior to the start of excavations. Support systems will be inspected daily.

UNDERGROUND UTILITIES

Underground utility locations will be checked and determined and permits as necessary will be in place prior to initiating excavations. Local utility companies will be contacted at least two days in advance, advised of proposed work, and requested to locate underground installations. When excavations approach the estimated location of utilities, the exact location will be determined by careful probing or hand digging and when it is uncovered, proper supports will be provided.

OVERHEAD OBSTACLES

A minimum safe distance of 20 feet will be maintained when working around overhead high-voltage lines or the line will be de-energized following appropriate lock-out and tag-out procedures by qualified utility personnel.

ENTRY/EXIT ROUTES

Excavations five feet or more deep will require an adequate means of exit, such as a ladder, ramp, or steps and located so as to require no more than 25 feet of lateral travel. Under no circumstances will

personnel be raised.

VEHICLE CONTROL/SAFETY

Personnel working around heavy equipment, or who may be exposed to public vehicular traffic will wear a traffic warning vest consisting of at least 400 square inches of red or orange material. At night, at least 400 square inches of florescent or other reflective material will be worn.

For excavation work on or adjacent to highways or streets, signs, signals, and barricades that conform to the requirements of the current American National Standards Institute (ANSI) D6.1, Manual on Uniform Traffic Control Devices for Streets and Highways will be used to protect work areas. Signs, signals, and barricades will be adequately lighted at night. Flagmen will be provided when signs, signals and barricades do not provide adequate protection. Flagmen will use signals and procedures contained in the current issue of ANSI D6.1. At night, flagmen will be clearly illuminated so as to be easily seen by approaching traffic.

For mobile equipment operating next to or approaching the edge of an excavation, the operator will have a clear view of the edge of the excavation, or a warning system such as barricades, hand or mechanical signals, or stop logs will be used. If possible the surface grade will slope away from the excavation.

Personnel will be safely located in and around the trench and will not be permitted to work underneath loads handled by lifting or digging equipment. Personnel are required to stand away from vehicles being loaded and unloaded. Operators can remain in the cabs of vehicles being loaded or unloaded provided the vehicles are equipped to provide adequate protection to the operator.

HAZARDOUS ATMOSPHERES

Hazardous atmospheres, such as oxygen deficiency (atmospheres containing less than 19.5% oxygen), flammable gases or vapors (airborne concentrations greater than 20% of the lower explosive limit), and toxic gases or vapors (airborne concentrations above the OSHA Permissible Exposure Limit or other exposure limits) may occur in excavations, especially around landfills and hazardous waste sites.

In locations where oxygen deficiency or hazardous gaseous conditions are possible, the air in the excavation will be tested before personnel are permitted to enter an excavation deeper than 4 feet. When flammable gases are present, adequate ventilation will be provided and sources of ignition will be eliminated. Ventilation or respiratory protection will be provided to prevent personnel exposures to oxygen deficient or toxic atmospheres. Periodic retesting (at least each shift) of the excavation will be conducted to verify that the atmosphere is acceptable. A log or field book records will be maintained of all test results.

WATER ACCUMULATION HAZARDS

Personnel will not work in excavations that have accumulated water or where water is accumulating unless adequate precautions have been taken. These precautions can include special support or shield systems, water removal systems such as pumps, or safety harnesses and lifelines. Water removal systems will be operated and monitored by experienced personnel. Diversion ditches or dikes will be used to prevent surface water from entering the excavation and to provide adequate drainage of the area around the excavation. Adequate precautions, as described above, will be taken for excavating

subject to heavy rains.

STABILITY OF ADJACENT STRUCTURES

Support systems such as shoring, bracing, or underpinning will be provided to maintain the stability of adjoining buildings, walls, or other structures endangered by the excavation operations. Excavations below a foundation or retaining wall that could be reasonably expected to pose a hazard to personnel will not be permitted unless:

- a support system is provided
- The excavation is in stable rock; or
- A Registered Professional Engineer has determined that the structure will not be effected by the excavation activity or that the excavation work will pose a hazard to employees. The Professional Engineer is required to demonstrate how the above determination was made on the basis of appropriate calculations.

Sidewalks will not be undermined unless shored to protect from possible collapse.

PROTECTION FROM LOOSE ROCK, MATERIALS OR SPOILS

In excavations and trenches that personnel may be required to enter, loose rock, excavated or other material, and spoils will be effectively stored and retained at least two feet or more from the edge of the excavation.

As an alternative to the clearance prescribed above, barriers or other effective retaining devices may be used in order to prevent spoils or other materials from falling into the excavation.

Walkways, runways, and sidewalks will be kept clear of excavated material from other obstructions.

Scaling operations may be used to remove loose material and will be performed only by experienced crews under the direct supervision of a competent supervisor. The scalers will be provided with scaler=s lifelines, safety belts, boatswain chair, and other safety equipment necessary for their protection.

FALL PROTECTION

Walkways or bridges with standard guardrails that meet OSHA specifications will be provided where employees, the public, or equipment are required to cross over excavations.

Adequate barrier physical protection will be provided at all remotely located excavations. All excavations will be barricaded or covered.

EMERGENCY RESCUE

In the event of a cave-in, the Emergency Rescue Squad will be immediately notified. The caller should provide his name, location, nature of the accident (an excavation collapse), the dimensions of the excavation, and number of people trapped in the excavation. Personnel are not to enter a collapsed trench to attempt rescue. This may cause a further collapse of the trench. Under no circumstance is heavy equipment to be used to attempt rescue of personnel in a collapsed excavation; injury or decapitation could be the result. All heavy equipment and traffic in the area is to be shut down and

stopped to reduce vibration. Pumps should be started if water ensues.

INSPECTION PROGRAM

Safety personnel will conduct daily inspections of the excavation, the adjacent areas, and protective systems. Inspections will be conducted prior to the start of work and as needed throughout the work shift. Inspections will also be made after every rainstorm or other occurrence that increases the hazard of collapse (i.e., vibration from heavy equipment, freezing and thawing, etc.).

The excavation inspection will include a check for the following:

- Evidence if situations that could result in possible cave-in (i.e. soil crumbling or sloughing, water saturated soils, freezing and thawing, unusual vibrations such as from heavy equipment, heavy rains, surface run off entering trench, etc.);
- Indications of failure of protective systems;
- Hazardous atmosphere (oxygen deficiency, flammable and toxic gases and vapors);
- Condition and support of exposed underground installations;
- Adequate means of egress;
- Signs, signals, and barricades for work area protection;
- Precautionary measures to control water accumulation;
- Stability and support of adjacent structures; and
- Adequate protection from loose rock and soil.

PROTECTIVE SYSTEMS

Personnel working in excavations will be protected from cave-ins by sloping and/or benching of excavation walls, a shoring system or some other equivalent means except when:

- The excavation is made entirely in stable rock; or
- Excavations are less than five feet deep and safety personnel have determined that there is no indication of potential cave-in. Depending on site and soil conditions protective measures may be taken for the excavations less than five feet in depth.

The most important factor influencing the choice of protective systems is the soil type classification. Once the soil type has been classified, selection of the protective system, the determination of the angle of repose for sloping and benching, and the design of shoring systems will be made. Decisions will be based on careful evaluation of pertinent factors such as depth of cut; possible variation in water content of the material while the excavation is open; anticipated changes in materials from exposure to air, sun, water, or freezing; loading imposed structures equipment, overlying material, or stored material; and vibration from equipment, blasting traffic or other sources.

Soil Classification

Appendix A of the OSHA Excavation Standard describes a method to classify soils into four types:

1. **Stable Rock** - Solid mineral matter that can be excavated with vertical sides.
2. **Type A** - cohesive soils with an unconfined compressive strength of 1.5 ton per square foot (tsf) or greater. Examples include: clay; silty clay; sandy clay; clayey loam; and cemented soils such as caliche and hardpan. No soil is considered to be Type A if it is fissured, subject to vibration, previously disturbed, or part of a sloped, layered system.
3. **Type B** - cohesive soils with an unconfined compressive strength of greater than 0.5 tsf but less than 1.5 tsf. Examples include: angular gravel similar to crushed rock; silt; silty loam; and sandy loam; Type B soils also include : previously disturbed soils that are not type C; Type A soils that are fissured or subject to vibration; and dry rock that is not stable.
4. **Type C** - cohesive soils with an unconfined compressive strength of 0.5 tsf or less. Examples include: gravel; sand; loamy sand; submerged soil or soil from which water is seeping; submerged rock that is not stable.

The engineer, geologist, or safety personnel will conduct at least one visual and at least one manual test as described in the OSHA excavation standard in order to classify soils. Visual tests include looking for : particle size and soil cohesiveness (clumping); cracking in the excavation sides which suggests fissured material; underground installations and previously disturbed soils; layered soil systems that slope toward the excavation; evidence of surface water and water seeping from the sides of the excavation; and sources of vibration that may affect the excavation stability. Manual tests include: plasticity; dry strength; tumb penetration; drying test; and strength tests using a pocket penetrometer or hand-operated sheervane.

Sloping and Benching

One of the following options for sloping and benching systems described in section 1926.652(b) of the OSHA Excavation Standard will be used in excavations of .5 foot or deeper or at the discretion of the safety personnel:

- The walls of excavation will be sloped at an angle not steeper than one-and one-half horizontal to one vertical. Sloping configurations will follow the slopes shown for Type C soils in Appendix B of the OSHA Excavation Standard.
- Maximum allowable slopes and sloping and benching configurations will be determined according to soil type as described in Appendices A and B of the OSHA Excavation Standard.
- Use of other written tabulated data and designs, such as tables and charts, to design sloping and benching systems. A copy of the tabulated data must be approved by a registered Professional Engineer. A copy of the tabulated data must be kept at the job site.

Personnel are not allowed to work on the faces of sloped or benched excavations above other workers unless the workers at the lower levels are protected from falling material or equipment. Similar protection will be provided for personnel working in excavations below other workers.

Support Systems, Shield Systems, and Other Protective Devices

One of the following options described in OSHA (1926.652 (c)) will be followed.

- Timber shoring, designed according to the conditions and requirements of Appendix C of the OSHA Excavation Standard or aluminum hydraulic shoring designed according to manufacturers tabulated data or Appendix D of the OSHA Excavation Standard. In order to use the information in Appendices C or D, the soil type must first be determined using the classification system in Appendix A. For each soil type the size and spacing of the cross braces, uprights, and walls that comprise the shoring system are then selected based on the depth and width of the trench.
- Use of the manufacturer=s written tabulated to design support systems, shielded systems, and other protective devices. Any deviation from this tabulated data must be approved by the manufacturer. A copy of the tabulated data as well as any approvals to deviate from the tabulated data must be kept at the job site.
- Use of other written tabulated data to design support systems, shield systems, and other protective devices. The tabulated data must be approved by a Registered Professional Engineer. A copy of the tabulated data must be kept at the job site.
- Use of a written support system, shield system, and other protective device design that has been approved by a Registered Professional Engineer. A copy of the written design must be kept at the job site.

Installation and Removal of Support

Cross braces or trench jacks, uprights, and walls will be secured together to prevent sliding, falling or kickouts.

Additional precautions by way of shoring and bracing will be taken to prevent slides or cave-ins when excavations or trenches are made in locations adjacent to backfilled excavations, or where excavations are subjected to vibrations from railroad or highway traffic, the operation of machinery, or any other source.

If it is necessary to place or operate power shovels, derricks, trucks, materials, or other heavy objects on a level above or near any excavation, the side of the excavation will be sheetpiled, shored, and braced as necessary to resist the extra pressure due to such superimposed loads.

Backfilling and removal of trench supports will progress together from the bottom of the trench. Jacks or braces will be released slowly and , in unstable soil, ropes will be used to pull out the jacks or braces from above after employees have cleared the trench.

Shield Systems

Portable trench boxes or sliding trench shields may be used for protection of personnel in lieu of a shoring system or sloping. Where such trench boxes or shields are used, they will be designed, constructed and maintained in a manner which will provide protection equal to or greater than the sheeting or shoring required for the trench. Shields will be installed so as to restrict lateral or other hazardous movement. Personnel are not allowed inside shields when shields are being moved.

EXCAVATION SAFETY LIST

To be completed prior to each work shift, or prior to personnel entering a new trench for the first time, by the Site Safety Officer/Competent Person:

Project _____ Location _____

Job Number _____

Competent Person(CP)* _____ Date _____

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
1. Has the site been cleared for utilities and other underground obstructions?	_____	_____	_____
2. If on public property, has the regional utility locating service been notified?	_____	_____	_____
3. Has the excavation equipment been safety checked by the operator?	_____	_____	_____
4. Are copies of relevant OSHA excavation regulations available on site?	_____	_____	_____
5. Will the excavation be 5 feet or more in depth?	_____	_____	_____
6. If 4 is yes, will personnel enter the excavation at any time?	_____	_____	_____
7. If 4a is yes, have provisions been made for shoring, sloping, or benching the excavation? Describe: _____ _____ _____	_____	_____	_____
8. Has an inspection of the site and excavation been conducted by the SSO?	_____	_____	_____
9. Has the Competent Person conducted visual and manual tests to classify the soil?	_____	_____	_____

* According to Federal OSHA, A Competent Person is a person who is capable of identifying existing and predictable hazards in the surroundings; or working conditions which are unsanitary, hazardous, or dangerous to employees; and who has the authority to take prompt corrective measures to eliminate them.

10. G Visual Test _____ (type)
 G Manual Test _____ (type)
 G Soil Classification _____ (type)
11. Are there any conditions that might expose employees to injury from possible moving ground? _____
12. Is excavated material being placed at least 2 feet from the edge of the excavation? _____
13. Is work in the excavation at all times under the immediate supervision of the SSO or other competent person? _____
14. Is there a stairway, ladder, or ramp securely fastened in place to provide ingress and egress from the excavation? _____
15. If the excavation is 4 feet or more in depth, are safe means of access (see 8) provided so as to require no more than 25 feet of lateral travel to reach them? _____
16. If structural ramps are installed that are used for access/egress: were they designed by a qualified engineer? _____
17. Do the structural ramps have appropriate means to prevent slipping and are the ramps uniform in thickness? _____
18. Are walkways or bridges provided across the excavation to safe crossing? _____
19. If excavations are 7 1/2 or more feet in depth, do the walkways have guardrails and toeboards? _____
20. Are undermined structures adequately supported to safely carry all anticipated loads and protect workers? _____
21. Are there adequate means provided to prevent mobile equipment from inadvertently entering the excavation? _____
22. Is the excavation well marked and barricaded to prevent personnel from falling IN? _____
23. Are means available to prevent surface water from entering the excavation and to provide _____

adequate drainage of the area adjacent to the trench?

- | | | | | |
|------------|--|-------|-------|-------|
| 24. | Where it is reasonable to expect hazardous atmospheres, including oxygen deficiency, to exist in the excavation, is appropriate atmosphere testing equipment available. | _____ | _____ | _____ |
| 25. | Has the testing equipment been calibrated, and the calibrations recorded, today? | _____ | _____ | _____ |
| 26. | Are employees trained in proper use of this equipment? | _____ | _____ | _____ |
| 27. | Has a harness and lifeline been provided whenever an employee is required to enter a confined footing excavation? | _____ | _____ | _____ |
| 28. | Is appropriate personal protective equipment (hardhat, safety boots, eye protection, etc.) available and in use? | _____ | _____ | _____ |

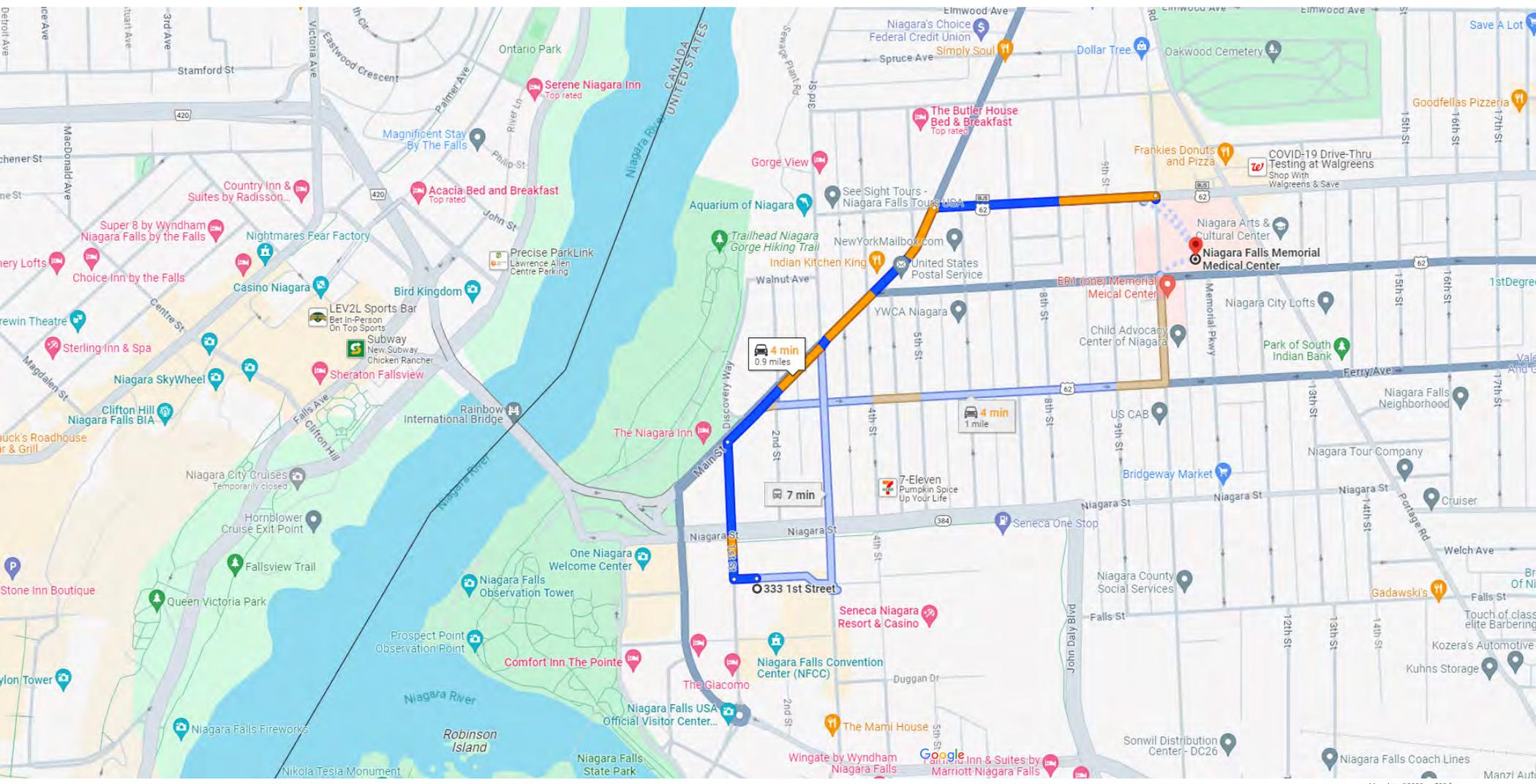
Notes: _____

CPs Name (Print)

Signature

ATTACHMENT 4

Map to Hospital



- via Main St and Pine Ave** 4 min
 Fastest route now due to traffic conditions 0.9 mile
- via Ferry Ave** 4 min
 Some traffic, as usual 1.0 mile
- 12:33 PM—12:40 PM** 7 min
 40 50 77

Explore nearby Niagara Falls Mem Medical Ctr

Restaurants
 Hotels
 Gas stations
 Parking Lots
 More

APPENDIX B

COMMUNITY AIR MONITORING PLAN



COMMUNITY AIR MONITORING PLAN (CAMP)

The NEST Site
333 1st Street
City of Niagara Falls, New York, 14303
NYSDEC Site No. C932183

Prepared for:

Community Services Seventh Housing LLC
180 Oak Street Buffalo, NY 14203

Prepared by:



960 Busti Avenue, Suite B-150
Buffalo, New York 14213

December 2024

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Attachments

1- NYSDOH Generic CAMP and Fugitive Dust and Particulate Monitoring

1.0 COMMUNITY AIR MONITORING PROGRAM (CAMP)

A Community Air Monitoring Program (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the upwind and downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The program is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors and on-site workers not directly involved with work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. A NYSDOH generic CAMP obtained from NYSDEC DER-10 is presented in Attachment 1 that will be followed and adhered to for work activities that could release potential contaminants from an impacted area.

A program for suppressing fugitive dust and particulate matter monitoring will also be conducted in accordance NYSDEC DER-10 titled Appendix 1B Fugitive Dust and Particulate Monitoring, which is also provided in Attachment 1. The fugitive dust suppression and particulate monitoring program will be employed at the site during building demolition, site investigations/remediation and other intrusive activities which warrant its use.

Both the CAMP and the fugitive dust and particulate monitoring program will be administered by the environmental engineer/consultant. Monitoring results of the CAMP will be reported to the New York State Department of Health daily for review.

NYSDEC and NYSDOH are to be provided CAMP data on a daily basis when collected. When sample excursions occur, identify the reason for the excursions and measures to address the excursions.

ATTACHMENT 1

NYSDOH Generic CAMP and Fugitive Dust and Particulate Monitoring

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

Overview

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

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

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

Community Air Monitoring Plan

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

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

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

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

VOC Monitoring, Response Levels, and Actions

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

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

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

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

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

Particulate Monitoring, Response Levels, and Actions

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

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

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

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

December 2009

Appendix 1B Fugitive Dust and Particulate Monitoring

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

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

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

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

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

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

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

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

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

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

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

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

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

Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

- If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels (response actions should also be pre-determined). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any unusual background readings should be discussed with NYSDOH prior to commencement of the work.
- If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m³, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m³ or less at the monitoring point.
- Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

Special Requirements for Indoor Work With Co-Located Residences or Facilities

Unless a self-contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under “Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures” except that in this instance “nearby/occupied structures” would be adjacent occupied rooms. Additionally, the location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings, conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, it is strongly recommended that exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, it is strongly recommended that the planned work be implemented during hours (e.g. weekends or evenings) when building occupancy is at a minimum.

APPENDIX C

QUALITY ASSURANCE/ QUALITY CONTROL PLAN



QUALITY ASSURANCE/QUALITY CONTROL PLAN

The NEST Site
333 1st Street
City of Niagara Falls, New York, 14303
NYSDEC Site No. C932183

Prepared for:

Community Services Seventh Housing LLC
180 Oak Street Buffalo, NY 14203

Prepared by:



960 Busti Avenue, Suite B-150
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DECEMBER 2024

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1.0 INTRODUCTION

This Quality Assurance/Quality Control (QA/QC) Plan provides an overview of QA/QC procedures required for the project. It also provides methods for laboratory testing of environmental samples obtained from the Site, which helps to ensure the quality of the data produced. The project manager is responsible for verifying that QA procedures are followed in the field so that quality, representative samples are collected. The Project Manager is in contact with the analytical laboratory to monitor laboratory activities so that holding times and other QA/QC requirements are met. The anticipated quantity of field samples collected, and corresponding analytical parameters/methods will be specified during remediation.

TABLE 1: ANALYTICAL SUMMARY TABLE

PARAMETER	ANALYTICAL METHOD
Part 375 VOCs	8260
Part 375 SVOCs	8270
Part 375 Metals	6010/7470/7471
Part 375 PCBs	8082
Part 375 Pesticides	8081
Air	TO-15
Emerging Contaminants	1633
1,4 Dioxane	8270 SIM

Holding Times: 8260-14 days and 8270, 8081, and 8082-7 days

A complete analyte list is provided in Table 2 and analytical methods and procedures are provided in Table 3. Both tables are located at the end of this document.

The analytical laboratory proposed for use for the analysis of samples will be a certified NYSDOH ELAP laboratory. The QA Manager of the laboratory will be responsible for performing project-specific audits and for overseeing the quality control data generated. The field geologist/technician coordinates all personnel involved with field sampling, verifies that all sampling is conducted per the FSP, and communicates regularly with the Project Manager. The ultimate responsibility for maintaining quality throughout the project rests with the Project Manager, including field and laboratory QA/QC. **The project manager is Jason Brydges, the quality assurance officer is John Berry and the field analyst is Jim Hull.**

2.0 DATA QUALITY OBJECTIVES

2.1 BACKGROUND

Data quality objectives (DQOs) are qualitative and quantitative statements, which specify the quality of data required supporting the investigation for the site. DQOs focus on the identification of the end use of the data to be collected. The project DQOs are achieved utilizing the definitive data category as outlined in *Guidance for the Data Quality Objectives Process*, EPA QA/G-4 (September 1994). All sample analyses will provide definitive data, which are generated using rigorous analytical methods such as reference methods approved by the United States

Environmental Protection Agency (USEPA). The purpose of this investigation is to determine the nature and extent of contamination at the site.

Within the context of the purpose stated above, the project DQOs for data collected during this investigation are:

- To assess the nature and extent of surrounding soil contamination (i.e., on adjacent/bordering properties).
- To maintain the highest possible scientific/professional standards for each procedure.
- To develop sufficient data to assess whether the levels of contaminants identified in the media sampled exceed regulatory guidelines.

2.2 QA OBJECTIVES FOR CHEMICAL DATA MEASUREMENT

Sample analytical methodology for the media sampled and data deliverables are required to adhere to the requirements in NYSDEC Analytical Services Protocol. Laboratories are instructed to complete Sample Preparation and Analysis Summary forms and submit with the data packages. The laboratory is instructed that matrix interferences must be fixed to the extent practicable. To achieve the definitive data category described above, the data quality indicators of precision, accuracy, representativeness, comparability, and completeness are measured during analysis.

2.2.1 Precision

Precision examines the distribution of the reported values about their mean. The distribution of reported values refers to how different the individual reported values are from the average reported value. Precision may be affected by the natural variation of the matrix or contamination within that matrix and by errors made in field or laboratory handling procedures. Precision is evaluated using analyses of a laboratory matrix spike/matrix spike duplicate (for organics) and matrix duplicates (for inorganics), which indicate analytical precision through the reproducibility of the analytical results. Relative Percent Difference (RPD) is used to evaluate precision and it must meet the method requirements.

2.2.2 Accuracy

Accuracy measures the analytical bias in a measurement system. Sources of error are the sampling process, field contamination, preservation, handling, sample matrix, sample preparation, and analysis techniques. These data help to assess the potential concentration contribution from various outside sources. The laboratory objective for accuracy is to equal or exceed the accuracy demonstrated for the applied analytical methods on samples of the same matrix. The percent recovery criterion is used to estimate accuracy based on recovery in the matrix spike/matrix spike duplicate and matrix spike blank samples. The spike and spike duplicate, which will give an indication of matrix effects that may be affecting target compounds is also a good gauge of method efficiency.

2.2.3 Representativeness

Representativeness expresses the degree to which the sample data accurately and precisely represent the characteristics of a population of samples, parameter variations at a sampling point, or environmental conditions. Representativeness is a qualitative parameter, which is most concerned with the proper design of the sampling program or sub-sampling of a given sample. Objectives for representativeness are defined for sampling and analysis tasks and are a function of the

investigative objectives. The sampling procedures described in the Field Sampling Plan have been selected with the goal of obtaining representative samples for the media of concern.

2.2.4 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. A DQO for this program is to produce data with the greatest possible degree of comparability. This goal is achieved through using standard techniques to collect and analyze representative samples and reporting analytical results in appropriate units. Complete field documentation will support the assessment of comparability. Comparability is limited by the other parameters (e.g., precision, accuracy, representativeness, completeness, comparability), because only when precision and accuracy are known can data sets be compared with confidence. For data sets to be comparable, it is imperative that contract-required methods and procedures be explicitly followed.

2.2.5 Completeness

Completeness is defined as a measure of the amount of valid data obtainable from a measurement system compared to the amount that was expected to be obtained under normal conditions. It is important that appropriate QA procedures be maintained to verify that valid data are obtained to meet project needs. For the data generated, a goal of 90% is required for completeness (or usability) of the analytical data. If this goal is not met, then project personnel will determine whether the deviations might cause the data to be rejected.

3.0 SAMPLING LOCATIONS, CUSTODY, AND HOLDING TIMES

Sampling locations are discussed in the Remedial Action Work Plan (RAWP). Procedures addressing field and laboratory sample chain-of-custody and holding times details are presented in the Field Sampling Plan. The laboratory must meet the method required detection limits which are referenced within the methods.

4.0 CALIBRATION PROCEDURES AND FREQUENCY

To obtain a high level of precision and accuracy during sample processing procedures, laboratory instruments must be calibrated properly. Several analytical support areas must be considered so the integrity of standards and reagents is upheld prior to instrument calibration. The following sections describe the analytical support areas and laboratory instrument calibration procedures.

4.1 ANALYTICAL SUPPORT AREAS

Prior to generating quality data, several analytical support areas must be considered; these are detailed in the following paragraphs.

Standard/Reagent Preparation - Primary reference standards and secondary standard solutions shall be obtained from National Institute of Standards and Technology (NIST), or other reliable commercial sources to verify the highest purity possible. The preparation and maintenance of standards and reagents will be accomplished according to the methods referenced. All standards and standard solutions are to be formally documented (i.e., in a logbook) and should

identify the supplier, lot number, purity/concentration, receipt/preparation date, preparers name, method of preparation, expiration date, and any other pertinent information. All standard solutions shall be validated prior to use. Care shall be exercised in the proper storage and handling of standard solutions (e.g., separating volatile standards from nonvolatile standards). The laboratory shall continually monitor the quality of the standards and reagents through well documented procedures.

Balances - The analytical balances shall be calibrated and maintained in accordance with manufacturer specifications. Calibration is conducted with two Class AS" weights that bracket the expected balance use range. The laboratory shall check the accuracy of the balances daily and they must be properly documented in permanently bound logbooks.

Refrigerators/Freezers - The temperature of the refrigerators and freezers within the laboratory shall be monitored and recorded daily. This will verify that the quality of the standards and reagents is not compromised, and the integrity of the analytical samples is upheld. Appropriate acceptance ranges (2 to 6°C for refrigerators) shall be clearly posted on each unit in service.

Water Supply System - The laboratory must maintain a sufficient water supply for all project needs. The grade of the water must be of the highest quality (analyte-free) to eliminate false-positives from the analytical results. Ultraviolet cartridges or carbon absorption treatments are recommended for organic analyses and ion-exchange treatment is recommended for inorganic tests. Appropriate documentation of the quality of the water supply system(s) will be performed on a regular basis.

4.2 LABORATORY INSTRUMENTS

Calibration of instruments is required to verify that the analytical system is operating properly and at the sensitivity necessary to meet established quantitation limits. Each instrument for organic and inorganic analyses shall be calibrated with standards appropriate to the type of instrument and linear range established within the analytical method(s). Calibration of laboratory instruments will be performed according to specified methods.

In addition to the requirements stated within the analytical methods, the contract laboratory will be required to analyze an additional low-level standard at or near the detection limits. In general, standards will be used that bracket the expected concentration of the samples. This will require the use of different concentration levels, which are used to demonstrate the instrument's linear range of calibration.

Calibration of an instrument must be performed prior to the analysis of any samples and then at periodic intervals (continuing calibration) during the sample analysis to verify that the instrument is still calibrated. If the contract laboratory cannot meet the method required calibration requirements, corrective action shall be taken. All corrective action procedures taken by the contract laboratory are to be documented, summarized within the case narrative, and submitted with the analytical results.

5.0 INTERNAL QUALITY CONTROL CHECKS

Internal QC checks are used to determine if analytical operations at the laboratory are in control, as well as determining the effect sample matrix may have on data being generated. Two types of internal checks are performed and are described as batch QC and matrix-specific QC

procedures. The type and frequency of specific QC samples performed by the contract laboratory will be according to the specified analytical method and project specific requirements. Acceptable criteria and target ranges for these QC samples are presented within the referenced analytical methods.

QC results which vary from acceptable ranges shall result in the implementation of appropriate corrective measures, potential application of qualifiers, and/or an assessment of the impact these corrective measures have on the established data quality objectives. Quality control samples including any project-specific QC will be analyzed are discussed below.

5.1 BATCH QC

Method Blanks - A method blank is defined as laboratory-distilled or deionized water that is carried through the entire analytical procedure. The method blank is used to determine the level of laboratory background contamination. Method blanks are analyzed at a frequency of one per analytical batch.

Matrix Spike Blank Samples - A matrix spike blank (MSB) sample is an aliquot of water spiked (fortified) with all the elements being analyzed for calculation of precision and accuracy to verify that the analysis that is being performed is in control. An MSB will be performed for each matrix and organic parameter only.

5.2 MATRIX-SPECIFIC QC

Matrix Spike Samples - An aliquot of a matrix is spiked with known concentrations of specific compounds as stipulated by the methodology. The matrix spike (MS) and matrix spike duplicate (MSD) are subjected to the entire analytical procedure to assess both accuracy and precision of the method for the matrix by measuring the percent recovery and relative percent difference of the two spiked samples. The samples are used to assess matrix interference effects on the method, as well as to evaluate instrument performance. MS/MSDs are analyzed at a frequency of one each per 20 samples per matrix.

Matrix Duplicates - The matrix duplicate (MD) is two representative aliquots of the same sample which are prepared and analyzed identically. Collection of duplicate samples provides for the evaluation of precision both in the field and at the laboratory by comparing the analytical results of two samples taken from the same location. Obtaining duplicate samples from a soil matrix requires homogenization (except for volatile organic compounds) of the sample aliquot prior to filling sample containers, to best achieve representative samples. Every effort will be made to obtain replicate samples; however, due to interferences, lack of homogeneity, and the nature of the soil samples, the analytical results are not always reproducible.

Rinsate (Equipment) Blanks - A rinsate blank is a sample of laboratory demonstrated analyte-free water passed through and over the cleaned sampling equipment. A rinsate blank is used to indicate potential contamination from ambient air and from sample instruments used to collect and transfer samples. This water must originate from one common source within the laboratory and must be the same water used by the laboratory performing the analysis. The rinsate blank should be collected, transported, and analyzed in the same manner as the samples acquired that day. Rinsate blanks for nonaqueous matrices should be performed at a rate of 10 percent of the total number of samples collected throughout the sampling event. Rinse blanks will not be performed on samples (i.e., groundwater) where dedicated disposable equipment is used.

Trip Blanks - Trip blanks are not required for nonaqueous matrices. Trip blanks are required for aqueous sampling events. They consist of a set of sample bottles filled at the laboratory with laboratory demonstrated analyte free water. These samples then accompany the bottles that are prepared at the lab into the field and back to the laboratory, along with the collected samples for analysis. These bottles are never opened in the field. Trip blanks must return to the lab with the same set of bottles they accompanied to the field. Trip blanks will be analyzed for volatile organic parameters. Trip blanks must be included at a rate of one per volatile sample shipment.

6.0 CALCULATION OF DATA QUALITY INDICATORS

6.1 PRECISION

Precision is evaluated using analyses of a field duplicate or a laboratory MS/MSD that indicate analytical precision through the reproducibility of the analytical results. RPD is used to evaluate precision by the following formula:

$$RPD = \frac{(X_1 - X_2)}{[(X_1 + X_2)/2]} \times 100\%$$

where:

- X₁ = Measured value of sample or matrix spike
- X₂ = Measured value of duplicate or matrix spike duplicate

Precision will be determined using MS/MSD (for organics) and matrix duplicates (for inorganics) analyses.

6.2 ACCURACY

Accuracy is defined as the degree of difference between the measured or calculated value and the true value. The closer the numerical value of the measurement comes to the true value or actual concentration, the more accurate the measurement is. Analytical accuracy is expressed as the percent recovery of a compound or element that has been added to the environmental sample at known concentrations before analysis. Analytical accuracy may be assessed using known and unknown QC samples and spiked samples. It is presented as percent recovery. Accuracy will be determined from matrix spike, matrix spike duplicate, and matrix spike blank samples, as well as from surrogate compounds added to organic fractions (i.e., volatiles, semivolatiles, PCB), and is calculated as follows:

$$Accuracy (\%R) = \frac{(X_s - X_u)}{K} \times 100\%$$

where:

- X_s - Measured value of the spike sample
- X_u - Measured value of the unspiked sample
- K - Known amount of spike in the sample

6.3 COMPLETENESS

Completeness is calculated on a per matrix basis for the project and is calculated as follows:

$$\text{Completeness (\%C)} = \frac{(X_v - X_n)}{N} \times 100\%$$

where:

X_v - Number of valid measurements

X_n - Number of invalid measurements

N - Number of valid measurements expected to be obtained

7.0 CORRECTIVE ACTIONS

Laboratory corrective actions shall be implemented to resolve problems and restore proper functioning to the analytical system when errors, deficiencies, or out-of-control situations exist at the laboratory. Full documentation of the corrective action procedure needed to resolve the problem shall be filed in the project records, and the information summarized in the case narrative. A discussion of the corrective actions to be taken is presented in the following sections.

7.1 INCOMING SAMPLES

Problems noted during sample receipt shall be documented by the laboratory. The Project Manager shall be contacted immediately for problem resolution. All corrective actions shall be documented thoroughly.

7.2 SAMPLE HOLDING TIMES

If any sample extraction or analyses exceed method holding time requirements, the Project Manager shall be notified immediately for problem resolution. All corrective actions shall be documented thoroughly.

7.3 INSTRUMENT CALIBRATION

Sample analysis shall not be allowed until all initial calibrations meet the appropriate requirements. All laboratory instrumentation must be calibrated in accordance with method requirements. If any initial/continuing calibration standards exceed method QC limits, recalibration must be performed and, if necessary, reanalysis of all samples affected back to the previous acceptable calibration check.

7.4 REPORTING LIMITS

The laboratory must meet the method required detection limits listed in NYSDEC ASP, 10/95 criteria. If difficulties arise in achieving these limits due to a sample matrix, the laboratory must notify BE3 project personnel for problem resolution. To achieve those detection limits, the laboratory must utilize all appropriate cleanup procedures to retain the project required detection limits. When any sample requires a secondary dilution due to high levels of target analytes, the laboratory must document all initial analyses and secondary dilution results. Secondary dilution will be permitted only to bring target analytes within the linear range of calibration. If samples are analyzed at a secondary dilution with no target analytes detected, the Project Manager will be immediately notified so that appropriate corrective actions can be initiated.

7.5 METHOD QC

All QC method-specified QC samples shall meet the method requirements referenced in the analytical methods. Failure of method-required QC will result in the review and possible qualification of all affected data. If the laboratory cannot find any errors, the affected sample(s) shall be reanalyzed or re-extracted/redigested, then reanalyzed within method-required holding times to verify the presence or absence of matrix effects. If matrix effect is confirmed, the corresponding data shall be flagged accordingly using the flagging symbols and criteria. If matrix effect is not confirmed, then the entire batch of samples may have to be reanalyzed or re-extracted/redigested, then reanalyzed at no cost. Project Manager shall be notified as soon as possible to discuss possible corrective actions should unusually difficult sample matrices be encountered.

7.6 CALCULATION ERRORS

All analytical results must be reviewed systematically for accuracy prior to submittal. If upon data review calculation or reporting errors exist, the laboratory will be required to reissue the analytical data report with the corrective actions appropriately documented in the case narrative.

8.0 DATA REDUCTION, VALIDATION, AND USABILITY

8.1 DATA REDUCTION

Laboratory analytical data are first generated in raw form at the instrument. These data may be either in a graphic or printed tabular format. Specific data generation procedures and calculations are found in each of the referenced methods. Analytical results must be reported consistently. Identification of all analytes must be accomplished with an authentic standard of the analyte traceable to NIST or USEPA sources. Individuals experienced with an analysis and knowledgeable of requirements will perform data reduction.

8.2 DATA VALIDATION

Data validation is a systematic procedure of reviewing a body of data against a set of established criteria to provide a specified level of assurance of validity prior to its intended use. All analytical results from soil and groundwater samples will have ASP Category B deliverables and DUSR. The data validation will be in accordance with DER-10 Section 2.2 with ASP - Category B data deliverables provided by the laboratory and a DUSR provided for validation. Where possible, discrepancies will be resolved by the project manager.

- Technical holding times will be in accordance with NYSDEC ASP, 7/2005 edition.
- Organic calibration and QC criteria will be in accordance with NYSDEC ASP, 7/2005 edition. Data will be qualified if it does not meet NYSDEC ASP, 7/2005 criteria.

9.0 REFERENCES

Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Quality Assurance Manual, Final Copy, Revision I, October 1989.

National Enforcement Investigations Center of USEPA Office of Enforcement. *NEIC Policies and Procedures*. Washington: USEPA.

New York State Department of Environmental Conservation (NYSDEC) 2005. *Analytical Services Protocol*, (ASP) 7/2005 Edition. Albany: NYSDEC.

NYSDEC “DER-10 Technical Guidance for Site Investigation and Remediation (DER-10),” dated May 3, 2010, Appendix 2B.

TABLE 2
ANALYTE LIST

QA/QC Plan

Part 375 Metals (ICP)

EPA 6010C

Analyte

Arsenic
Barium
Beryllium
Cadmium
Chromium
Copper
Lead
Manganese
Nickel
Selenium
Silver
Zinc
Mercury EPA 7471B
Cyanide, Total EPA 9014

PCBs EPA 7471B

PCB-1016
PCB-1221
PCB-1232
PCB-1242
PCB-1248

Chlorinated Pesticides

EPA 8081B

4,4-DDD
4,4-DDE
4,4-DDT
Aldrin
alpha-BHC
beta-BHC
cis-Chlordane
delta-BHC
Dieldrin
Endosulfan I
Endosulfan II
Endosulfan Sulfate
Endrin
Endrin Aldehyde
Endrin Ketone
gamma-BHC (Lindane)
Heptachlor
Heptachlor Epoxide
Methoxychlor
Toxaphene
trans-Chlordane

**Semi-Volatile Organics
(Acid/Base Neutrals)**

EPA 8270D

1,1-Biphenyl
1,2,4,5-Tetrachlorobenzene
1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2,2-Oxybis (1-chloropropane)
2,3,4,6-Tetrachlorophenol
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
2-Chloronaphthalene
2-Chlorophenol
2-Methylnaphthalene
2-Methylphenol
2-Nitroaniline
2-Nitrophenol
3&4-Methylphenol
3,3'-Dichlorobenzidine
3-Nitroaniline
4,6-Dinitro-2-methylphenol
4-Bromophenyl phenyl
4-Chloro-3-methylphenol
4-Chloroaniline
4-Chlorophenyl phenyl ether
4-Nitroaniline
4-Nitrophenol
Acenaphthene
Acenaphthylene
Acetophenone
Anthracene
Atrazine
Benzaldehyde
Benzo (a) anthracene
Benzo (a) pyrene
Benzo (b) fluoranthene
Benzo (g,h,i) perylene
Benzo (k) fluoranthene
Bis (2-chloroethoxy) methane
Bis (2-chloroethyl) ether
Bis (2-ethylhexyl) phthalate
Butylbenzylphthalate
Caprolactam

Carbazole
Chrysene
Dibenz (a,h) anthracene
Dibenzofuran
Diethyl phthalate
Dimethyl phthalate
Di-n-butyl phthalate
Di-n-octylphthalate
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno (1,2,3-cd) pyrene
Isophorone
Naphthalene
Nitrobenzene
N-Nitroso-di-n-propylamine
N-Nitrosodiphenylamine
Pentachlorophenol
Phenanthrene
Phenol
Pyrene

Volatile Organics

EPA 8260C

1,1,1-Trichloroethane
1,1,2,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
1,2,4-Trimethylbenzene
1,2-Dibromo-3-Chloropropane
1,2-Dibromoethane
1,2-Dichlorobenzene
1,2-Dichloroethane
1,2-Dichloropropane
1,3,5-Trimethylbenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,4-dioxane
2-Butanone
2-Hexanone
4-Methyl-2-pentanone
Acetone
Benzene
Bromochloromethane
Bromodichloromethane

TABLE 2 (Continued)**Volatile Organics
(Continued)**

Bromomethane
Carbon disulfide
Carbon Tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloromethane
cis-1,2-Dichloroethene
cis-1,3-Dichloropropene
Cyclohexane
Dibromochloromethane
Dichlorodifluoromethane
Ethylbenzene
Freon 113
Isopropylbenzene
m,p-Xylene
Methyl acetate
Methyl tert-butyl Ether
Methylcyclohexane
Methylene chloride
Naphthalene
n-Butylbenzene
n-Propylbenzene
o-Xylene
p-Isopropyltoluene
sec-Butylbenzene
Styrene
tert-Butylbenzene
Tetrachloroethene
Toluene
trans-1,2-Dichloroethene
trans-1,3-Dichloropropene
Trichloroethene
Trichlorofluoromethane
Vinyl chloride

Volatiles-Air - TO-15

Acetone
Benzene
Carbon disulfide
Chloromethane
Dichlorodifluoromethane
Ethanol
Ethylbenzene
Ethyl Acetate
4-Ethyltoluene
Heptane
Hexane
Isopropyl Alcohol
Methylene chloride
Methyl ethyl ketone
Propylene
1,1,1-Trichloroethane
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
2,2,4-Trimethylpentane
Tertiary Butyl Alcohol
Tetrachloroethylene
Toluene
Trichloroethylene
Trichlorofluoromethane
m,p-Xylene
o-Xylene
Xylenes (total)
Acetone
Benzene
Carbon disulfide
Chloromethane
Dichlorodifluoromethane
Ethanol
Ethylbenzene
Ethyl Acetate
4-Ethyltoluene
Heptane
Hexane
Isopropyl Alcohol
Methylene
Methyl ethyl ketone
Propylene
1,1,1-Trichloroethane

TABLE 3
PFAS ANALYTE LIST

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonates	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
Perfluoroalkyl carboxylates	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUA/PFUdA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTriA/PFTrDA	72629-94-8
Perfluorotetradecanoic acid	PFTA/PFTeDA	376-06-7	
Fluorinated Telomer Sulfonates	6:2 Fluorotelomer sulfonate	6:2 FTS	27619-97-2
	8:2 Fluorotelomer sulfonate	8:2 FTS	39108-34-4
Perfluorooctane-sulfonamides	Perfluorooctanesulfonamide	FOSA	754-91-6
Perfluorooctane-sulfonamidoacetic acids	N-methyl perfluorooctanesulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethyl perfluorooctanesulfonamidoacetic acid	N-EtFOSAA	2991-50-6

TABLE 3 - ANALYTICAL METHODS & PROCEDURES SUMMARY

Groundwaters

Analyte(s)	Method	Preservation	Holding Time	Container
Volatile Organics	8260	HCl to pH <2, cool to ≤6°C	14 days	2 - 40 ml septum sealed vials
Semivolatile Organics	8270	cool to ≤6°C	Samples extracted within 7 days and extracts analyzed within 40 days following extraction	1 liter amber with Teflon lined cap
Organochlorine Pesticides	8081	cool to ≤6°C		1 liter amber with Teflon lined cap
Chlorinated Herbicides (silvex)	8151	cool to ≤6°C		1 liter amber with Teflon lined cap
PCBs	8082	cool to ≤6°C		1 liter amber with Teflon lined cap
ICP Metals	6010	HNO3 to pH <2	6 months	250 ml. plastic
Mercury	7470	HNO3 to pH <2	28 days	250 ml. plastic
Hexavalent Chromium	7196	cool to ≤6°C	24 hours	125 ml. plastic
Cyanide, Total	9010	NaOH to pH >12, cool to ≤6°C	14 days	250 ml. plastic
PFAS	537M	cool to ≤6°C	Samples extracted within 14 days and extracts analyzed within 28 days following extraction	250 ml. HDPE
1,4-Dioxane	8270 SIM	cool to ≤6°C	Samples extracted within 7 days and extracts analyzed within 40 days following extraction	1 liter amber with Teflon lined cap

Soils

Analyte(s)	Method	Preservation	Holding Time	Container
Volatile Organics	8260	cool to ≤6°C	14 days	4 oz. widemouth glass with Teflon lined cap
Semivolatile Organics	8270	cool to ≤6°C	Samples extracted within 14 days and extracts analyzed within 40 days following extraction	4 oz. widemouth glass with Teflon lined cap
Organochlorine Pesticides	8081	cool to ≤6°C		4 oz. widemouth glass with Teflon lined cap
Chlorinated Herbicides (silvex)	8151	cool to ≤6°C		4 oz. widemouth glass with Teflon lined cap
PCBs	8082	cool to ≤6°C		4 oz. widemouth glass with Teflon lined cap
ICP Metals	6010	none	6 months	4 oz. widemouth glass with Teflon lined cap
Mercury	7471	cool to ≤6°C	28 days	4 oz. widemouth glass with Teflon lined cap
Hexavalent Chromium	3060/7196	cool to ≤6°C	30 days to extraction 7 days from extraction to analysis	4 oz. widemouth glass with Teflon lined cap
Cyanide, Total	9012	cool to ≤6°C	14 days	4 oz. widemouth glass with Teflon lined cap
PFAS	537M	cool to ≤6°C	Samples extracted within 14 days and extracts analyzed within 40 days following extraction	250 ml. HDPE
1,4-Dioxane	8270 SIM	cool to ≤6°C	Samples extracted within 7 days and extracts analyzed within 40 days following extraction	4 oz. widemouth glass with Teflon lined cap

TABLE 4 - ANALYTICAL METHODS & PROCEDURES SUMMARY CONT.

Soil Gas

Analytes	Method	Preservation	Holding Time	Container
VOCs	EPA Method TO-15	None	14 Days	Evacuated 6-Liter SUMMA® Canister

APPENDIX D

FIELD SAMPLING PLAN



FIELD SAMPLING PLAN

The NEST Site
333 1st Street
City of Niagara Falls, New York, 14303
NYSDEC Site No. C932183

Prepared for:

Community Services Seventh Housing LLC
180 Oak Street Buffalo, NY 14203

Prepared by:



960 Busti Avenue, Suite B-150
Buffalo, New York 14213

DECEMBER 2024

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1.0 INTRODUCTION

This Field Sampling Plan (FSP) provides procedures for the field activities designed in the Work Plan where soil, groundwater, and vapor sampling are required at the Site. The field procedures presented in this manual should be followed by all field personnel, as adherence can help to ensure the quality and usability of the data collected. The FSP should be used collectively with and comply with the following documents:

- The HASP.
- The QA/QC Plan.
- The RI Work Plan.

Sampling for emerging contaminants will be conducted in accordance with the NYSDEC Guidance Sampling, Analysis, and Assessment of Per-And Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs – April 2023.. As part of a site investigation or remedial action compliance program, whenever samples of potentially affected media are collected and analyzed for the standard Target Analyte List/Target Compound List (TAL/TCL), PFAS analysis should also be performed. Field sampling for PFAS performed should follow the appropriate procedures outlined for soils, sediments, or other solids (Appendix B), non-potable groundwater (Appendix C), surface water (Appendix D), public or private water supply wells (Appendix E), and fish tissue (Appendix F). QA/QC samples (e.g. duplicates, MS/MSD) should be collected as specified in DER-10, Section 2.3(c).

As detailed in the guidance document, EPA Method 1633 is the procedure to use for environmental samples. Reporting limits for PFOA and PFOS in aqueous samples should not exceed 2 ng/L. Reporting limits for PFOA and PFOS in solid samples should not exceed 0.5 µg/kg. Reporting limits for all other PFAS in aqueous and solid media should be as close to these limits as possible. . The analytical laboratory proposed for use for the analysis of samples will be a certified NYSDOH ELAP laboratory.

All field equipment requiring calibration will be calibrated per, and at the frequency, recommended by the equipment manufacturer.

2.0 SOIL SAMPLING

Soil samples are obtained as outlined in the Work Plan, considering the following general protocol:

1. Inspect newly created test pit or boring core stratigraphy once obtained in/from the subsurface.
2. Sample soil, and record depth and any physical characteristics (e.g., contamination, odor, discoloration, debris, etc.) in the logbook.
3. Quickly place the calibrated PID into the exposed soil and record the instrument readings in the logbook.
4. Samples should be collected at locations and frequency per the Work Plan and QA/QC Plan.
5. Decontaminate sampling implements after use and between sample locations. In most cases, dedicated sampling equipment is utilized thereby eliminating equipment decontamination. If dedicated equipment is not used, “dry” decontamination will be applied and “wet” as necessary. Procedures for dry and wet decontamination are provided below.

6. Label each sample container with the appropriate sample identification and place samples in a cooler (cooled to 4 degrees C.) for shipment to the laboratory.
7. Initiate chain-of-custody procedures.

Dry decontamination procedures may include the use of stiff brushes or scrappers to remove debris off of sampling equipment. Dry decontamination methods are typically used with solid contaminants and prior to wet decontamination methods.

Wet decontamination procedures may include the use of Alconox water or a steam cleaner to rinse and scrub contamination away from sampling equipment. If necessary, a decontamination station with wash water and wash water containment will be used. Wash water will be drummed and characterized prior to proper disposal/discharge.

2.1 GEOPROBE PROCEDURES

Geoprobe direct push sampling is a standard method of soil sampling to obtain representative samples from the subsurface. Field preparation, sample collection, and data logging activities for Geoprobe sampling are identical to that of test pitting/trenching listed above. The following procedures detail activities, as directed by the field technician, for the execution of Macro Core drilling operations:

1. Startup drill rig and raise mast.
2. Use star bit with rig in rotary setting to penetrate pavement (if applicable).
3. Excavate a hole large enough to set a road box before you advance the borehole (if applicable).
4. Unthread the shoe from the bottom of the sample tube and inset a sample liner and rethread the shoe on the bottom of the sample tube.
5. Thread the drive cap on the top of the sample tube.
6. Align the sample tube so it is plumb in both directions to ensure a straight borehole is drilled.
7. Drive the top of the sample tube into ground surface to a depth of 4-feet for the first 4-foot sample.
8. Unthread the drive cap from the top of the sample tube and thread the pull cap in its place.
9. Pull the sample tube from the ground using caution to not pinch your hand between the drill rods, pull cap, or rig.
10. Unthread the cutting shoe and pull the sample liner from the bottom of the sample tube. Use pliers to reach in the sample tube and grab the liner, if needed.
11. Cut the sample liner lengthwise in two places and present the sample on a table or plastic sheeting (or similar) to ensure all sample material is contained. Quickly screen the soil for volatile organic vapors using a PID. Describe the soil and collect any necessary samples into appropriate containers and label the containers.
12. Insert a new liner and thread on the cutting shoe and repeat steps from #4 to #11 with the addition of a 4-foot long drill rod onto the top of the sample tube to advance a second 4-foot interval.
13. Proceed with this procedure until the desired depth or refusal is reached.
14. Upon completion of probing, decontaminate all equipment in contact with the soil/fill in a decontamination area using Alconox and water.



15. Backfill borings with indigenous soil in the order in which the material was removed with the topsoil/sand/cover soil placed last to cover the hole. Soil samples that exhibit detectable vapors or exhibit grossly other contaminated characteristics shall not be placed back into the borehole but shall be containerized for proper disposal.
16. Soil cuttings from borings will be left in their original plastic liners until they can be put back into their respective boreholes the order they came out.
17. Any cuttings that cannot be returned to their original borehole will be placed in sealed NYSDOT approved 55-gallon drums.

Reference: American Society for Testing Material (ASTM), 1992, ASTM D1586-84, Standard Method for Penetration Test and Split Barrel Sampling of Soils.

2.2 HOLLOW-STEM AUGER DRILLING AND SAMPLING PROCEDURES

Drilling with Hollow Stem Augers (HSAs) is a standard method for collecting undisturbed soil samples at depths that can exceed 100 feet below ground surface (bgs). This drilling and sampling method uses auger flights with a hollow center that can be used for sample collection during the drilling program. For environmental soil investigations, augers are typically 5-feet in length with a 4 1/4-inch hollow center section.

While drilling with HSAs, a plug is placed at the base of the auger string to prevent soil from entering the augers. When the sampling depth is reached, the center plug is removed and replaced with a 2-foot-long split-spoon soil sampler. A 140-pound hammer, mounted on the drill rig, is then used to drive the soil sampler and connect drill rods 2 feet into the undisturbed soil at the base of the augers. Removal of the soil sampler from the augers allows description and sampling of the collected soil. To sample the next lower 2-foot soil sample, the center plug is again placed at the base of the auger string and drilling and then sampling is continued. Continuous soil samples can be collected using HSAs to any drillable depths.

Field procedures.

1. HSAs, drill rods and the drilling rig will be thoroughly decontaminated prior to initial borehole installation, and between each borehole, at the centralized decontamination area. All decontamination liquids and solids will be collected and placed in DOT approved 55-gallon drums. Refer to section 2.0 Soil Sampling for decontamination procedures.
2. The drill rig will be inspected for oil leaks and any other leaks prior to starting drilling operations.
3. Lower the center plug to the bottom of the augers. Advance the boring by rotating and advancing the HSAs to the desired depth. The boring will be advanced incrementally to permit continuous or intermittent subsurface soil sampling, as required.
4. Remove the center plug from the HSAs and lower the 2-foot-long split-spoon sampler to the base of the augers. Use the rigs 140 hammer to drive the split-spoon sampler 2-feet into the undisturbed soil. Record the number of hammer blows (blow counts) for each 6-inches of sampler penetration.
5. Remove the split-spoon sampler from the borehole, open the split-spoon and quickly scan the soil for VOCs with a PID or FID. Describe the soil, collect the project



- required samples, place in the proper containers, label the containers and place on ice.
6. Continue the above drilling and sampling steps until the final desired depth is reached.
 7. If a monitoring well will not be constructed in the borehole, backfill the borehole with either soil cuttings, unless grossly contaminated, to within 12 inches of the surface for non-residential sites, or grout, as specified by the project work plan.
 8. Unless cuttings are grossly contaminated, they will be stored on poly liner before being put back into their original boreholes in the order they came out. If cuttings cannot be placed back into the borehole before the end of the day, they must be covered with poly liner and properly ballasted.
 9. If cuttings cannot be placed back into the borehole that generated them or are grossly contaminated upon inspection, they will be drummed and characterized before proper disposal.

Reference: American Society for Testing Material (ASTM), ASTM D5784, Standard Guide for Use of Hollow-Stem Augers for Geoenvironmental Exploration and the Installation of Subsurface Water Quality Monitoring Devices

2.3 TEST PIT PROCEDURES

Test pit sampling is a standard method of soil sampling to obtain representative samples for identification as well as to serve as a means of obtaining significant information about the subsurface. The following steps describe the procedures for test pit operations.

2.3.1 *Field Preparation*

1. Verify underground utilities have been found.
2. Review scope of work, safety procedures and communication signals with site personnel.
3. Pre-clean the sampling equipment prior to use, as necessary.
4. Mark and review trench locations. Specific locations are determined in the field and are selected based on areas of visible or potential surface contamination or debris, pre-determined locations representing specific Site areas, and field obstructions

2.3.2 *Excavation and Sample Collection*

1. Position backhoe/equipment into appropriate area considering direction of excavation, obstructions, safety concerns, etc.
2. Commence excavation with the backhoe upwind of the excavation, as possible.
3. Ensure continuous air monitoring has been activated.
4. Screen soil regularly for VOCs as excavation progresses and soil is stockpiled.
5. As directed by field technician for each test trench, topsoil, or cover soil (if any) is excavated and placed on poly/plastic sheeting.
6. Soil/material below the topsoil is excavated to the depth as directed by field technician and placed on poly/plastic sheeting separate from the topsoil/cover soil.
7. Segregate grossly impacted material from material, as possible, using visual



- observations and PID screening.
8. Record geologic log as trenches are excavated visually inspecting subsurface material for discoloration or staining and documenting pit/trench with photos. The following information will be recorded for each test pit log:
 - Depth, length, and width of the excavation.
 - Description of each lithological unit including depth and thickness of distinct soil, fill, or rock layers.
 - Description of any man-made impacts or apparent contamination.
 - Depth to groundwater and bedrock, if encountered.
 9. Collect soil samples using dedicated stainless-steel spoons directly from the bucket of the backhoe at ground surface. No personnel shall enter the excavation to collect samples unless provisions in the HASP have been addressed for entering an excavation.
 10. Place each soil sample directly into appropriate sample bottles/jars.
 11. Clearly label the sample bottles and jars.
 12. Place each jar in an ice-filled cooler.
 13. Ship samples to the laboratory as soon as possible, but no later than 24 hours after collection.
 14. Document the types and numbers of samples collected on Chain-of-Custody.
 15. Record time and date of sample collection and a description of the sample and any associated air monitoring measurements in the field logbook.
 16. After sampling, backfill and compact (e.g., bucket and equipment tracks/wheels) the excavated material from each trench or pit prior to moving to the next location.
 17. Backfill with indigenous soil in the order in which the material was removed with the topsoil/cover soil placed last to cover the trench, placing impacted material at bottom of pit/trench and covering with 'clean' material.
 18. Decontaminate sampling and excavation equipment between sampling locations (i.e., if not dedicated) and at completion over top of excavation area using dry methods initially and steam cleaning, as needed.

3.0 GROUNDWATER SAMPLING

3.1 WELL INSTALLATION PROCEDURES

The following procedure outlines a NYSDEC-approved method of constructing groundwater wells within unconsolidated material to monitor groundwater elevation and acquiring groundwater samples for laboratory testing. The well screen is 2" Schedule 40 pipe with 0.010 slot size. 2" diameter wells will be installed in 4.25" diameter borings. The following is a step-by-step method for the open-hole method of installing a groundwater well once a boring or augured hole has been drilled to a desired depth within the subsurface:

1. Thread a cap on the bottom section of well screen. If more than one section of well screen is required, thread the last section.
2. Lower the screen into the borehole with the riser section ready.
3. Add the riser sections to the screen. Do not drop the screen in the borehole.
4. Add riser sections as required until the bottom screen section touches the bottom of the borehole.
5. If completing the well with a road box, mark the riser two inches below the lid of the



road box and then cut the riser. The road box will have an approximate diameter of 6" and a length of 1 to 2 feet.

6. Place a slip cap over the top of the rise section.
7. Place sand in the space between the borehole and the PVC screen and riser to the required depth. Place the sand in very slowly so it does not bridge in the well bore.
8. Place bentonite and cement above the sand-pack.
9. Grout in the road box with concrete mix.

If installing bedrock monitoring wells is required, the following procedure should be followed:

1. The overburden at each well location will be drilled using a 10-inch outer diameter hollow stem auger until bedrock is encountered.
2. A roller bit attachment will then be utilized to complete 5 7/8-inch diameter rock socket 3 feet into competent bedrock.
3. A 4-inch diameter steel casing will then be grouted into place to at least 3 feet into competent bedrock. The grouted case will be allowed to sit for a minimum of 24 hours (or grout manufacturers specification) to allow the grout to cure before bedrock coring.
4. The bedrock will then be cored using an HQ-size core drill bit (3 7/8-inch diameter) to a depth of approximately 230 feet bgs.
5. A 2-inch diameter schedule 40 polyvinyl chloride (PVC) monitoring well will then be installed into the open hole. PVC wells will be 10-foot long and have 0.010-inch slot screens.
6. Bedrock Coring logs will be generated detailing characteristics of encountered bedrock.
7. All IDW will be managed in accordance with Section 2.2 Hollow Stem Auger Drilling and Sampling Techniques.
- 7-8. If drilling fluid is required to install the well, the total amount of water lost to the subsurface will be recorded.

3.2 WELL DEVELOPMENT PROCEDURES

At least 24 hours after completion of drilling and installation, well development is completed through pumping or bailing until the discharged water is relatively sediment free and the indicator parameters (e.g., pH, temperature, specific conductivity, etc.) have reached steady-state. Development removes sediment and can improve the hydraulic properties of the sand pack. The effectiveness of this process is monitored to minimize the volume of discharged waters to obtain sediment-free samples. As approved by the regulatory agency, if well development water is free from NAPL, visual or olfactory contamination, and has a concentration of contaminants below applicable guideline values, it can be recharged to unpaved ground into the same groundwater unit, within or directly adjacent to a source area in a manner which does not result in surface water runoff, with DER approval. Otherwise, this water must be containerized in labeled containers and sampled prior to discharge or disposal.

1. Select an appropriate well development method based upon water depth, well productivity, and sediment content of the water. Well development options include: (a) bailing; (b) manual pumping; and (c) submersible pumps. These options utilized with surging of the well screen using an appropriately sized surge block.



2. Decontaminate, as needed, and assemble equipment in the monitoring well based upon the method selected. Care should be taken not to introduce contaminants into the equipment or well during installation. Refer to the contamination procedures outlined in Section 2.0 Soil Sampling.
3. Proceed with development by repeated removal of water from the well until the discharged water is relatively sediment-free (i.e., < 50 NTUs). Volume of water removed, pH, temperature and conductivity measurements are recorded on the Well Development/Purging Logs.

The same general procedures as listed above will be used during the development of a bedrock well for water removal, storage, disposal, and equipment decontamination. However, when Bedrock wells are installed, water is often used during drilling. In the event that water is lost to the subsurface, the same amount of water lost will be removed from the aquifer during development.

3.3 WELL PURGING PROCEDURES

To collect representative samples, groundwater wells must be adequately purged prior to sampling. Purging will require removing three to five volumes of standing water in rapidly recharging wells and at least one volume from wells with slow recharge rate. In addition to the required well volumes, water quality parameters (pH, temperature, specific conductivity and turbidity) should have stabilized prior to sampling. Sampling should commence as soon as adequate recharge has occurred. Although not required, it is recommended that purging and sampling occur at least 24 hours after development.

1. Remove well cover ensuring no foreign material enters the well.
2. Monitor the interior of the riser pipe for organic vapors using a PID. If a sustained reading of greater than 5 ppm above background is recorded, the well will be vented until levels are below 5 ppm before pumping is started.
3. If levels do not fall below 5 ppm after venting, work will be halted and personnel will evacuate the work area. Levels will be allowed to stabilize, and another reading will be taken in the breathing zone.
4. If background levels continue to be exceeded, then work will not continue at that location and the project manager will be notified of the situation. See Section 3.3 of the HASP.
5. Measure the water level below top of casing and the entire well depth using an electronic water level indicator.
6. Determine the volume of water within the well by knowing the total depth of the well.
7. Wash the end of the probe with soap and rinse with deionized water between wells.
8. Calibrate field instruments for measuring water quality parameters (e.g., pH, specific conductance, turbidity, etc.)
9. In all wells, a peristaltic pump will be used to purge the required water volume (i.e., until stabilization of pH, temperature specific conductivity and turbidity). If depths to water exceed about 25 feet below ground, bailers and/or submersible pumps may be used.
10. Utilize dedicated, new polyethylene bailers and tubing for sampling. If sampling for emerging contaminants such as PFAS, HDPE bailers and tubing must be used.
11. Purge until the required volume is removed. If the well purges to dryness and recharges within 15 minutes, purging can continue as it recharges. If the well purges to dryness



and recharge is greater than 15 minutes, purging is terminated and sampling can occur as soon as the well recharges.

12. Calculate well volumes and record measurements for pH, temperature, turbidity, and conductivity during the purging along with physical observations.
13. All wash, purge, and sampling related liquids will be containerized in NYSDOT approved 55-gallon drums upon generation. Contents will be characterized before proper disposal.

3.4 WELL SAMPLING PROCEDURES

1. Perform well sampling within 24 hours of purging if well has recovered sufficiently to sample. If sufficient volume for analytical testing cannot be obtained from a well or if recharge exceeds 24 hours, then DEC should be consulted on analytical priorities and validity of the sample.
2. Collect sample using appropriate containers.
3. Label sample bottles using a waterproof permanent marker per procedures outlined below.
4. Use verifiably clean sample bottles (containing required preservatives) and place samples on ice in coolers for transport to the analytical laboratory, who will certify bottles are analyte-free.
5. Initiate chain-of-custody.
6. Record well sampling data field notebook and on the Well Development/Purging Log.

4.0 SAMPLE DOCUMENTATION

Each soil and groundwater sample is logged in a bound field notebook by the technician or geologist. Field notes should include, but are not limited to the following:

- descriptions of subsurface material encountered during sampling,
- sample numbers and types of samples recovered, and
- date and time of sampling event.

The technician or geologist also completes a daily drilling or sampling record and chains-of-custody for all samples collected that are being transported to the laboratory. Once sampling program is complete, the geologist or technician transfers field notes/logs onto standard forms (e.g., boring logs, sampling logs, daily reports, etc.) to be included with the formal investigation report.

5.0 SAMPLING CONTAINER SELECTION

The selection of sample containers is based on the media being sampled and the required analysis. Container selection should be completed in advance of mobilizing into the field with close communications with the laboratory.

6.0 SAMPLE LABELING

The following procedure helps to prevent misidentification of samples and to clarify the location



and purpose of environmental samples collected during the investigation:

1. Fix a non-removable (when wet) label to each container.
2. Wrap each sample bottle within 2-inch cellophane tape.
3. Write the following information with permanent marker on each label:
 - A. Site name
 - B. Sample identification
 - C. Project number
 - D. Date/time
 - E. Sampler's initials
 - F. Sample preservation
 - G. Analysis required

Each sample is assigned a unique identification alpha-numeric code, such as RR-ss1 or WS-TP1 (2-3'), where the abbreviations represent RR – River Road (site), surface sample 1 and Waste Site, test pit 1, obtained at 2-3' bgs. Other common abbreviations include the following:

- BH = Geoprobe Borehole
- SW = Surface Water
- SED = Sediment
- SB = Soil Boring
- MSB = Matrix Spike Blank
- NSS = Near Surface Soil (1' - 2' depth)
- EB = Equipment Rinse Blank
- HW = Hydrant Water (Decon/Drilling Water)
- GW = Groundwater
- TB = Trip Blank
- RB = Rinse Blank
- MS/MSD = Matrix Spike/Matrix Spike Duplicate

7.0 SAMPLE SHIPPING

Proper documentation of sample collection and the methods used to control these documents are referred to as chain-of-custody procedures. Chain-of-custody procedures are essential for (1) presenting analytical results in a legal or regulatory forum (e.g., evidence in litigation or administrative hearings), (2) minimizing loss or misidentification of samples, and (3) ensuring that unauthorized persons do not tamper with collected samples.

The following chain-of-custody guidelines should be utilized during sample collection as outlined in and prepared by the National Enforcement Investigations Center (NEIC) Policies and Procedures of the USEPA Office of Enforcement:

- 1) Complete chain-of-custody record with all relevant information.
- 2) Send original chain with the samples in a sealed, waterproof bag taped inside the sample cooler.
- 3) Place adequate inert cushioning material (e.g., corrugated plastic, polypropylene foam wrap, etc.) in bottom of cooler.
- 4) Place bottles in cooler so they do not touch (use cushioning material for dividers).
- 5) Place VOA vials in sealed/waterproof bags in the center of the cooler.
- 6) Pack cooler with ice in sealed/waterproof plastic bags.



- 7) Pack cooler with cushioning material.
- 8) Place any additional paperwork in sealed bag with original chain.
- 9) Tape cooler drain shut.
- 10) Wrap cooler with packing tape at two locations to secure lid. Do not cover labels.
- 11) Place lab address on top of cooler.
- 12) Ship samples via overnight carrier the same day that they are collected.
- 13) Label cooler with "This side up" on all sides and "Fragile" on at least two sides.
- 14) Fix custody seals on front right and left of cooler and cover with packaging tape.

8.0 SOIL VAPOR INTRUSION SAMPLING

Soil vapor intrusion (SVI) investigation consist of sampling contaminant vapors that may exist beneath the building slabs, inside the buildings, and outside the buildings. Sample collection includes the following procedures per New York State Department of Health *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*.

8.1 SUB-SLAB AIR SAMPLING PROCEDURES

8.1.1 Sampling Locations

Select the sub-slab sample collection points by observing the condition of the building floor slab for apparent penetrations such as concrete floor cracks, floor drains, or sump holes. The floor conditions will be noted, and potential locations of subsurface probes will be selected. The locations will ideally be away from the foundation walls, apparent penetrations, and buried pipes.

8.1.2 Sampling Probes

Drill a 5/8-inch diameter hole approximately one inch deep into the concrete floor using a 5/8-inch diameter drill bit and a hammer drill. Extend the hole through the remaining thickness of the slab and about three inches below the base of the slab using a 1/2-inch diameter drill bit. Remove the concrete cuttings using the 1/2-inch drill bit in an up-down motion. Clean out the shallow 5/8-inch drilled hole using a round steel wire brush. Carefully clean the surface of the concrete adjacent to the 5/8-inch hole using a flat wire brush to remove any residual concrete dust from the floor's surface. Dabbing the surface with clay can also remove the dust. These steps will allow the clay seal (see below) to better adhere to the concrete surface.

Insert one end of a 1.5-foot length of 1/4-inch diameter (OD) Teflon or HDPE tubing through the center hole of a 5/8-inch diameter rubber stopper. About two inches of the tubing should extend beyond and below the narrow end of the stopper. Insert the tubing into the 5/8-inch diameter borehole so that the bottom of the stopper rests on top of the 1/2-inch diameter drilled hole. Pack the annulus of the 5/8-inch diameter hole with Sculpy modeling clay and extend the clay about 1.5-inches above the floor adhering tightly to the tubing. The clay should be in a volcano-like shape with a wide base adhering to the concrete floor and narrowing at the upper end of contact with the tubing. This shape allows the tubing to move without disturbing the contact of the clay with the floor and the tubing. The clay should cover and adhere to a minimum of one-half inch of the concrete surface beyond the borehole.



8.1.3 Helium Tracer Gas Testing

Place a 1-quart (or similar size) container over the sample probe after threading the sample tube through a hole in the top of the bucket. Seal the tube to the bucket with clay. The bucket should also have another hole drilled in the top for the injection of helium, and a hole in the side near the floor for the measurement of helium gas concentrations.

Connect a helium (99.999% pure) cylinder tubing to the top port of bucket enclosure and seal with clay or other sealing material. Insert a helium detector probe in the bottom port of the bucket. Release enough helium to displace any ambient air in the bucket until the concentration of helium reaches a minimum of 90%. Maintain this minimum concentration by testing with a helium detector. The Helium cylinder should be open during the purge time to cause a slight positive pressure within the enclosure.

Connect the sample tubing to a GilAir vacuum pump or equivalent using 3/8-inch O.D. silicone tubing. Connect a 1-liter Tedlar bag to the outlet of the pump using silicone tubing and collect a 1-liter sample. Purging flow rates must not exceed 0.2 liters per minute (L/min). Analyze the Tedlar bag for helium using a helium detector and record the results on the Summa Canister Data Sheet. A concentration of helium 10% or greater indicates a poor seal of the sample probe and it must be reinstalled and retested. After purging, remove the bucket enclosure from over the sample probe.

8.1.4 Sample Collection

Assign sample identification to the Summa canister sample identification tag and record on chain of custody (COC), and the Summa Canister Data Sheet. Also record the Summa canister and flow controller (regulator) serial numbers on the COC and Summa Canister Data Sheet. Attach a pre-calibrated/certified 8-hour or 24-hour flow controller, and particulate filter to the Summa canister. Attach the sample tube to the Summa canister using a 1/4-inch Swagelok nut with appropriate ferrules, to the end of the flow controller/particulate filter assembly. The sampling period will be 8 hours for most commercial facilities and 24 hours for mixed use residential/commercial.

Open canister valve to initiate sample collection and record sample start time, date, and initial canister vacuum on the canister identification tag and on the Summa Canister Data Sheet. If the canister does not show sufficient vacuum (generally less than 25"Hg), do not use. Take a digital photograph of canister setup and surrounding area. Include in the photograph a dry erase board or similar display which presents sample ID, location, and date.

After 8 or 24 hours, record sample end time and canister pressure on the Summa Canister Data Sheet, and close valve. Disconnect the Teflon tubing and remove flow controller/particulate filter assembly from canister. Seal canister with laboratory supplied brass plug. Ship the samples, with COCs, overnight, to the selected laboratory for standard TO-15 analysis.

8.2 INDOOR/OUTDOOR AIR SAMPLING PROCEDURES



Place the indoor air Summa canister/flow controller inlet at breathing height in the approximate center of the space being sampled, or, for the outdoor air sample, elevated on a table or other object in a location upwind of the building being sampled. The breathing height is defined as four to six feet above the floor or ground. As an option, a length of Teflon tubing can be attached to the Summa canister/flow controller inlet and raised to breathing zone height.

Record the canister and flow controller serial numbers on the canister identification tag, COC and the Summa Canister Data Sheet. Assign sample identification to the canister identification tag, and record on the COC and the Summa Canister Data Sheet. Remove brass plug from canister fitting and save.

Attach a pre-calibrated/certified 8 or 24-hour flow controller and particulate filter to the Summa canister. For the outside air sample, also connect the laboratory supplied “candy cane” fitting to the flow controller. Open canister valve to initiate sample collection and record start time, date, and gauge vacuum reading on the canister identification tag and on the Summa Canister Data Sheet. Take a photograph of canister setup and surrounding area.

After 8 or 24 hours, record the gauge vacuum reading, close the Summa canister valve completely and record the end time on the Summa Canister Data Sheet. There should still be a slight vacuum in the Summa canister. If no vacuum remains in the canister, or the canister does not show a significant net loss in vacuum after sampling, the sample should be re-collected using a new Summa canister and flow controller. Disconnect any tubing and candy cane fittings from the Summa canister and remove the flow controller. Replace the brass plug on the canister. Ship canister, with COCs, overnight, to the selected laboratory.

8.3 SOIL VAPOR SAMPLING

A soil vapor assessment can be completed outside of buildings in the subsurface to assess potential vapor concerns across the site. Soil vapor sampling and probe installation will be conducted in accordance with NYSDOH guidance for evaluating soil vapor intrusion (NYSDOH Soil Vapor Intrusion Guidance-October 2006).

- Vapor Points are typically installed at a depth above native soil, groundwater level, top of bedrock, or at a depth comparable to building foundations.
- A unique boring should be bored to be converted to vapor point locations.
- Vapor Point Installation diagrams should be developed.
- Vapor probe holes are completed as follows:
 - A ¼ inch PVC tube with a 3/8-inch stainless steel screen at the bottom is installed at the bottom of each probe hole.
 - Porous sand is backfilled around the screen to a two-foot depth (or less depending on total depth of the borehole) of each hole
 - A bentonite seal will be placed above the sand layer to seal off the hole around the tubing.
 - Air samples are collected in regulated summa canisters over a 24-hour period in a 6 Liter Summa® Canister.
 - Samples will be analyzed for USEPA TO- 15 compounds.



8.4 QUALITY CONTROL

The number of Quality Control samples (duplicates) to be taken during sub-slab sampling may be found in the QA/QC Plan. The duplicate sample rate is usually 10 percent. Field duplicates for sub-slab, indoor air and outdoor air samples will be collected by attaching the T-fitting supplied by the laboratory to two Summa canisters with attached regulators. For sub-slab samples, the inlet of the T-fitting will then be attached to the sub-slab sample tubing using a Swagelok fitting. For indoor and outdoor air samples, any tubing used to raise the sampling height will also be attached to the inlet of the T fitting. For sampling, both Summa canister valves are opened and closed simultaneously.

8.5 SAMPLE LABELING

Each sub-slab sample should have the following information at a minimum placed on the laboratory supplied sample label:

- Site name
- Sample identification – see below
- Date/time
- Sampler's initials
- Analysis required – TO-15

The serial number of the canister and regulator used during sampling is also noted on the Summa canister identification tag and on the COC. Each sub-slab, indoor air and outdoor air sample will be assigned a unique alpha-numeric code. An example of this code and a description of its components are presented below. Field duplicate samples will be assigned a unique identification alphanumeric code that specifies the date of collection, the letters FD (for field duplicate) and an ascending number that records the number of duplicate samples collected that day. For example, the first field duplicate collected on February 22, 2023 would be assigned the sample number in the format YYYYMMDD-FD-1 = 20230222-FD-1.

Subsequent duplicates collected on the same day will be assigned FD-2, FD-3 etc. Field sampling crew will record the duplicate sample information on the Summa Canister Data Sheets and in the field book.

8.6 FIELD DOCUMENTATION

Field notebooks are used during all on-site work. A dedicated field notebook is maintained by the field technician overseeing the site activities. Sub-slab sampling procedures should be photo-documented. The field sampling team will maintain sampling records that include the following data:

- Sample Identification
- Date and time of sample collection
- Identity of samplers
- Sampling methods and devices
- Purge volumes (soil vapor)
- Volume of soil vapor sample extracted
- The Summa canister vacuum before and after samples collected



- Chain of Custody and shipping information

The proper completion of the following forms/logs is considered correct procedure for documentation during the indoor air-sampling program:

1. Field Logbook - weather-proof hand-bound field book
2. Summa Canister Data Sheet
3. Chain of Custody Form

8.7 SAMPLE SHIPPING

Proper documentation of sample collection and the methods used to control these documents are referred to as chain-of-custody procedures. Chain-of-custody procedures are essential for presentation of sample analytical chemistry results as evidence in litigation or at administrative hearings held by regulatory agencies. Chain-of-custody procedures also serve to minimize loss or misidentification of samples and to ensure that unauthorized persons do not tamper with collected samples.

The following chain-of-custody guidelines should be utilized during sample collection as outlined in and prepared by the National Enforcement Investigations Center (NEIC) Policies and Procedures of the USEPA Office of Enforcement:

- Complete the chain-of-custody (COC) record with all relevant information.
- Ship original COC with the samples in a sealed waterproof plastic bag and place inside the box containing a Summa canister.
- Retain a copy of the COC for field records.
- Ship Summa canisters in the same boxes the laboratory used for shipping.
- Place the lab address on top of sample box/cooler.
- Fix numbered custody seals across box lid flaps and cooler lid.
- Cover seals with wide, clear tape.
- Ship samples via overnight carrier within three days of sample collection if possible.



APPENDIX E

DER-10 IMPORTED FILL REQUIREMENTS



site-specific exemption for one or more of the requirements set forth in this section, based upon site-specific conditions, such as:

- i. use and redevelopment of the site;
- ii. depth of the placement of the backfill material relative to the surface or subsurface structures;
- iii. depth of the placement of the backfill material relative to groundwater;
- iv. volume of backfill material;
- v. potential for odor from the backfill material;
- vi. presence of historic fill in the vicinity of the site;
- vii. DEC-issued beneficial use determination, pursuant to 6 NYCRR Part 360; or
- viii. background levels of contamination in areas surrounding the site.

9. For remedial programs pursuant to the BCP, DEC can only provide a site-specific exemption for backfill consistent with the provisions of paragraph 8 above as follows:

- i. for Track 2 and Track 3 cleanups, for soils greater than 15 feet below ground surface; or
- ii. for Track 4 cleanups, for soils beneath buildings, pavement and other improvements or for soils beneath the soil cover system or soil cap over exposed surface soils.

10. **Sampling fill imported to or exported from a site.** The remedial party will sample and analyze the fill being imported to the site in accordance with this subdivision and Table 5.4(e)10. Samples of the fill will be collected based on the soil quantity and type of constituents identified in the table and will be a combination of discrete and composite samples, handled as follows:

- i. for VOCs only, grab samples are allowed. These grab samples are one or more discrete samples taken from the fill, with the number as specified in the volatile column of Table 5.4(e)10 for the soil quantity in question, and analyzed for the VOCs identified in Appendix 5; or
- ii. for SVOCs, inorganics and PCBs/pesticides:
 - (1) one or more composite samples are collected from the volume of soil identified in Table 5.4(e)10 for analysis, with each composite from a different location in the fill volume;
 - (2) each composite is prepared by collecting discrete samples from 3 to 5 random locations from the volume of soil to be tested; and
 - (3) the discrete samples are mixed, and after mixing, a sample of the mixture is analyzed for the SVOCs, inorganic and PCBs/pesticide constituents identified in Appendix 5.

Table 5.4(e)10			
Recommended Number of Soil Samples for Soil Imported To or Exported From a Site			
Contaminant	VOCs	SVOCs, Inorganics & PCBs/Pesticides	
Soil Quantity (cubic yards)	Discrete Samples	Composite	Discrete Samples/Composite
0-50	1	1	3-5 discrete samples from different locations in the fill being provided will comprise a composite sample for analysis
50-100	2	1	
100-200	3	1	
200-300	4	1	
300-400	4	2	
400-500	5	2	
500-800	6	2	
800-1000	7	2	
➤ 1000	Add an additional 2 VOC and 1 composite for each additional 1000 Cubic yards or consult with DER		

(f) Compliance for soil exported from a site for reuse. For soil that is being exported from a site to locations other than permitted disposal facilities, the handling requirements are set forth in this subdivision and in paragraph 5.4(e)4.

1. Levels of contamination must not exceed the lower of the groundwater and residential use levels as shown in Appendix 5, absent a beneficial use determination issued by DEC. DER will coordinate with the Division of Solid & Hazardous Materials (DSHM), prior to the start of the remedial action, relative to whether the exported soil can be used beneficially in accordance with 6 NYCRR 360-1. The sampling and analysis requirements are set forth in paragraph 5.4(e)10.

2. The number of required samples are specified in Table 5.4(e)10 and paragraph (e)10 above, which may be modified by the DER project manager based on various factors, including the location of the site receiving the soil.

(g) Compliance for the decommissioning of monitoring wells. All monitoring wells not required for site management should be decommissioned in accordance with paragraph (d)6 above prior to DER approval of the FER.

5.5 Underground Storage Tank Closure

(a) The first step for underground storage tank (UST) closure is the identification, removal, treatment, containment and/or stabilization of the contents to prevent contaminant exposure to receptors and to prevent further movement of contaminants through any pathway as set forth herein.

1. A health and safety plan for the site is developed, as described in section 1.9, by a qualified individual in accordance with subparagraph 1.5(a)3.i.

2. Underground tank closures not performed in accordance with this section will require a certification of the closure report by a professional engineer, as described in section 1.5.

**Updated
Allowable Constituent Levels for Imported Fill or Soil**

Source: These table are derived from soil cleanup objective (SCO) tables in 6 NYCRR 375. Table 375-6.8(a) is the source for unrestricted use and Table 375-6.8(b) is the source for restricted use.

Note: For constituents not included in this table, refer to the contaminant for supplemental soil cleanup objectives (SSCOs) in the Commissioner Policy on [Soil Cleanup Guidance](#). If an SSCO is not provided for a constituent, contact the DER PM to determine a site-specific level.

Table 375-6.8(a). Unrestricted use soil cleanup objectives

Table 375-6.8(a). Unrestricted use soil cleanup objectives.

Contaminant	CAS Number	Unrestricted Use
Metals		
Arsenic	7440-38-2	13 ^c
Barium	7440-39-3	410 ^c
Beryllium	7440-41-7	4.4
Cadmium	7440-43-9	2.5 ^c
Chromium, hexavalent ^e	18540-29-9	1 ^b
Chromium, trivalent ^e	16065-83-1	30 ^c
Copper	7440-50-8	50
Total Cyanide ^{e, f}		2.3 ^c
Lead	7439-92-1	63 ^c
Manganese	7439-96-5	1600 ^c
Mercury (Total)		0.18 ^c
Nickel	7440-02-0	30
Selenium	7782-49-2	3.9 ^c
Silver	7440-22-4	2
Zinc	7440-66-6	109 ^c
PCBs/Pesticides		
4,4'-DDE	72-55-9	0.0033 ^b
4,4'-DDT	50-29-3	0.0033 ^b
4,4'-DDD	72-54-8	0.0033 ^b

Table 375-6.8(a). Unrestricted use soil cleanup objectives.

Contaminant	CAS Number	Unrestricted Use
Aldrin	309-00-2	0.0048 ^c
alpha-BHC	319-84-6	0.02
beta-BHC	319-85-7	0.021
Chlordane (alpha)	5103-71-9	0.014
delta-BHC ^g	319-86-8	0.04
Dieldrin	60-57-1	0.005 ^c
Endosulfan I ^{d, f}	959-98-8	4.3
Endosulfan II ^{d, f}	33213-65-9	4.3
Endosulfan sulfate ^{d, f}	1031-07-8	4.3
Endrin	72-20-8	0.014
Heptachlor	76-44-8	0.013
Lindane	58-89-9	0.025
Polychlorinated biphenyls	1336-36-3	0.1
Semivolatile organic compounds		
1,4 Dioxane	123-91-1	0.1 ^b
Acenaphthene	83-32-9	20
Acenaphthylene ^f	208-96-8	100 ^a
Anthracene ^f	120-12-7	100 ^a
Benz(a)anthracene ^f	56-55-3	1 ^c
Benzo(a)pyrene	50-32-8	1 ^c
Benzo(b)fluoranthene ^f	205-99-2	1 ^c

Table 375-6.8(a). Unrestricted use soil cleanup objectives.

Contaminant	CAS Number	Unrestricted Use
Benzo(g,h,i)perylene ^f	191-24-2	0.64
Benzo(k)fluoranthene ^f	207-08-9	0.8 ^c
Chrysene ^f	218-01-9	1 ^c
Dibenz(a,h)anthracene ^f	53-70-3	0.33 ^b
Dibenzofuran ^f	132-64-9	2.1
Fluoranthene ^f	206-44-0	85
Fluorene	86-73-7	30
Indeno(1,2,3-cd)pyrene ^f	193-39-5	0.5 ^c
m-Cresol ^f	108-39-4	0.33 ^b
Naphthalene ^f	91-20-3	12
o-Cresol ^f	95-48-7	0.33 ^b
p-Cresol ^f	106-44-5	0.33 ^b
Pentachlorophenol	87-86-5	0.8 ^b
Phenanthrene ^f	85-01-8	1.1 ^c
Phenol	108-95-2	0.33 ^b
Pyrene ^f	129-00-0	64
Volatile organic compounds		
1,1,1-Trichloroethane ^f	71-55-6	0.68
1,1-Dichloroethane ^f	75-34-3	0.27
1,1-Dichloroethene ^f	75-35-4	0.24
1,2-Dichlorobenzene ^f	95-50-1	1.1

Table 375-6.8(a). Unrestricted use soil cleanup objectives.

Contaminant	CAS Number	Unrestricted Use
1,2-Dichloroethane	107-06-2	0.02 ^c
cis -1,2-Dichloroethene ^f	156-59-2	0.19
trans-1,2-Dichloroethene ^f	156-60-5	0.19
1,3-Dichlorobenzene ^f	541-73-1	2.6
1,4-Dichlorobenzene	106-46-7	1.8
Acetone	67-64-1	0.03
Aniline	62-53-3	0.04
Benzene	71-43-2	0.06
n-Butylbenzene ^f	104-51-8	18
Carbon tetrachloride ^f	56-23-5	0.76
Chlorobenzene	108-90-7	4.5
Chloroform	67-66-3	0.37
Ethylbenzene ^f	100-41-4	1
Hexachlorobenzene ^f	118-74-1	0.33 ^b
Methyl ethyl ketone	78-93-3	0.10
Methyl tert-butyl ether ^f	1634-04-4	0.1
Methylene chloride	75-09-2	0.05
Nitrobenzene	98-95-3	0.08 ^c
n – Propylbenzene ^f	103-65-1	5
sec-Butylbenzene ^f	135-98-8	25
tert-Butylbenzene ^f	98-06-6	11

Table 375-6.8(a). Unrestricted use soil cleanup objectives.

Contaminant	CAS Number	Unrestricted Use
Tetrachloroethene	127-18-4	1.3
Toluene	108-88-3	0.7
Trichloroethene	79-01-6	0.47
1,2,4-Trimethylbenzene ^f	95-63-6	5.9
1,3,5-Trimethylbenzene ^f	108-67-8	3.1
Vinyl chloride ^f	75-01-4	0.03
Xylene (mixed)	1330-20-7	0.26
All soil cleanup objectives are in parts per million (ppm).		

- ^a. The soil cleanup objectives for unrestricted use were capped at a maximum value of 100 ppm. See the New York State Department of Environmental Conservation Technical Support Document (2006), section 9.3.
- ^b. For constituents where the calculated soil cleanup objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Track 1 soil cleanup objective value.
- ^c. For constituents where the calculated soil cleanup objective was lower than the rural soil background concentration, the rural soil background concentration is used as the Track 1 soil cleanup objective value for this use of the site. See the New York State Department of Environmental Conservation Technical Support Document (2006), Section 9 and Appendix D.
- ^d. The soil cleanup objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.
- ^e. The soil cleanup objective for this specific compound (or family of compounds) is met if the analysis for the total species of this contaminant is below the specific soil cleanup objective.
- ^f. Protection of ecological resources soil cleanup objectives were not developed for contaminants identified in Table 375-6.8(b) with “NS”. Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the department to calculate a protection of ecological resources soil cleanup objective according to the New York State Department of Environmental Conservation Technical Support Document (2006).
- ^g This soil cleanup objective is derived from data on mixed isomers of BHC.

Table 375-6.8(b). Restricted use soil cleanup objectives.

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted Residential	Commercial	Industrial		
Metals							
Arsenic	7440-38-2	16 ^f	16 ^f	16 ^f	16 ^f	13 ^f	16 ^f
Barium	7440-39-3	410	410	410	10,000 ^d	433	820
Beryllium	7440-41-7	8.8	43	670	750	10	47
Cadmium	7440-43-9	2.5 ^f	2.5 ^f	3.7	4.4	4	7.5
Chromium, hexavalent ^h	18540-29-9	1 ^e	1 ^e	11	11	20	19
Chromium, trivalent ^h	16065-83-1	30 ^f	110	1,700	2,000	160	NS
Copper	7440-50-8	280	280	280	10,000 ^d	50	1720
Total Cyanide ^h		2.6	13	28	240	NS	40
Lead	7439-92-1	400	400	1,000	3,900	63 ^f	450
Manganese	7439-96-5	2,000 ^f	2,000 ^f	10,000 ^d	10,000 ^d	1600 ^f	2,000 ^f
Mercury (Total)		0.30 ^j	0.30 ^j	1.1 ^j	1.1 ^j	0.18 ^f	0.73
Nickel	7440-02-0	87	320	320	5,900	30	130
Selenium	7782-49-2	22	110	1,700	2,000	3.9 ^f	4 ^f
Silver	7440-22-4	22	110	1,700	2,000	2	8.3
Zinc	7440-66-6	1,300	6,600	10,000 ^d	10,000 ^d	109 ^f	2,480
PCBs/Pesticides							
4,4'-DDE	72-55-9	0.78	3.4	22	22	0.0033 ^e	9.3

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Groundwater
		Residential	Restricted Residential	Commercial	Industrial		
4,4'-DDT	50-29-3	0.78	3.8	27	27	0.0033 ^e	135
4,4'-DDD	72-54-8	1.2	5	33	33	0.0033 ^e	14
Aldrin	309-00-2	0.0088	0.044	0.33	0.33	0.14	0.19
alpha-BHC	319-84-6	0.042	0.18	1.2	1.2	0.04 ^g	0.02
beta-BHC	319-85-7	0.042	0.18	1.8	2.9	0.6	0.09
Chlordane (alpha)	5103-71-9	0.14	0.65	8.2	11	1.3	4.5
delta-BHC	319-86-8	100	100 ^a	500 ^b	1,000 ^c	0.04 ^g	0.1
Dieldrin	60-57-1	0.017	0.075	0.48	0.48	0.006	0.1
Endosulfan I	959-98-8	8.4 ⁱ	35 ⁱ	360 ⁱ	580 ⁱ	NS	65
Endosulfan II	33213-65-9	8.4 ⁱ	35 ⁱ	360 ⁱ	580 ⁱ	NS	44
Endosulfan sulfate	1031-07-8	8.4 ⁱ	35 ⁱ	360 ⁱ	580 ⁱ	NS	47 ^c
Endrin	72-20-8	1.2	5.3	55	87	0.014	0.06
Heptachlor	76-44-8	0.12	0.53	5.1	5.1	0.14	0.38
Lindane	58-89-9	0.05	0.21	0.21	3.4	6	0.05
Polychlorinated biphenyls	1336-36-3	1	1	1	25	1	3.2
Semivolatiles							
1,4-Dioxane	123-91-1	1.4	5.7	36	36	0.1 ^e	0.1 ^e
Acenaphthene	83-32-9	100 ^a	100 ^a	500 ^b	1,000 ^c	20	98

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted Residential	Commercial	Industrial		
Acenaphthylene	208-96-8	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	365
Anthracene	120-12-7	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	1,000 ^c
Benz(a)anthracene	56-55-3	1 ^f	1.4	37	37	NS	1 ^f
Benzo(a)pyrene	50-32-8	1 ^f	1 ^f	3.7	3.7	2.6	22
Benzo(b)fluoranthene	205-99-2	1 ^f	1.4	37	37	NS	2.1
Benzo(g,h,i)perylene	191-24-2	1.2	4.9	47	78	NS	1,000 ^c
Benzo(k)fluoranthene	207-08-9	1.2	4.9	47	78	NS	2
Chrysene	218-01-9	1.2	4.9	47	78	NS	1 ^f
Dibenz(a,h)anthracene	53-70-3	0.33 ^e	0.33 ^e	3.7	3.7	NS	1,000 ^c
Dibenzofuran	132-64-9	4.2	18	180	290	NS	110
Fluoranthene	206-44-0	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	1,000 ^c
Fluorene	86-73-7	100 ^a	100 ^a	500 ^b	1,000 ^c	30	386
Indeno(1,2,3-cd)pyrene	193-39-5	0.5 ^f	1.4	37	37	NS	6.6
m-Cresol	108-39-4	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	0.33 ^e
Naphthalene	91-20-3	84 ^a	100 ^a	500 ^b	1,000 ^c	NS	12
o-Cresol	95-48-7	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	0.33 ^e
p-Cresol	106-44-5	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	0.33 ^e
Pentachlorophenol	87-86-5	0.8 ^e	1.3	6.9	7	0.8 ^e	0.8 ^e

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Groundwater
		Residential	Restricted Residential	Commercial	Industrial		
Phenanthrene	85-01-8	1.2	4.9	47	78	NS	1,000 ^c
Phenol	108-95-2	100 ^a	100 ^a	500 ^b	1,000 ^c	30	0.33 ^e
Pyrene	129-00-0	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	1,000 ^c
Volatiles							
1,1,1-Trichloroethane	71-55-6	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	0.68
1,1-Dichloroethane	75-34-3	19	47	240	240	NS	0.27
1,1-Dichloroethene	75-35-4	0.41	0.98	5.1	5.1	NS	0.33
1,2-Dichlorobenzene	95-50-1	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	1.1
1,2-Dichloroethane	107-06-2	2.4	5.8	30	30	10	0.02
cis-1,2-Dichloroethene	156-59-2	8.7	41	500 ^b	590	NS	0.19
trans-1,2-Dichloroethene	156-60-5	75	100 ^a	500 ^b	1,000 ^c	NS	0.19
1,3-Dichlorobenzene	541-73-1	11	38	280	280	NS	2.6
1,4-Dichlorobenzene	106-46-7	10	24	130	130	20	1.8
Acetone	67-64-1	100 ^a	100 ^b	500 ^b	1,000 ^c	2.2	0.03
Aniline	62-53-3	6.7	8.1	36	36	32	0.04
Benzene	71-43-2	1.2	3.7	20	20	70	0.06
n-Butylbenzene	104-51-8	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	18
Carbon tetrachloride	56-23-5	1.9	7.1	41	41	NS	0.76

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted Residential	Commercial	Industrial		
Chlorobenzene	108-90-7	73	100 ^a	500 ^b	1,000 ^c	40	4.5
Chloroform	67-66-3	4.8	24	180	180	12	0.37
Ethylbenzene	100-41-4	32	76	390	390	NS	1
Hexachlorobenzene	118-74-1	0.33 ^e	0.33 ^e	1.8	2.9	NS	3.2
Methyl ethyl ketone	78-93-3	100 ^a	100 ^a	500 ^b	1,000 ^c	100 ^a	0.10
Methyl tert-butyl ether	1634-04-4	40	100 ^a	500 ^b	890	NS	0.1
Methylene chloride	75-09-2	17	81	500 ^b	1,000 ^c	12	0.05
Nitrobenzene	98-95-3	0.77	1.8	8.9	8.9	2	0.08 ^f
n-Propylbenzene	103-65-1	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	5
sec-Butylbenzene	135-98-8	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	25
tert-Butylbenzene	98-06-6	100 ^a	100 ^a	500 ^b	1,000 ^c	NS	11
Tetrachloroethene	127-18-4	15	18	81	81	2	1.3
Toluene	108-88-3	100 ^a	100 ^a	500 ^b	1,000 ^c	36	0.7
Trichloroethene	79-01-6	1.7	6.4	54	54	2	0.47
1,2,4-Trimethylbenzene	95-63-6	41	100 ^a	500 ^b	1,000 ^c	NS	5.9
1,3,5-Trimethylbenzene	108-67-8	41	100 ^a	500 ^b	1,000 ^c	NS	3.1
Vinyl chloride	75-01-4	0.099	0.48	7.1	7.1	NS	0.03
Xylene (mixed)	1330-20-7	100 ^a	100 ^a	500 ^b	1,000 ^c	0.26	1.2

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Groundwater
		Residential	Restricted Residential	Commercial	Industrial		
All soil cleanup objectives are in parts per million (ppm).							
NS = Not specified. See New York State Department of Environmental Conservation Technical Support Document (2006).							

- a. The soil cleanup objectives for residential, restricted-residential, and ecological resources use were capped at a maximum value of 100 ppm. See New York State Department of Environmental Conservation Technical Support Document (2006) section 9.3.
- b. The soil cleanup objectives for commercial use were capped at a maximum value of 500 ppm. See New York State Department of Environmental Conservation Technical Support Document (2006) section 9.3.
- c. The soil cleanup objectives for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See New York State Department of Environmental Conservation Technical Support Document (2006) section 9.3.
- d. The soil cleanup objectives for metals were capped at a maximum value of 10,000 ppm. See New York State Department of Environmental Conservation Technical Support Document (2006) section 9.3.
- e. For constituents where the calculated soil cleanup objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the soil cleanup objective value.
- f. For constituents where the calculated soil cleanup objective was lower than the rural soil background concentration, the rural soil background concentration is used as the Track 2 soil cleanup objective value for this use of the site. See the New York State Department of Environmental Conservation Technical Support Document (2006), Section 9 and Appendix D.
- g. This soil cleanup objective is derived from data on mixed isomers of BHC.
- h. The soil cleanup objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific soil cleanup objective.
- i. This soil cleanup objective is for the sum of endosulfan I, endosulfan II, and endosulfan sulfate.
- j. Protection of public health soil cleanup objectives for total mercury are based on either the rural soil background concentration for total mercury (0.3 ppm or 0.18 ppm for habitat) or the most toxic mercury form that may be present in soil samples. If total mercury is found in soil

APPENDIX F

PROJECT SCHEDULE



BCP PROJECT SCHEDULE (1) January 2026
 THE NEST - BCP#C932183

..... Review Period
 ——— Drafting/Response Period

TASK	2026																												2027																			
	JAN				FEB				MAR				MAY				JUN				JULY				AUG				SEP				OCT				NOV				DEC				JAN			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
1. Remedial Action WP																																												
2. Remediation					————	————	————	————	————	————	————	————	————	————	————	————	————	————	————	————	————	————	————	————																								
3. Final Engineering Report																									————	————																

(1) - Track 1 Unrestricted Use

Submittal Dates
 Remedial Action WP: 1/26/2026
 Final Engineering Report: 12/1/2026

APPENDIX G

COMMUNITY AND ENVIRONMENTAL RESPONSE PLAN



COMMUNITY & ENVIRONMENTAL RESPONSE PLAN

The NEST Site
333 1st Street
City of Niagara Falls, New York, 14303
NYSDEC Site No. C932183

Prepared for:

Community Services Seventh Housing LLC
180 Oak Street Buffalo, NY 14203

Prepared by:



960 Busti Avenue, Suite B-150
Buffalo, New York, 14213

DECEMBER 2024

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1.0 INTRODUCTION

This Community and Environmental Response Plan (CERP) has been prepared to summarize the controls, monitoring and/or work practices that will be implemented during the site remediation at the NEST Site to address the potential for short-term impacts to the surrounding community or environmental resources. The Site is depicted on **Figure 13-Site Survey**. The remediation will include the following:

- Remove all impacted soils exceeding Unrestricted SCOs to meet Track 1 requirements.
- Import clean material to backfill excavations.

The CERP is a concise summary of the controls, monitoring, and work practices and how they combine to provide the necessary protection of the community and ecological resources. Additional details regarding how this will be implemented are contained in various sections of the Work Plan. The purpose of the CERP is to provide members of the community with information on the steps and programs that have been put in place in order to protect their health and minimize the disturbance caused by construction activity. This effort will be performed under the approval and oversight of the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH).

This CERP has been prepared in accordance Section 5.1(f) NYSDEC *Final DER-10 Technical Guidance for Site Investigation and Remediation*, dated May 2010.

1.1 CERP ORGANIZATION

This CERP has been organized in general accordance with the Section 5.1(f) NYSDEC *DER-10* as follows:

- Section 1 – Introduction, describes the purpose and objectives of the CERP
- Section 2 – Community Air Monitoring Plan (CAMP)
- Section 3 – Public Protection Measures
- Section 4 – Vapor/Odor Management
- Section 5 – Noise Reduction Plan
- Section 6 – Vibration Monitoring
- Section 7 – Site Security Plan
- Section 8 – Storm Water and Erosion Control Plan
- Section 9 – Waste Management
- Section 10 – Traffic Management Plan

2.0 COMMUNITY AIR MONITORING PLAN (CAMP)

A site-specific CAMP has been prepared for the site and shall be in force during the course of the site remediation. The intent of the CAMP 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 work activities) from volatile organic compounds (VOCs) and particulates (i.e., dust) carried in the air as a direct result of remedial work activities on the Site. The CAMP provides air monitoring procedures, contamination concentration limits, and procedures to reduce VOCs and dust generation if the limits are approached. See **Appendix B** for further information.

The generic CAMP presented in *NYSDEC DER-10* titled *Appendix 1A-New York State Department of Health Generic Community Air Monitoring Plan* and included in **Appendix B**, will be followed and adhered to for the site remediation.

A program for suppressing fugitive dust and particulate matter monitoring will also be conducted in accordance *NYSDEC DER-10* titled *Appendix 1B Fugitive Dust and Particulate Monitoring* which is also provided in **Appendix B** noted above. The fugitive dust suppression and particulate monitoring program will be employed at the site during site remediation and other intrusive activities which warrant its use.

3.0 PUBLIC PROTECTION MEASURES

A number of plans to protect the public from physical hazards at the Site will be implemented. Each of these measures is designed to make the area surrounding the remediation safe for the general public.

3.1 WARNING SIGNS

The contractor will place signs at the Site entrance that the Site is being remediated by Community Services Seventh Housing LLC under the oversight of the NYSDEC. In addition, signs will be placed at entrances stating this is an active construction site and only authorized personnel are allowed onto the Site.

3.2 SITE FENCING

Fencing will be placed around the Site where none exist and entrance gates locked during non-work hours.

4.0 VAPOR/ODOR MANAGEMENT PLAN

If significant nuisance odors are noted, the Owner, the BE3 site inspector, and the contractor will consult to determine what type of emission control action is appropriate. Actions that may be taken to reduce contaminant or odor levels include the following:

- Covering working areas of exposed impacted soils, trucks loaded with impacted soils, or stockpiles of impacted soils with tarpaulin covers, vapor reducing foam, or other vapor control agents.
- Reduce the production rate or change the sequence of work activities.
- Change the work methods or equipment to alternatives that reduce the potential to create dust or release contaminants into the air.
- Using specialized odor suppressing foams to cover the contaminated soils. The foam is a product which reduces the ability of vapors and dust to enter the air.
- Misting water onto soil in order to prevent dust that may carry odors.

Corrective measures may also include halting work and implementing additional dust suppression techniques which may include:

- Applying water on haul roads
- Wetting equipment and excavation faces

- Spraying water on truck buckets during excavation and dumping
- Restricting heavy equipment traffic use or areas of operation
- Restricting vehicle speeds
- Covering excavated areas and materials after excavation activity ceases or completing site excavation, grading, and filling in small area sequences to reduce leaving large surface areas exposed

In practice, these actions will typically be used proactively to prevent alert levels from being reached at the Site perimeter.

5.0 NOISE REDUCTION PLAN

The remedial activities conducted on Site will conform to the noise codes/ordinances for the City of Niagara Falls during the work.

To be in compliance, construction activities on the Site will be prohibited between the hours of 6:00 PM and 7:00 AM Monday through Friday, Saturdays, Sundays, and on all legal holidays. In the event of an emergency that requires work to be conducted during the aforementioned times, the contractor will seek a variance from the Building Department Administrator of the City of Niagara Falls to permit such activities.

It is not anticipated that the activities at the Site will create excess levels of noise to a degree that would cause concern to nearby residents. If noise issues do become a concern the following steps may be taken to reduce the noise level caused by construction:

- Locating pieces of machinery on the Site to maximize the distance from potential receptors.
- Developing a design for a site perimeter sound barrier.
- Specifying the use of low noise emission construction equipment.

The work that will be completed does not currently require the contractor to perform tasks which are commonly associated with high levels of noise. The periodic use of back up alarms on vehicles will in all likelihood be the noise that is commonly heard from the Site, and the contractor will make every effort to minimize the need for vehicles to use them.

6.0 VIBRATION MONITORING

It is not anticipated that the remedial activities at the Site will generate high levels of vibrations for nearby residents. The remedial work that will be completed does not currently require the contractor to perform tasks that are commonly associated with high levels of vibration such as blasting, or pile driving.

The most common source of vibrations from the Site will be from compaction equipment, which will be used to compact clean soil as it is used to replace impacted soil that has been excavated. Compaction equipment will create vibrations over a very small area and not nearly powerful enough to cause damage to nearby structures.

7.0 SITE SECURITY PLAN

The objectives of the Site security plan are to prevent the vandalism/destruction of construction equipment, prevent access, and minimize health and safety concerns for the surrounding property owners.

7.1 PERIMETER SECURITY

The site will be completely fenced and have locked gates.

7.2 EQUIPMENT SECURITY

All vehicles and/or equipment left on the site will be secured at the end of each working day and during non-workdays. No vehicles or equipment will be left overnight in an unsecured location. The contractor will ensure that all non-essential equipment is de-energized when left on site and not in use to prevent any malfunctions from occurring while workers are not present.

8.0 STORMWATER AND EROSION CONTROL PLAN

The stormwater and erosion control plan is intended to minimize soil erosion, and control stormwater on the Site.

8.1 IMPLEMENTATION OF EROSION CONTROL MEASURES

Filtrexx erosion control Soxx or silt fences will be installed around the perimeter of the support zones and all areas to be excavated and/ or backfilled.

The contractor shall install and maintain the erosion control measures for the duration of the excavation/backfill work.

8.2 STORMWATER RUNOFF CONTROL

The contractor will be required to utilize appropriate control measures to direct stormwater to flow around an excavation area and to a discharge point. Appropriate controls may include digging a small ditch to direct the water flow, or building barriers out of clean soil to collect the stormwater so it can be pumped to a suitable discharge point

9.0 WASTE MANAGEMENT

The waste management plan identifies the procedures for managing, treatment, and disposal of waste materials generated as a result of the Site remediation. All wastes removed from the Site will be transported by properly permitted and/or licensed waste haulers directly to approved disposal facilities. All trucks will be inspected to ensure the proper placards, decals and permits are displayed. Trucks will utilize the most direct hauling route to the disposal facility.

9.1 SOIL MANAGEMENT AND TREATMENT

Impacted soils removed from excavation areas will be loaded into trucks for transport to the approved disposal facility. Trucks will not be allowed to stage on local roadways. The Contractor will schedule trucks in a manner that will minimize the wait time for loading.

Vehicles containing impacted soils will be covered with a solid plastic tarp. If necessary, spray-on odor suppressing materials may be used to reduce potential VOC emissions or odors during transit.

9.2 CONSTRUCTION DEWATERING AND TREATMENT

Stormwater encountered during excavation that has been impacted by contaminated soils will be pumped to a temporary storage/Frac tank. The water will be sampled and tested to determine if it can be discharged to the City of Niagara Falls sewer system or required to be sent to a disposal facility.

10. TRAFFIC MANAGEMENT PLAN

The objectives of the traffic plan at the Site are to describe the objectives for traffic control and address any potential concerns. The traffic control plan outlines traffic management at the site for:

- Trucking materials on and off site
- Contractor access and parking
- Equipment access and storage
- Traffic control at the site entrance
- Requirements for truck flagmen at site access gates.

Trucking of materials and equipment to and from the site will be through an established entrance gate. Contractor employees will also enter and leave the site through this same gate. The contractor's traffic control personnel will direct traffic as needed upon delivery of equipment, trailers, excavation support materials, etc. To maintain access and lines of sight, the contractor will arrange for and coordinate with the appropriate local authorities to ensure that on-street parking nearest to the entrance/exit gate is limited throughout the duration of the work. Trucks will not be allowed to queue on local streets; however, the contractor may negotiate with a third party to obtain off-site parking where vehicles can wait to be loaded. All the roadways utilized by the contractor during the work will be checked daily for spillage and seepage, and cleaned to the satisfaction of Owner's representative, as necessary. All trucking on local roadways will meet the requirements of all local regulatory agencies.

10.1 TRUCK CONTROLS

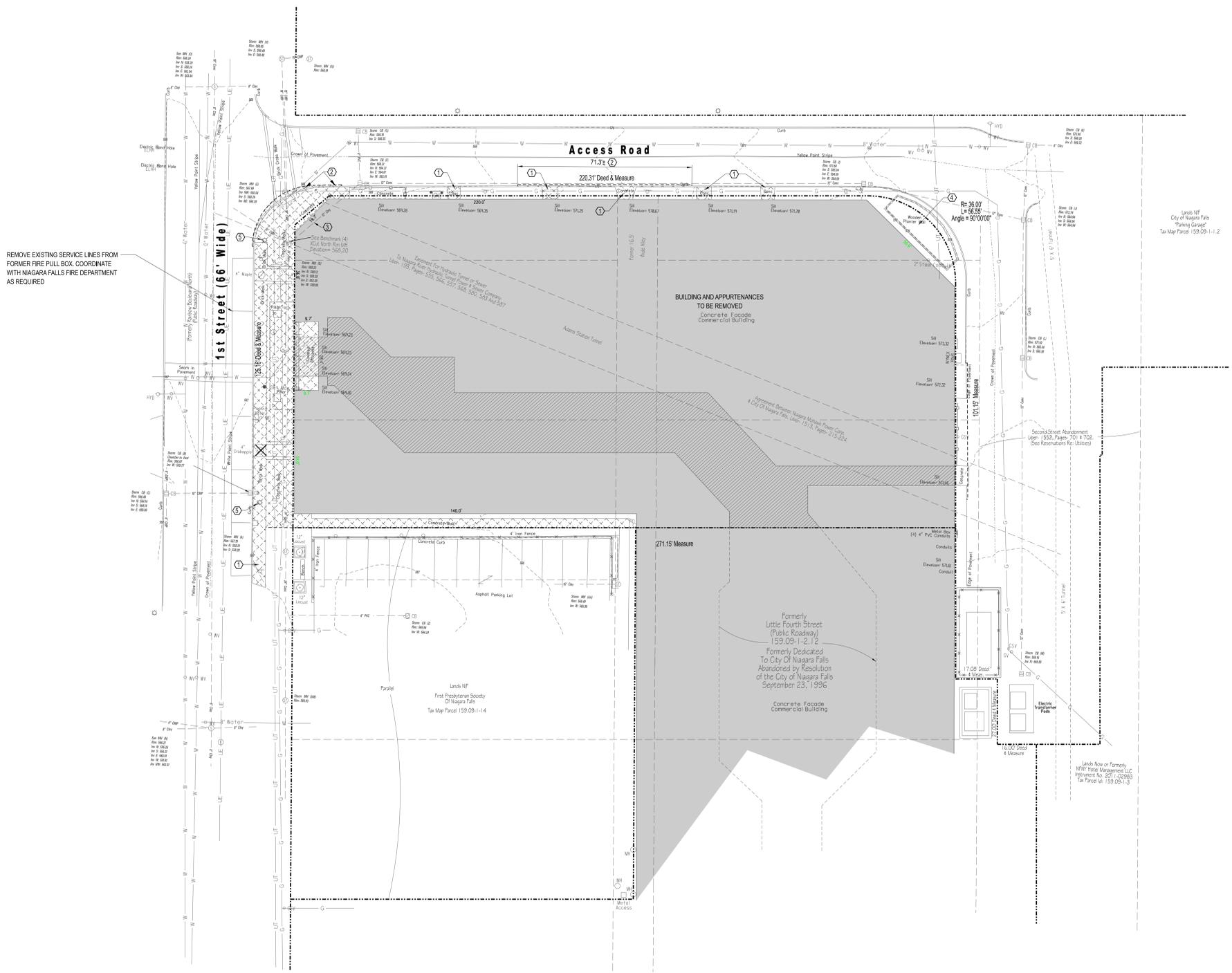
Upon arrival to the site, each truck will be visually inspected to ensure appropriate permits are in place. Trucks hauling impacted soil will be initially lined with polypropylene plastic tarp along their beds to prevent water from seeping out of the soil onto local streets. When applicable, odorous truckloads of soil will be foamed to control odors (refer to Sections 4 and 9). The trucks will also utilize a heavy tarp which will be extended over the cargo area and overlap the sides and rear of the cargo area to prevent soil being removed from the truck by wind. Trucks, before exiting the site, will pass through an inspection area and be inspected to ensure tires and undercarriages are clean and that tarps are secured. Excess mud and soil on truck carriages will be manually removed with brooms and brushes as necessary. The proper cleaning of trucks exiting the site will aid in minimizing/eliminating dust and soil leaving the site.

APPENDIX H

NEW DEVELOPMENT

CIVIL CONSTRUCTION PLANS





REMOVE EXISTING SERVICE LINES FROM FORMER FIRE PULL BOX. COORDINATE WITH NIAGARA FALLS FIRE DEPARTMENT AS REQUIRED.

DEMOLITION PLAN NOTES

- CONTRACTOR TO REMOVE & DISPOSE OF ALL ITEMS INDICATED & ANY ITEMS INCIDENTAL TO THE CONSTRUCTION AS REQUIRED.
- CONTRACTOR SHALL PROTECT/PRESERVE ALL EXISTING ITEMS TO REMAIN, INCLUDING, BUT NOT LIMITED TO BUILDINGS, PAVEMENT, OVERHEAD & BURIED UTILITIES, TREES, LANDSCAPING, ETC. DAMAGE TO ITEMS SCHEDULED TO REMAIN SHALL BE REPAIRED OR REPLANTED AT NO ADDITIONAL COST TO THE OWNER.
- UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL HAVE ALL UNDERGROUND FACILITIES LOCATED AND MARKED PRIOR TO EXCAVATION/DEMOLITION/CONSTRUCTION.
- DISCONNECT, CAP AND REMOVE/ABANDON EXISTING UTILITIES FOR ALL BUILDINGS TO BE DEMOLISHED, UNLESS NOTED OTHERWISE. ALL UTILITY TERMINATIONS SHALL BE IN ACCORDANCE WITH THE APPLICABLE UTILITY COMPANY REQUIREMENTS.
- CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS/DEBRIS REMOVED FROM THE SITE.
- CONTRACTOR TO OBTAIN HIGHWAY WORK PERMIT PRIOR TO THE START OF CONSTRUCTION. CALL FOR STAKEOUT OF UTILITIES BEFORE STARTING WORK. NOTIFY ENGINEER OR OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES FOUND IN THE FIELD.
- THIS PLAN IS PREPARED FROM A SURVEY SHOWING KNOWN SURFACE FEATURES. IT IS INTENDED AS A GUIDE TO THE CONTRACTOR, NOT AS A COMPLETE AND UNIVERSAL DEMOLITION PLAN. SEE THE SITE PLAN. MORE FEATURES (NOT INDICATED) MAY REQUIRE DEMOLITION TO CONSTRUCT THE SITE PLAN. CONTRACTOR MUST VISIT THE SITE TO CONFIRM DEMOLITION EFFORT PRIOR TO BIDDING.
- REMOVE CONCRETE SIDEWALK AND/OR PAVEMENT TO THE LIMITS INDICATED. SAW CUT CONCRETE TO THE NEAREST EXISTING CONTROL/EXPANSION JOINT.
- BUILDING DEMOLITION SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS/REGULATIONS.
- MAINTAIN STORM SEWER CONTINUITY & POSITIVE DRAINAGE DURING DEMOLITION, REMOVAL & CONSTRUCTION OF STORM SEWERS & INLETS.

DEMOLITION PLAN SHEET KEYNOTES

- ① REMOVE EXISTING CONCRETE/ASPHALT PAVEMENT & SUBBASE AND/OR MASONRY UNITS
- ② ACCESS ROAD CURB SHALL BE SAW CUT FULL-DEPTH AND NEATLY REMOVED FROM THE BACKSIDE. ACCESS ROAD ROAD PAVEMENT SHALL NOT BE DISTURBED AND THE PAVEMENT EDGE SHALL BE USED AS A FORM FOR PLACING NEW CURB.
- ③ REMOVE STORM PIPE
- ④ REMOVE PLANTER
- ⑤ REMOVE LIGHT POLE & FIXTURE, STORE AND REINSTALL ON NEW BASE

DEMOLITION PLAN LEGEND

CONCRETE/ASPHALT PAVEMENT/MASONRY UNITS TO BE REMOVED

HCR SHARS NO. 20230391

Drawn By: S.S.
 Checked By: V.O.
 Project Manager: V.O.

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Revisions

No.	Description

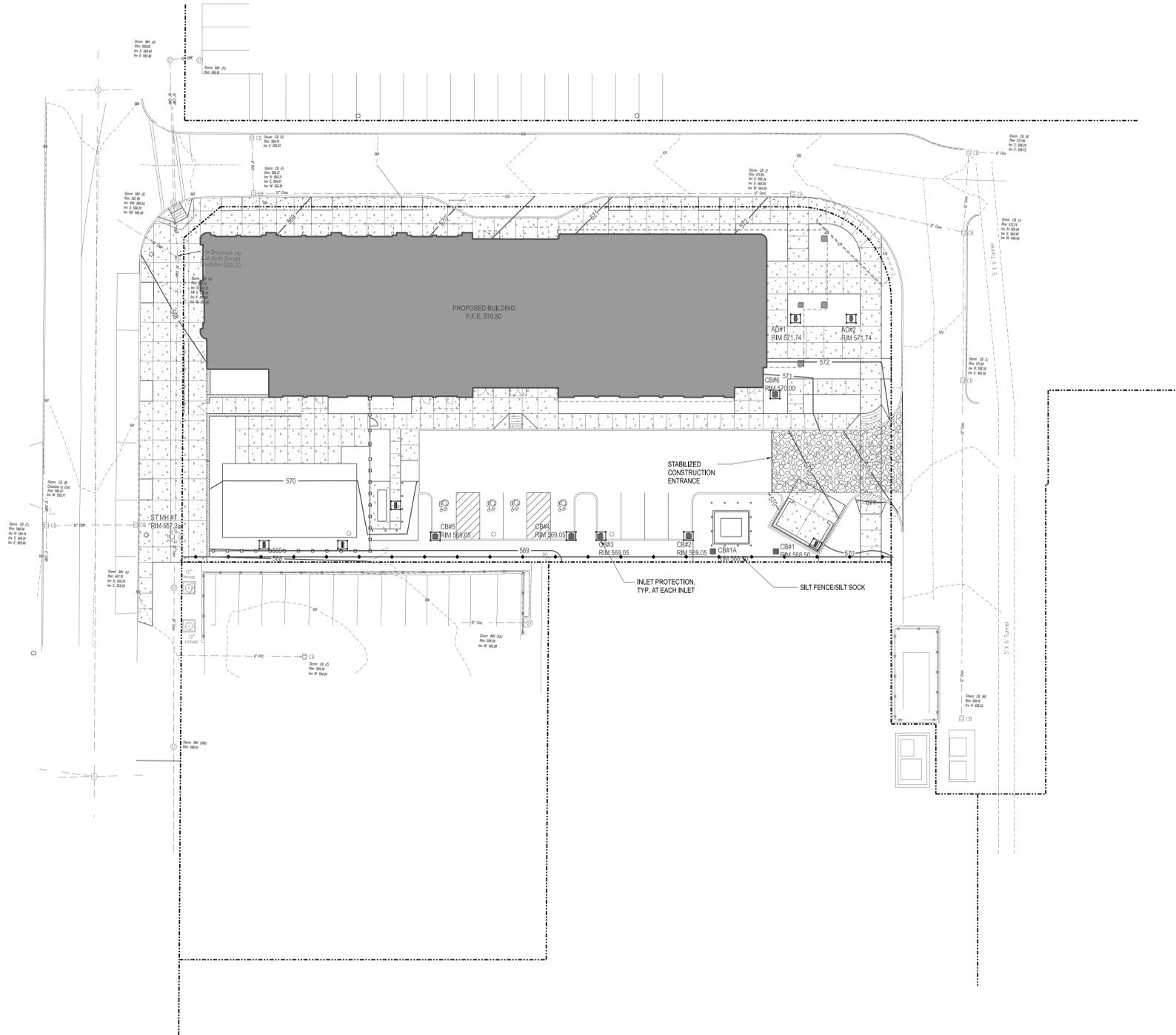
The Nest
 333 1st Street
 Niagara Falls, NY 14303
 SWBR Project Number 22234.00

Community Services for Every1
 180 Oak Street
 Buffalo, NY 14203

C-102
 DEMOLITION PLAN

DECEMBER 6TH, 2024
 CONSTRUCTION DOCUMENTS





EROSION CONTROL PLAN LEGEND

-  INLET PROTECTION
-  SILT FENCE/SILT SOCK
-  STABILIZED CONSTRUCTION ENTRANCE



HCR SHARS NO. 20230391

Drawn By: S.S.
Checked By: V.O.
Project Manager: V.O.

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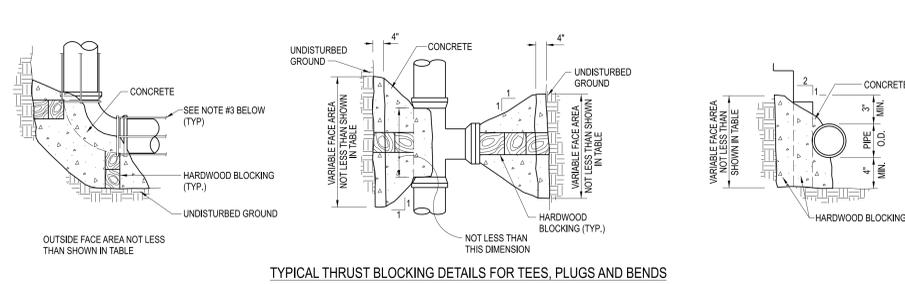
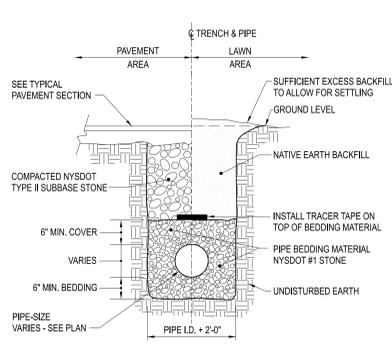
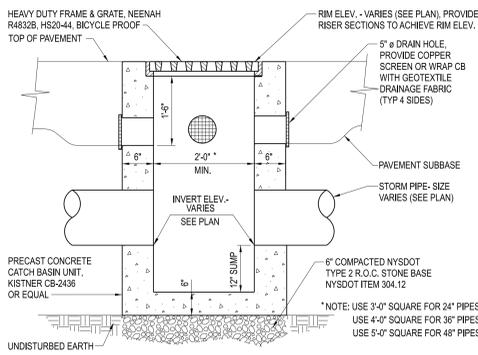
Revisions

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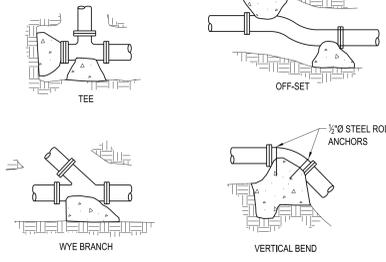
C-106
EROSION &
SEDIMENT
CONTROL PLAN

DECEMBER 6TH, 2024
CONSTRUCTION
DOCUMENTS

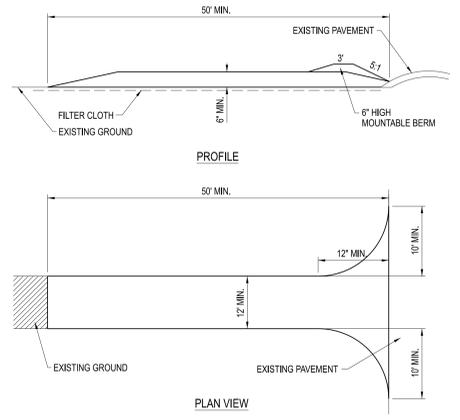


PIPE SIZE	AREA SQ. IN.	TOTAL PRESS. IN LBS.	AREA OF BLOCK IN SQUARE FEET				
			TEES PLUGS	90° BENDS	45° BENDS	22 1/2° BENDS	11 1/4° BENDS
4"	26	5,800	1.5	2.1	1.1	1.0	1.0
6"	48	10,800	2.7	3.8	2.1	1.0	1.0
8"	79	17,800	4.5	6.3	3.5	2.0	1.0
10"	114	25,700	6.4	9.0	4.9	2.5	1.25
12"	159	35,600	9.0	12.7	6.9	3.5	2.0

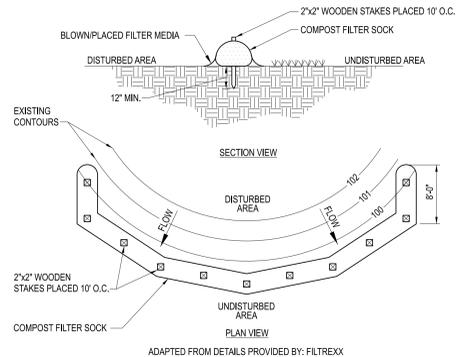
- NOTES:
- THRUST BLOCKS ARE TO BE CONSTRUCTED OF DRY-MIX PORTLAND CEMENT ATTAINING 3000 AT 28 DAYS.
 - THRUST BLOCKS ARE TO BE USED IN CONJUNCTION WITH LOCKING COLLARS.
 - PROVIDE TIE-RODS OR MEGA-LUGS TO ALIGNMENT CONCRETE THRUST BLOCKS AS SHOWN.



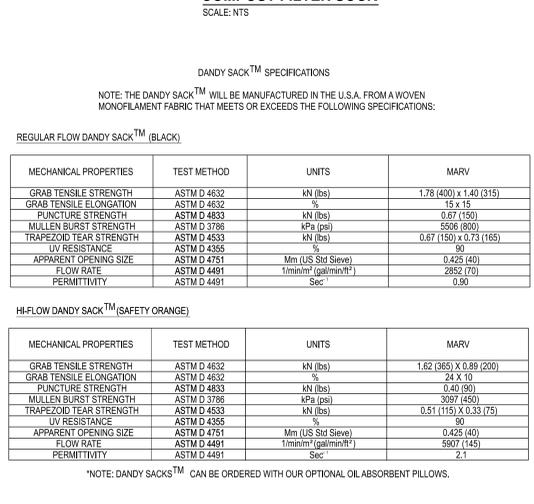
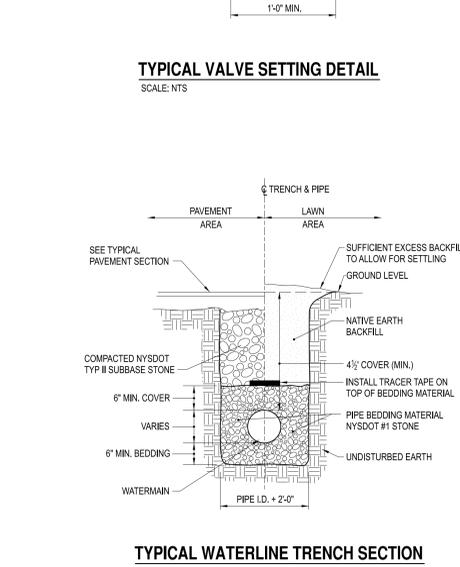
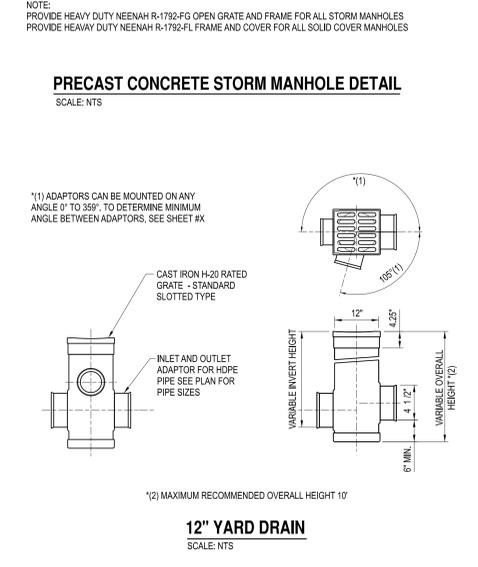
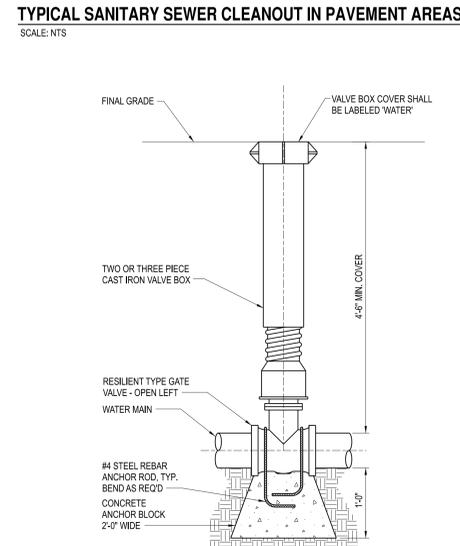
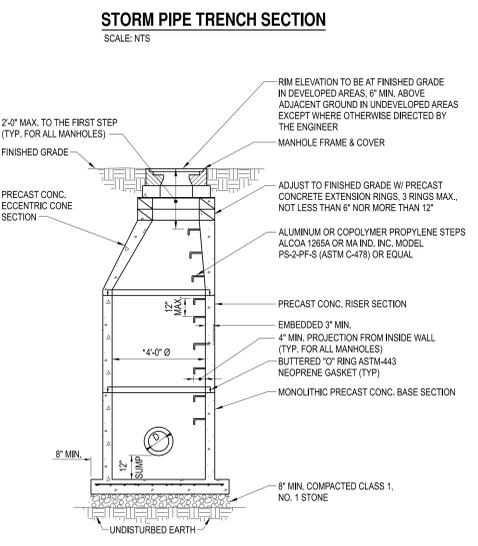
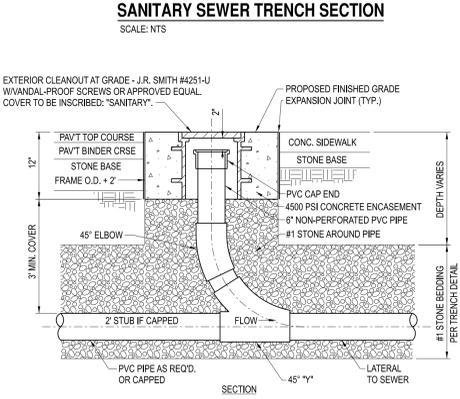
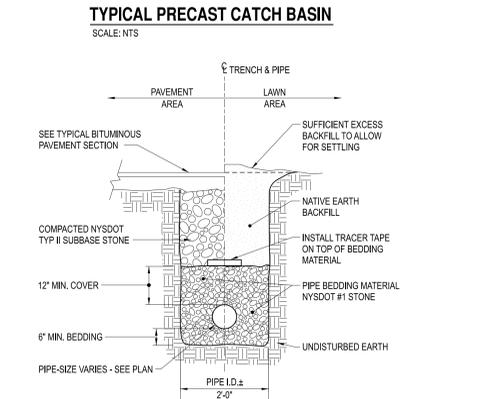
- STABILIZED CONSTRUCTION ENTRANCE NOTES:
- STONE SIZE - USE 2" STONE, WASHED, CRUSHED.
 - LENGTH - NOT LESS THAN 50 FEET
 - THICKNESS - NOT LESS THAN SIX (6) INCHES
 - WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
 - FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
 - SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE & WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 - PERIODIC INSPECTION & NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.



- EROSION CONTROL NOTES:
- THE FOLLOWING EROSION CONTROL PROCEDURE SHALL BE ADHERED TO BY THE CONTRACTOR:
- INSTALL TEMPORARY SILT FENCE BARRIERS AS SHOWN ON THE PLAN AND AT ALL EXISTING STORMWATER CATCH BASINS WITHIN THE WORK AREA TO PREVENT SEDIMENT MIGRATION. ALL SILT FENCE/SOCK BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
 - THE TOPSOIL SHALL BE STRIPPED & STOCKPILED ON SITE FOR REUSE AS DIRECTED BY THE OWNER. ALL LOCAL ORDINANCES REGARDING THE SALE AND/OR REMOVAL OF TOPSOIL FROM THE SITE MUST BE FOLLOWED.
 - ALL SILT FENCES/SOCKS SHALL BE REPLACED WHENEVER THEY BECOME CLOGGED OR INOPERABLE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE & REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
 - THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION, DURING EARTHWORK OPERATIONS, WATER SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR AND WATER APPLIED AS NECESSARY AND AS DIRECTED BY THE OWNER IN ORDER TO CONTROL DUST.
 - DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED & ROAD SURFACES CLEANED BY THE CONTRACTOR ON A DAILY BASIS.
 - ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 4" DEPTH & SEEDS IMMEDIATELY AFTER FINE GRADES TAKES PLACE & AS SOON AS PHYSICALLY POSSIBLE.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM SEWERS, DITCHES & CULVERTS. SILT BUILD-UP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE TOWN.
 - IN ADDITION TO STORM WATER DISCHARGES, THE FOLLOWING NON-STORM WATER DISCHARGES MAY CONTRIBUTE TO THE RUN-OFF FROM THE SITE:
 - WATER FROM WATER SERVICE FLUSHINGS
 - WATER USED TO WASH DOWN CONSTRUCTION VEHICLES (NO DETERGENTS)
 - WATER USED FOR DUST CONTROL
 - UNCONTAMINATED GROUNDWATER
 - THE ABOVE NON-STORM WATER FLOWS SHALL BE TREATED IN THE SAME MANNER AS STORM WATER FLOWS INDICATED HEREIN.



- ADAPTED FROM DETAILS PROVIDED BY: FILTREXX
- | COMPOST STANDARDS TABLE | |
|----------------------------|-------------------------------|
| ORGANIC MATTER CONTENT | 25% - 100% (DRY WEIGHT) |
| ORGANIC PORTION | FIBROUS & ELONGATED |
| PH | 6.0 - 8.0 |
| MOISTURE CONTENT | 30% - 60% |
| PARTICLE SIZE | 100% PASSING A 1" SCREEN |
| SOLUBLE SALT CONCENTRATION | 10 - 50% PASSING A 30" SCREEN |
| | 5.0 dg/M (mg/mole/cm) MAXIMUM |
- SOCK FABRIC SHALL MEET STANDARDS OF TABLE 5.1. COMPOST SHALL MEET THE STANDARDS LISTED ON TABLE 5.2.
 - COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 5.2). MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE X-X. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
 - TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
 - ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVE GROUND HEIGHT OF THE SOCK & DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
 - SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
 - BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS. PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
 - UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCKS, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.



APPENDIX I

Site-Specific Work Plan





A SCOTT LAWN YARD COMPANY 

SITE-SPECIFIC REMEDIAL WORK PLAN

The NEST Site

333 1st Street

Niagara Falls, NY 14303

NYSDEC Site No. C932183

Prepared for:

BE3 - Brydges Engineering

960 Busti Avenue, Suite B-150

Buffalo, NY 14213

716-249-6880

Prepared by:



3305 Haseley Dr.

Niagara Falls, NY 14304

Prepared By: Nate Cichocki	Signature: 	Date: 3-6-26	Title: Project Manager
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EXHIBITS

Exhibit AA – Notes

Exhibit A – 9A Trucking Permit

Exhibit B – Erosion Control & Sediment Control Plan

Exhibit C – Truck Haul Route

Exhibit D – Miller Construction Services HASP

Exhibit E – Preconstruction Photographs

Exhibit F – UDIGNY (811) Ticket

Exhibit G – Type C Soil Excavation Detail

Exhibit H – Excavation Plan

Exhibit I – Hydrant Use Permit – Niagara Falls Water Board



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1. PROJECT OVERVIEW

1.1 Site Description

The Site is located at 333 1st Street in Niagara Falls, New York, and is enrolled in the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP). The Site consists of approximately 35,000SF and is currently an existing building foundation and Floor Slab. Surrounding properties include commercial & residential uses. The Site is located within an urban setting with public access in the immediate vicinity.

The purpose of the remedial activities is to address soil contamination identified during prior environmental investigations and to achieve applicable Soil Cleanup Objectives (SCOs) in accordance with NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation.

1.2 Background and Remedial Objectives

Previous environmental investigations identified the presence of contaminated soils exceeding applicable SCOs. For a list of Contaminants of concern (COCs) please reference the RAWP file provided by BE3.

The remedial objective is to excavate and properly dispose of impacted soil exceeding applicable SCOs, confirm attainment of remedial goals through confirmatory sampling, and restore the Site with approved clean backfill material suitable for its intended end use.



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2. SCOPE OF WORK

Miller Construction Services (MCS) shall perform all work necessary to complete the soil remediation in accordance with NYSDEC requirements, including but not limited to:

- Mobilization of personnel and equipment
- Installation of erosion and sediment controls
- Establishment of work limits and site controls
- Excavation and off-site disposal of contaminated soil
- Management of groundwater, if encountered
- Confirmatory soil sampling and laboratory analysis by BE3's Qualified Environmental Professional (QEP)
- Importation and placement of approved clean backfill
- Site grading and stabilization
- Demobilization and restoration

All work shall be performed in accordance with applicable federal, state, and local regulations.



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3. CONSTRUCTION SCHEDULE

The remedial contractor shall complete the work in accordance with the overall project schedule outlined in the contract documents. Major milestones include mobilization, installation of controls, excavation activities, confirmatory sampling, backfilling, and final restoration.

A detailed construction schedule will be provided when requested in a timely manner.

4. SEQUENCE AND METHODS OF WORK

4.1 Excavation Approach

Remedial excavation activities will be conducted utilizing a phased, cell-based approach to ensure controlled removal of impacted soil while maintaining environmental compliance and site stability. **[Exhibit H]**

The identified excavation footprint will be divided into manageable cells based on site layout, depth of contamination, and operational efficiency. The size of each cell will roughly be 60'x30'x7'. This will allow for effective excavation, sampling, and backfilling without leaving excessive open areas.

Excavation will proceed sequentially from one cell to the next. Each cell will be excavated to the required depth based on prior site characterization data and field observations. Upon completion of excavation within a cell, sidewall and floor confirmatory soil samples will be collected by BE3's Qualified Environmental Professional and will be recorded/tracked efficiently.

Following receipt of acceptable analytical results, the excavated cell will be backfilled with approved clean material prior to proceeding to the next cell.

This phased approach will:

- Minimize the area of open excavation at any one time
- Improve control of groundwater and stormwater
- Reduce potential for off-site migration of contaminants
- Enhance site safety and operational efficiency

4.2 Excavation Methods

Excavation within each cell will be performed using hydraulic excavators and appropriate earthmoving equipment suitable for the anticipated depth and soil conditions.

Excavated soil will be directly loaded into covered trucks for off-site transport to the approved disposal facility. Temporary stockpiling is not anticipated; however, if short-term staging is required due to logistical constraints, stockpiled materials will be placed on polyethylene sheeting and covered to prevent runoff and dust generation.

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Excavation depths and limits will be guided by pre-characterized contamination boundaries and field observations including staining, odor, and soil characteristics. BE3's QEP will provide oversight to confirm that removal limits are consistent with the approved remedial objectives.

4.3 Excavation Controls

To maintain environmental compliance and public protection during excavation activities, the following controls will be implemented:

- Continuous dust suppression through water application as necessary
- Stabilized construction entrance to prevent off-site soil tracking
- Perimeter erosion and sediment controls maintained and inspected regularly
- Controlled management of groundwater if encountered
- Compliance with OSHA excavation safety requirements including sloping or shoring if required **[Exhibit G]**

All excavation slopes will be maintained in accordance with applicable OSHA trenching and excavation standards.

According to the existing survey and site photos, the existing foundation wall is located on the property line. Within our cell-based approach, we may reduce the cell area along the property line to a smaller and more manageable workspace. Once we backfill the reduced cell, proper sloping methods can occur as we excavate more towards the center of the site.

For stabilization at the property line, we may leave the existing foundation wall intact and remove it at the end project. This will be decided based on existing conditions and after a "means & methods" **[See Exhibit AA]** conversation with all applicable personnel on site including the NYSDEC Project Manager, Owner & the QEP.

4.4 Backfilling and Restoration

Upon receipt of confirmatory analytical results demonstrating compliance with applicable SCOs, each completed cell will be backfilled with approved clean material meeting DER-10 import requirements.

Backfill will be placed in controlled lifts and compacted as required to achieve stable subgrade conditions suitable for the Site's intended future use. Final grading will restore the Site to approved design elevations in accordance with the project grading plan.

5. SOIL HANDLING AND DISPOSAL

5.1 Soil Characterization

Excavated soil will be managed in accordance with laboratory analytical results and regulatory classification. Soil characterization data have been used to establish waste profiles for disposal facility acceptance.

5.2 Disposal Facility

Contaminated soil will be transported to a properly permitted and authorized disposal facility that meets all regulatory requirements. Documentation of facility approval and acceptance has been obtained. Please see attached **[Exhibit A]** 9A Trucking Permit with each facility listed. The highlighted facility will be utilized.

5.3 Transportation and Tracking

All soil will be transported by a licensed and permitted waste hauler in accordance with 6 NYCRR Part 364 requirements. Trucks will be lined and covered prior to leaving the Site. Bills of Lading and disposal receipts will be maintained for all loads removed from the Site.

A daily log documenting truck counts, destination, and volume will be maintained throughout remediation activities.



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6. GROUNDWATER MANAGEMENT

If groundwater is encountered during excavation activities, it will be managed in a controlled manner to prevent off-site migration and environmental impact.

Groundwater will be pumped to temporary storage tanks or frac tanks for settling and characterization sampling. Water will be disposed of at a permitted facility or managed in accordance with applicable SPDES requirements. No uncontrolled discharge to the ground surface, storm drains, or adjacent properties will occur.

If groundwater conditions materially affect excavation operations, the Environmental Professional and NYSDEC will be notified.

7. EROSION AND SEDIMENT CONTROL

Erosion and sediment controls will be installed prior to commencement of earth-disturbing activities and maintained throughout construction.

Controls will include, at a minimum:

- Perimeter silt sock
- Stabilized construction entrance
- Storm drain inlet protection
- Stockpile containment and covering if stockpiling occurs.
- Temporary stabilization measures

The Erosion and Sediment Control Plan is included with this submission. Please see attached **[Exhibit B]**.

Routine inspections will be conducted and documented to ensure proper functioning of controls.

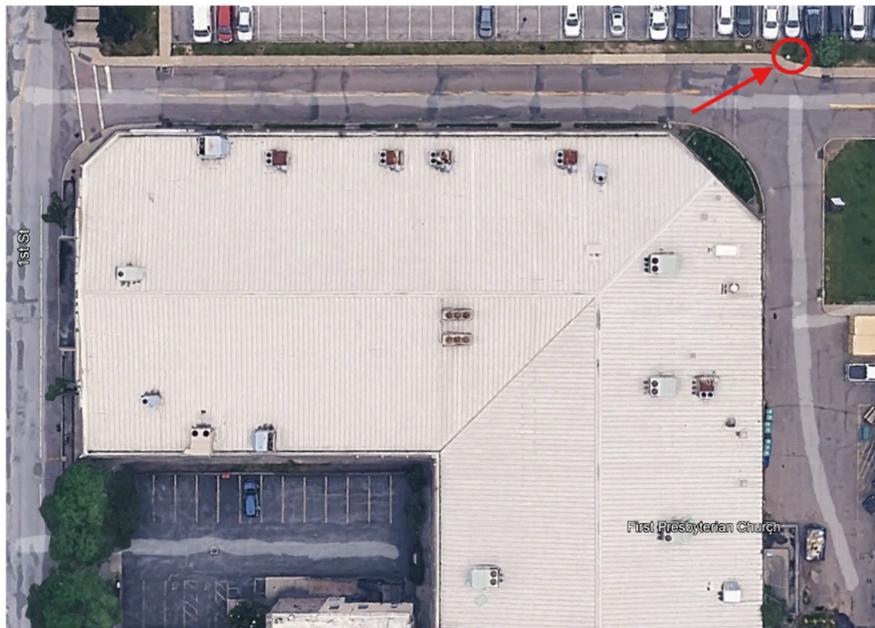
8. DUST CONTROL AND AIR MONITORING

Dust suppression measures will be implemented throughout remediation activities to minimize airborne particulate migration. These measures will include:

- Water spray or misting during excavation and loading
- Covering of trucks prior to departure
- Limiting soil drop heights
- Temporary cessation of work during high wind events if necessary

Community Air Monitoring will be conducted in accordance with the NYSDOH Community Air Monitoring Plan (CAMP). Monitoring will include real-time particulate and volatile organic compound (VOC) measurements at the Site perimeter. Action levels and response procedures are described in the HASP provided by BE3. BE3 will be responsible for all CAMP Measures.

Access to water will be through a Niagara Falls Water Board (NFWB) Fire Hydrant with an approved backflow preventor. The water from the hydrant will fill the water truck. The water truck will be onsite for the duration of the excavation and backfilling work. If water use is extended beyond this portion, it can be prolonged until it is no longer needed. See below location of fire hydrant related to the site. Please see **[Exhibit I]** for hydrant permit. If hydrant permit expires, MCS will renew another.



9. CONSTRUCTION ENTRANCE

A stabilized construction entrance will be installed at the Site access point to prevent tracking of soil and sediment onto adjacent roadways. The entrance will consist of geotextile fabric overlain with crushed stone of sufficient thickness to support construction traffic.

The entrance will be inspected daily and maintained as needed. Street sweeping will be performed if soil tracking occurs.

Please see **[Exhibit H]** for more information. The construction entrance will be constructed prior to start of construction. The existing building slab and foundation will be removed in a 30' wide x 50' long section matching the grade of the existing sidewalk. Within the construction site we will utilize the existing building slab so our trucks can be direct loaded on a level surface as we excavate the proposed cells.



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10. PLANNED TRUCK ROUTES

All trucks transporting soil from the Site will follow designated haul routes approved by the appropriate municipal authorities. Routes will prioritize major roadways and minimize travel through residential neighborhoods to the extent practicable.

A map identifying the approved haul route is included. Please see attached ***[Exhibit C]***.



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11. CLEAN FILL IMPORTATION (DER-10 COMPLIANCE)

Imported backfill material will originate from an identified and approved source. Analytical testing will be conducted in accordance with DER-10 to demonstrate compliance with applicable Soil Cleanup Objectives for the Site's end use.

Documentation including laboratory analytical results and source location will be provided prior to material importation. Please see attached ***[Exhibit AA]***.

Delivery tickets and quantity tracking logs will be maintained.



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12. CONFIRMATORY SAMPLING (BE3)

Confirmatory soil samples will be collected from excavation sidewalls and floors in accordance with DER-10 guidance to verify removal of contaminated material exceeding remedial goals.

Sampling locations and frequency have been determined in the RAWP prepared for this site by BE3. Analytical results will be compared to applicable SCOs.

All analytical data will be included in the Final Engineer Report (FER) submitted to NYSDEC.

13. SOIL STABILIZATION

If unstable or unsuitable subgrade conditions are encountered, stabilization measures may be implemented. These may include over-excavation and replacement with structural fill, placement of geotextile or geogrid reinforcement.

Any significant deviation from planned methods will be coordinated with the NYSDEC project manager, Owner and the QEP and will be solved by “means & methods”.

Please see **[Exhibit G & H]**. The proposed plan shows we will undergo a cell-based excavation approach backfilling as we go. Please see section 4.0 for more information.



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14. HEALTH AND SAFETY

All work will be conducted in accordance with the Site-Specific Health and Safety Plan (HASP), which complies with OSHA 29 CFR 1910.120, 29 CFR 1926, and applicable state regulations.

The Miller Construction HASP includes hazard identification, required personal protective equipment, decontamination procedures, spill response measures, and emergency response procedures. Please see attached **[Exhibit D]**.

15. DOCUMENTATION AND REPORTING

The remedial contractor will maintain comprehensive documentation including:

- Daily field activity reports
- Waste transport documentation and disposal receipts
- Erosion and sediment control inspection logs
- Photographic records
- Confirmatory sampling data and Air monitoring logs will be provided by BE3's QEP.
- UST Closure Report
- Import Requests
- Disposal Manifests

All documentation will be compiled into a Remedial Action Report (RAR) for submission to NYSDEC following completion of the remedial activities.



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16. CONTINGENCY PLAN

If previously unidentified contamination, underground storage tanks, or other unexpected conditions are encountered, work in the affected area will be temporarily suspended.

The Qualified Environmental Professional and Owner will be notified immediately, and NYSDEC will be contacted as required. Remedial actions will be modified as necessary upon regulatory concurrence.



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EXHIBIT AA

NOTES:

- The site pre-remediation topographic/contour map will be provided within BE3's submission.
- Miller Construction Services (MCS) has contacted UDIGNY (811) and will have all existing subsurface utilities marked. Please see attached **[Exhibit F]**.
- The established work limits have already been designated with the temporary fence installed on the perimeter of the job site. Please see attached **[Exhibit E]**.
- The locations of off-site fill sources and clean verification, per DER-10 requirements, are in progress and will be supplied when 'Notice to Proceed' has been received. No fill materials will be brought onto site until submittal and department approval has been made.
- MCS has worked on brownfield sites in the past and currently. The most current and active project that was listed as a DEC Brownfield site is Northland Corridor Redevelopment Project Phase 3.
- Means and Methods refers to the contractor's responsibility to determine, control, and implement the procedures, equipment, sequencing, techniques, and personnel used to perform the work with the consultation of the NYSDEC Project Manager and the Qualified Environmental Professional (BE3) that will be on site.

PART 364
WASTE TRANSPORTER PERMIT NO. 9A-974

Pursuant to Article 27, Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

MILLER CONSTRUCTION SERVICES, INC./dba SCOTT
LAWN YARD INC.
3305 HASELEY DRIVE
NIAGARA FALLS, NY 14304

PERMIT TYPE:

- NEW
 RENEWAL
 MODIFICATION

CONTACT NAME: CHRISTINE ELIZABETH MILLER
COUNTY: NIAGARA
TELEPHONE NO: (716)731-6415

EFFECTIVE DATE: 01/25/2026
EXPIRATION DATE: 01/17/2027
US EPA ID NUMBER:

AUTHORIZED WASTE TYPES BY DESTINATION FACILITY:

The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Allied Waste Niagara Falls Landfill	Niagara Falls , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	Non-Friable Asbestos
Bath Sanitary Landfill	Bath , NY	Petroleum Contaminated Soil	
Chaffee Landfill	Chaffee , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	Non-Friable Asbestos
Chautauqua Landfill	Ellery , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil Waste Tires	Non-Friable Asbestos
Genesee Soil Recycling	Lancaster , NY	Non-Hazardous Industrial/Commercial	C&D Debris
Green Ridge RDF	Gansevoort , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	Non-Friable Asbestos
High Acres Western Expansion Landfill	Fairport , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	Non-Friable Asbestos
Hyland Landfill	Angelica , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil Sludge from Sewage or Water Supply Treatment Plant	
Mill Seat SLF	Riga , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	Non-Friable Asbestos
Modern Landfill, Inc.	Model City , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	Non-Friable Asbestos

*** AUTHORIZED WASTE TYPES BY DESTINATION FACILITY LISTING (continued on next page) ***

NOTE: By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the Environmental Conservation Law, all applicable regulations, and the General Conditions printed on the back of this page.

ADDRESS:

New York State Department of Environmental Conservation
Division of Materials Management - Waste Transporter Program
625 Broadway, 9th Floor
Albany, NY 12233-7251

AUTHORIZED SIGNATURE: Patricia Leonardo Digitally signed by Patricia Leonardo
Date: 2026.01.23 12:41:56 -05'00' Date: ____/____/____

WASTE TRANSPORTER PERMIT

GENERAL CONDITIONS

The permittee must:

1. Carry a copy of this waste transporter permit in each vehicle used to transport waste. Failure to produce a copy of the permit upon request is a violation of the permit.
2. Display the full name of the transporter on both sides of each vehicle and display the waste transporter permit number on both sides and rear of each vehicle containing waste. The displayed name and permit number must be in characters at least three inches high and of a color that contrasts sharply with the background.
3. Transport waste only in authorized vehicles. An authorized vehicle is one that is listed on this permit.
4. Submit to the Department a modification application for additions/deletions to the authorized fleet of vehicles. The permittee must wait for a modified permit before operating the vehicles identified in the modification application.
5. Submit to the Department a modification application to add a new waste category or a new destination facility, or to change the current waste or destination facility category. The permittee must wait for a modified permit before transporting new waste types or transporting to new destination facilities.
6. Submit to the Department a modification application for any change to the permit.
7. Comply with requirements for placarding and packaging as set forth in New York State Transportation Law as well as any applicable federal rules and regulations.
8. Contain all wastes in the vehicle so there is no leaking, blowing, or other discharge of waste.
9. Use vehicles to transport only materials not intended for human or animal consumption unless the vehicle is properly cleaned.
10. Comply with requirements for manifesting hazardous waste, regulated medical waste, or low-level radioactive waste as set forth in the New York State Environmental Conservation Law and the implementing regulations. Transporters who provide a pre-printed manifest to a generator/shipper/offer or of regulated waste shall ensure that all information is correct and clearly legible on all copies of the manifest.
11. Deliver waste only to transfer, storage, treatment and disposal facilities authorized to accept such waste. Permittee must demonstrate that facilities are so authorized if requested to do so.
12. Maintain liability insurance as required by New York State Environmental Conservation Law.
13. Maintain records of the amount of each waste type transported to each destination facility on a calendar-year basis. The transporter is obligated to provide a report of this information to the Department by March 1 of each year.
14. Pay regulatory fees on an annual basis. Non-payment may be cause for revocation or suspension of permit.
15. **This permit is not transferable. A change of ownership will invalidate this permit.**
16. This permit does not relieve the permittee from the obligation to obtain any other approvals or permits, or from complying with any other applicable federal, state, or local requirement.
17. Renewal applications must be submitted no less than 30 days prior to the expiration date of the permit to:

**New York State Department of Environmental Conservation
Division of Materials Management, Waste Transporter Program
625 Broadway, 9th Floor
Albany, NY 12233-7251**

PART 364
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The Permittee is Authorized to Transport the Following Waste Type(s) to the Destination Facility listed :

Destination Facility	Location	Waste Type(s)	Note
Ontario County Sanitary Landfill	Stanley , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	Non-Friable Asbestos
TONAWANDA (T) LANDFILL	TONAWANDA , NY	Non-Hazardous Industrial/Commercial Petroleum Contaminated Soil	

PART 364
WASTE TRANSPORTER PERMIT NO. 9A-974

Pursuant to Article 27, Titles 3 and 15 of the Environmental Conservation Law and 6 NYCRR 364

PERMIT ISSUED TO:

MILLER CONSTRUCTION SERVICES, INC./dba SCOTT
LAWN YARD INC.
3305 HASELEY DRIVE
NIAGARA FALLS, NY 14304

PERMIT TYPE:

- NEW
 RENEWAL
 MODIFICATION

CONTACT NAME: CHRISTINE ELIZABETH MILLER
COUNTY: NIAGARA
TELEPHONE NO: (716)731-6415

EFFECTIVE DATE: 01/25/2026
EXPIRATION DATE: 01/17/2027
US EPA ID NUMBER:

AUTHORIZED VEHICLES:

The Permittee is Authorized to Operate the Following Vehicles to Transport Waste:

(Vehicles enclosed in <>'s are authorized to haul Residential Raw Sewage and/or Septage only)

12 (Twelve) Permitted Vehicle(s)

NY 19951NC
NY 22920ND
NY 22928ND
NY 31336MK
NY 37470NA
NY 37507NA
NY 53040ND
NY 53062ND
NY 69899MM
NY 99094MG
NY 99405MG
NY BR72051
End of List

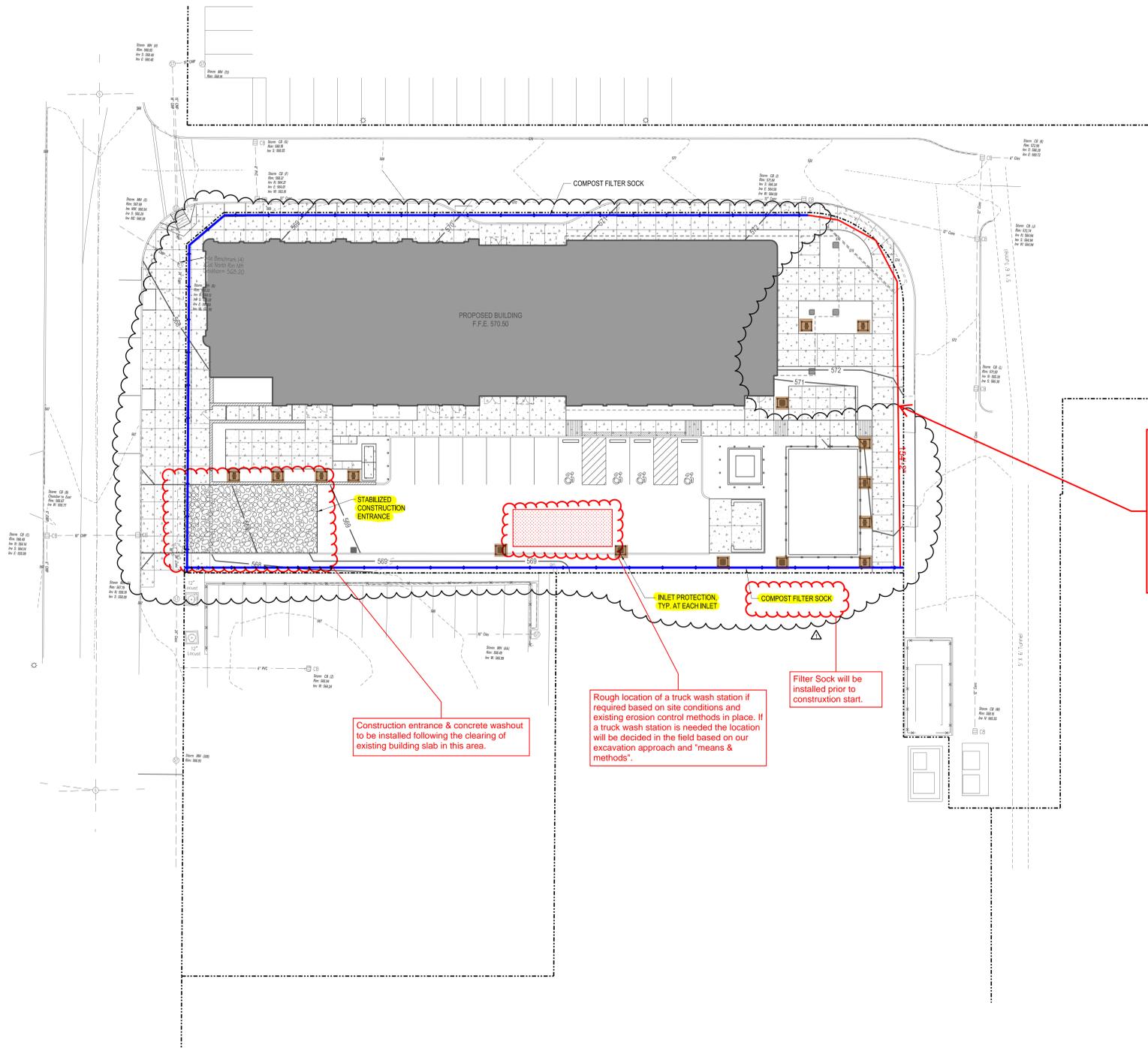
EXHIBIT B

SWBR

307 East Main Street, Buffalo, NY 14204
 910.222.5300 | info@swbr.com
 SWBR NYS Certificate of Authorization # 23021



C&S Engineers, Inc.
 141 Elm Street, Suite 100
 Buffalo, New York 14203
 Phone: 716-847-1630
 Fax: 716-847-1454
www.cscos.com



MCS will adhere to measures shown on this plan

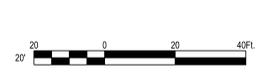
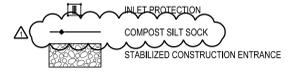
This red line is additional compost filter sock to surround the site per DEC comments

Construction entrance & concrete washout to be installed following the clearing of existing building slab in this area.

Rough location of a truck wash station if required based on site conditions and existing erosion control methods in place. If a truck wash station is needed the location will be decided in the field based on our excavation approach and "means & methods".

Filter Sock will be installed prior to construction start.

EROSION & SEDIMENT CONTROL PLAN LEGEND



HCR SHARS NO. 20230391

Drawn By: S.S.
 Checked By: V.O.
 Project Manager: V.O.

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Revisions
 9/24/2025 ASI -009

The Nest
 333 1st Street
 Niagara Falls, NY 14303
 SWBR Project Number 22234.00

Community Services for Every1
 180 Oak Street
 Buffalo, NY 14203

C-106
 EROSION & SEDIMENT CONTROL PLAN

DECEMBER 6TH, 2024
 CONSTRUCTION DOCUMENTS

FILE PATH:

CREEK MFG

PRODUCT DATA SHEET

PRODUCT: SEDIMENT SOCK - Pre-Filled Filter Sock

PART NUMBER: SSC08101 - SSC24101

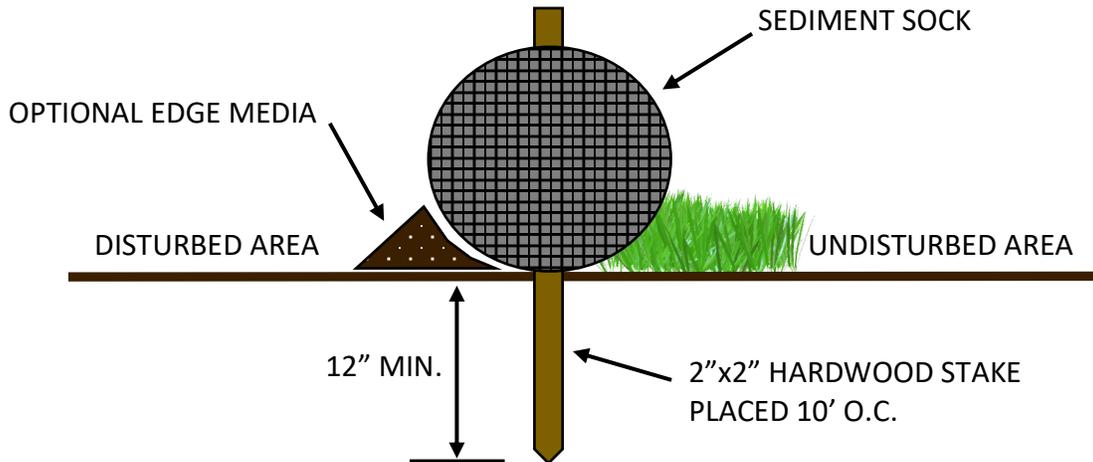
Silt sock to be installed in locations show on plan. See final pages of submittal for detail.

RECOMENDED USE: Sediment and erosion control on construction sites. Its key function is to filter sediment latent run off prior to exiting the disturbed work areas. Please always reference your Construction Drawings and or consult a certified engineer/onsite inspector for proper location and placement.

Product Overview							
Diameter	8 Inch		12 Inch		18 Inch		24 Inch
Pallet Length	200 ft	200 ft	110 ft	100 ft	55 ft	50 ft	40 ft
Section (QTY - Length)	1 - 200 ft	20 - 10 ft	1 - 110 ft	10 - 10 ft	1 - 55 ft	5 - 10 ft	1
Stakes (Pallet QTY)	21	-	12	-	7	-	5
Stake Size	2" x 24"	-	2" x 28"	-	2" x 36"	-	2" x 42"
Pallet Weight (+/-)	1,400 lbs	1,400 lbs	1,450 lbs	1,450 lbs	1,400 lbs	1,400 lbs	1,500 lbs
Part Number	SSC08101	SSC08102	SSC12101	SSC12102	SSC18101	SSC18102	SSC24101

NOTE Pallet weight can vary depending on moisture content of filler materials, stake size is nominal, stakes not included in section pallets sold separately by the pack of 25

Specifications			
Pallet Dimensions	40" x 48" x 76"	Netting Material	Heavy Duty Multi-Filament Polypropylene
Truck Load Quantity	26 Pallets	Netting Color	Black *Typical*
Packaging	Shrink Wrap **optional super sack**	Degradation Type	Photodegradable
Effective Height	75% Sock Diameter *Minimum*	Netting Name	Sediment Sock™
Filler Material	Recycled Wood Products	Mesh Opening	1/8 Inch
Field Functional	+ 2 Years	Fabric Strength - (ASTM D 3787)	220 lbs
Package Storage Life	Outdoor +3 Months/Under Roof +6 Months	UV Rating - (ASTM D4355)	100% @ 1,000 Hrs



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CREEK MFG

DATA SHEET

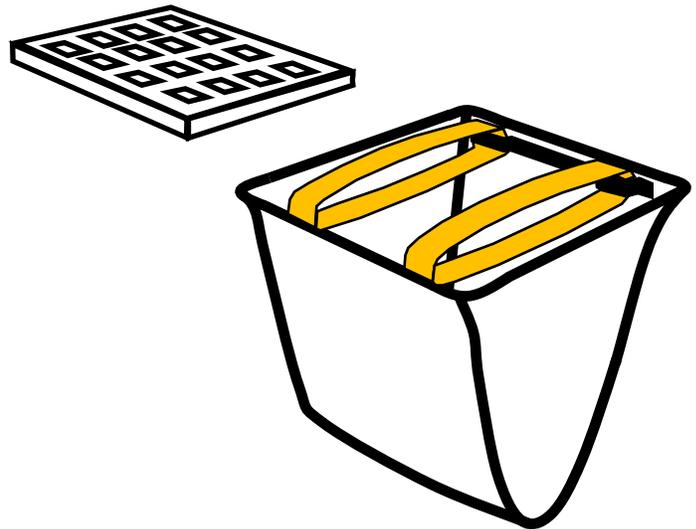
PRODUCT: BELOW GRATE SACK

PART NUMBER: BGS(2x)

Inlet bags to be installed in existing structures & newly installed structures. To be removed upon completion of construction.

Recommended Use: Protect construction sites from sediment latent water leaving the work area. This product is deployed on drainage structure inlet grates to protect the storm water system from collecting sediment. Grates may be located inside or outside paved areas, and can be used where other methods using ground penetration cannot, vehicles and traffic may pass over the bag.

Grate Bag - Specifications	
Water Flow	550 Gal/Min/Ft ²
Bag Material	High Tenacity Woven Monofilament
Lifting Straps	HD Webbing
Bag Sizes	2'x2' – 4'x4' Custom Sizes Available
Installation	
<ul style="list-style-type: none"> Remove grate from the frame Insert the grate into the bag straps Place bag with the grate back in the frame bag down Ensure the grate is sitting flat on the frame 	
Maintenance	
<ul style="list-style-type: none"> In large run off events inspect the bag for damage If sediment is collected around bag, remove and dispose 	
Removal	
<ul style="list-style-type: none"> Clean and remove sediment from around the bag Using the lift straps pull the grate from the frame Remove the grate from the bag and place on frame Dispose of any further sediment and rinse the bag 	



NTPEP Approved Woven Geotextile Fabric, it is inert to biological degradation and resistant to naturally encountered chemicals, alkalis and acids.

Property	Test Procedure	American Standard (TYP.)
Material Composition		Woven Monofilament
Grab Tensile Strength	ASTM D 4632	449 lbs x 315 lbs
Grab Tensile Elongation	ASTM D 4632	37% x 24%
Trapezoid Tear	ASTM D 4533	165 lbs x 150 lbs
CBR Puncture	ASTM D 6241	970 lbs
Apparent Opening Size	ASTM D 4751	30 US Std. Sieve
Water Flow Rate	ASTM D 4491	550 gpm/ft ²
Permittivity	ASTM D 4491	7.3 sec ⁻¹
Percent Open Area	CW-02215	30%
UV Rating	ASTM D 4355	90 % @ 500 Hrs

* NOTE: Mullen Burst Strength ASTM D 3786 is no longer recognized by ASTM D35 on Geosynthetics. Puncture Strength ASTM D 4833 is not recognized by AASHTO M 288-06 and has been replaced with CBR Puncture ASTM D 6241. Unless otherwise stated, all values stated here are Minimum Average Roll Values (MARV). The properties reported above are effective 03-01-2020 and are subject to change without notice*

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CREEK MFG

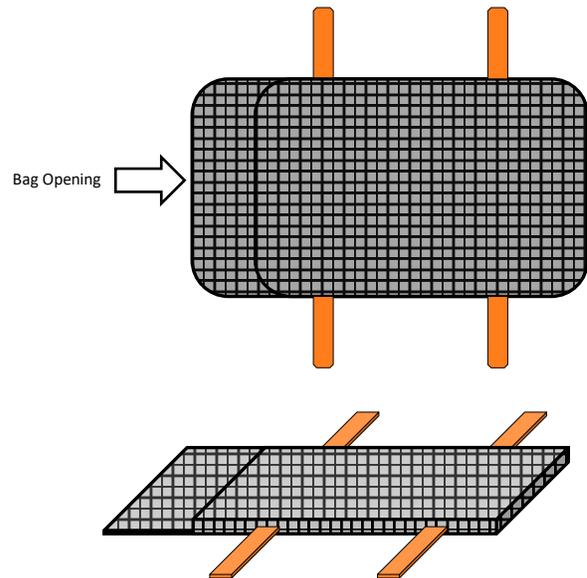
DATA SHEET

PRODUCT: Grate Bag (Drainage Structure Inlet)

PART NUMBER: GB2x2 to GB4x4

Recommended Use: Protect construction sites from sediment latent water leaving the work area. This product is deployed on drainage structure inlet grates to protect the storm water system from collecting sediment. Grates may be located inside or outside paved areas, and can be used where other methods using ground penetration cannot, vehicles and traffic may pass over the bag.

Grate Bag - Specifications	
Water Flow	145 Gal/Min/Ft ²
Bag Material	High Tenacity Woven Monofilament
Lifting Straps	1.5 inch – 1,500# Webbing
Seams	Heavy Duty Double Chain Stitch
Bag Sizes	2'x2' – 4'x4' Custom Sizes Available
Installation	
<ul style="list-style-type: none"> Remove grate from the frame Insert the grate into the bag opening and fold flap over Place bag with flap facing downward into the frame Ensure the grate is sitting flat on the frame 	
Maintenance	
<ul style="list-style-type: none"> In large run off events inspect the bag for damage If sediment is collected around bag, remove and dispose 	
Removal	
<ul style="list-style-type: none"> Clean and remove sediment from around the bag Using the lift straps pull the grate from the frame Remove the grate from the bag and place on frame Dispose of any further sediment and rinse the bag 	



NTPEP Approved Woven Geotextile Fabric GTX-2018-01-134, it is inert to biological degradation and resistant to naturally encountered chemicals, alkalis and acids.

Property	Test Procedure	American Standard
Material Composition		Woven Monofilament
Grab Tensile Strength	ASTM D 4632	365 lbs x 200 lbs
Grab Tensile Elongation	ASTM D 4632	24% x 10%
Wide Width Tensile Strength	ASTM D 4595	2400 x 1680 lbs/ft
Trapezoid Tear	ASTM D 4533	115 lbs x 75 lbs
CBR Puncture	ASTM D 6241	675 lbs
Apparent Opening Size	ASTM D 4751	40 US Std. Sieve
Water Flow Rate	ASTM D 4491	145 gpm/ft ²
Permittivity	ASTM D 4491	2.10 sec ⁻¹
Percent Open Area	CW-02215	10-15%
UV Rating	ASTM D 4355	90 % @ 500 Hrs

* NOTE: Mullen Burst Strength ASTM D 3786 is no longer recognized by ASTM D35 on Geosynthetics. Puncture Strength ASTM D 4833 is not recognized by AASHTO M 288-06 and has been replaced with CBR Puncture ASTM D 6241. Unless otherwise stated, all values stated here are Minimum Average Roll Values (MARV). The properties reported above are effective 03-01-2020 and are subject to change without notice*

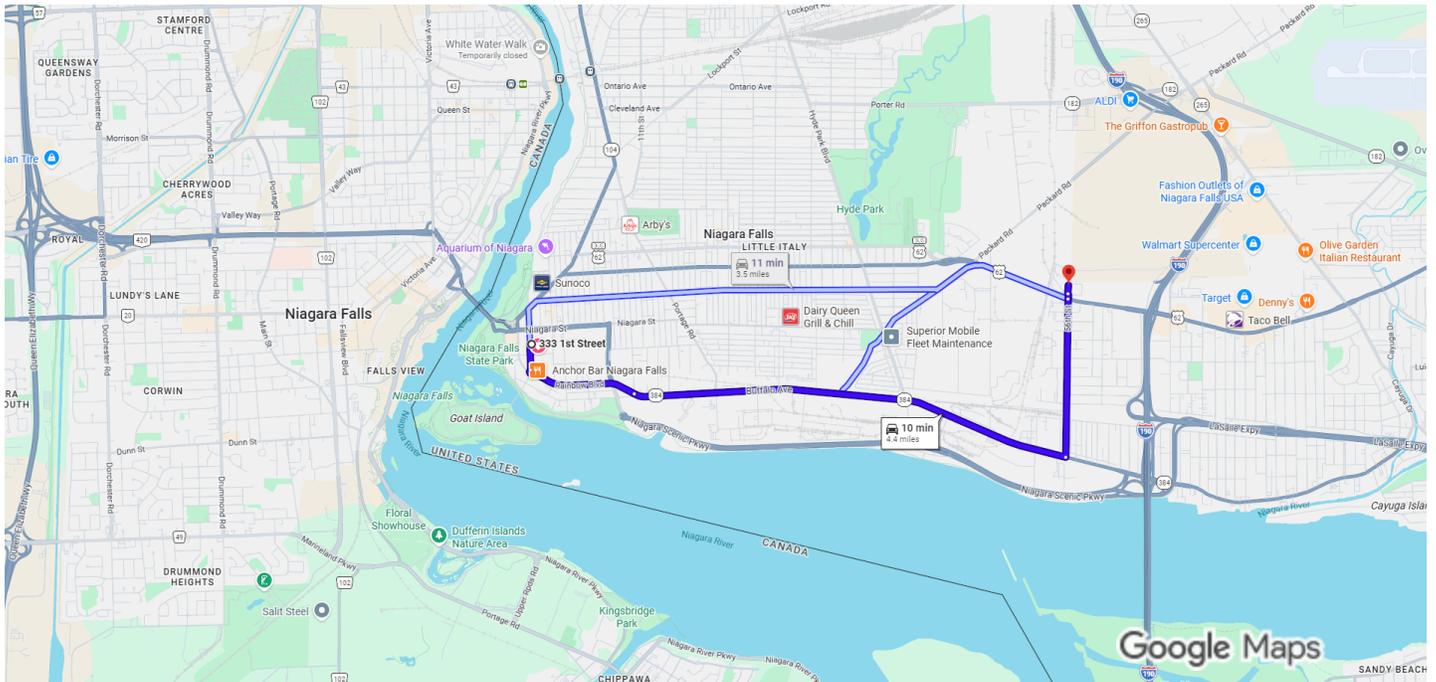
Inlet bags to be installed in existing structures & newly installed structures. To be removed upon completion of construction.

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333 1st St, Niagara Falls, NY 14303 to
Republic Services Pine Avenue Landfill, 5600 Niagara Falls Blvd,
Niagara Falls, NY 14304

Drive 4.4 miles, 10 min



Imagery ©2026, Map data ©2026 Google 2000 ft

333 1st St
Niagara Falls, NY 14303

EXHIBIT C

- ↑ 1. Head toward Old Falls St
_____ 0.2 mi
- ↻ 2. At the traffic circle, take the 3rd exit onto Rainbow Blvd
_____ 0.7 mi
- ↑ 3. Continue onto Buffalo Ave
_____ 2.6 mi
- ↶ 4. Turn left onto 56th St
_____ 0.9 mi
- ↑ 5. Continue straight
_____ 187 ft
- ↷ 6. Turn right
 - 📍 Destination will be on the right
_____ 249 ft

Republic Services Pine Avenue Landfill
5600 Niagara Falls Blvd, Niagara Falls, NY 14304

EXHIBIT D

The Nest Job Hazard Analysis

Miller Construction



Daily Trenching Log

DAILY TRENCHING LOG

DATE:	SIGNATURE:		
WEATHER:	PROJECT:		
Was One Call System contacted:	Yes _____	No _____	
Protective system:	Trench shield (box) _____ Sloping _____	Wood shoring _____ Other _____	
Purpose of trenching:	Drainage _____ Sewer _____ Other _____	Water _____ Gas _____	
Were visual soil tests made: If yes, what type?	Yes _____	No _____	
Were manual soil tests made: If yes, what type?	Yes _____	No _____	
Type of soil:	Stable Rock _____	Type A _____	Type B _____ Type C _____
Surface encumbrances: If yes, what type?	Yes _____	No _____	
Water conditions:	Wet _____	Dry _____	Submerged _____
Hazardous atmosphere exists: <i>(If yes, follow confined space entry procedures policy; complete Confined Space Entry Permit; monitor for toxic gas(es))</i>	Yes _____	No _____	
Is trenching or excavation exposed to public vehicular traffic (exhaust emission): <i>(If yes, refer to confined space entry procedures; complete Confined Space Entry Permit; monitor for toxic gas(es))</i>	Yes _____	No _____	
Measurements of trench:	Depth _____	Length _____	Width _____
Is ladder within 25 feet of all workers:	Yes _____	No _____	
Is excavated material stored two feet or more from edge of excavation:	Yes _____	No _____	
Are employees exposed to public vehicular traffic: <i>(If yes, warning vests required)</i>	Yes _____	No _____	
Are other utilities protected: <i>(Water, sewer, gas or other structures)</i>	Yes _____	No _____	
Are sewer or natural gas lines exposed: <i>(If yes, refer to confined space entry procedures policy; complete Confined Space Entry Permit; monitor for toxic gas(es))</i>	Yes _____	No _____	
Periodic inspection:	Yes _____	No _____	
Did employees receive training in excavating:	Yes _____	No _____	

Job Orientation Guide

Company: Miller Construction Employee: _____
 Trainer: _____ Hire Date: _____
 Date: _____ Position: _____

This checklist is a guideline for conducting employee safety orientations for employees new to Miller Construction. Once completed and signed by both supervisor and employee, it serves as documentation that orientation has taken place.

	Date	Initials
1. Explain the company safety program, including:		
Orientation	_____	_____
On-the-job training	_____	_____
Safety meetings	_____	_____
Accident investigation	_____	_____
Disciplinary action	_____	_____
2. Use and care of personal protective equipment, (Hard hat, fall protection, eye protection, etc.)	_____	_____
3. Line of communication and responsibility for immediately reporting accidents.		
A. When to report an injury	_____	_____
B. How to report an injury	_____	_____
C. Who to report an injury to	_____	_____
D. Filling out accident report forms	_____	_____
4. General overview of operation, procedures, methods and hazards as they relate to the specific job	_____	_____
5. Pertinent safety rules of the company and WISHA	_____	_____
6. First aid supplies, equipment and training		
A. Obtaining treatment	_____	_____
B. Location of Facilities	_____	_____
C. Location and names of First-aid trained personnel	_____	_____
7. Emergency plan		
A. Exit location and evacuation routes	_____	_____
B. Use of fire fighting equipment (extinguishers, hose)	_____	_____
C. Specific procedures (medical, chemical, etc.)	_____	_____
8. Vehicle safety	_____	_____
9. Personal work habits		
A. Serious consequences of horseplay	_____	_____
B. Fighting	_____	_____
C. Inattention	_____	_____
D. Smoking policy	_____	_____
E. Good housekeeping practices	_____	_____
F. Proper lifting techniques	_____	_____

NOTE TO EMPLOYEES: Do not sign unless ALL items are covered and ALL questions are satisfactorily answered.

The signatures below document that the appropriate elements have been discussed to the satisfaction of both parties, and that both the supervisor and the employee accept responsibility for maintaining a safe and healthful work environment.

Date: _____ Supervisor's Signature: _____

Date: _____ Employee's Signature: _____

JOB SAFETY ANALYSIS WORKSHEET

TITLE OF JOB OPERATION: The Nest Park

Date: 01/20/26

Title of person who does job: _____

Employee observed: _____ Location: _____

Analysis made by: _____ Analysis approved by: _____

Sequence of basic job steps	Potential accidents or hazards	Recommended safe job procedures
Equipment Safety	Struck-by hazard potential	Audible backup alarms
Weather Conditions	Cold Stress Hazards	Ice Melt/Proper PPE
Access by public	Pedestrian/public access to site	Site fencing and posted signs and spotters to be used.
Site work	Excavations	Competent person will inspect daily.
Personal protective equipment required for this position: Hardhats, eye protection, work boots, hearing protection		

Other hazards that may develop and will be addressed in our safety meetings:

Employee's signature

Date

Equipment Safety Inspection Checklist

Date: _____

Project: _____

Equipment: _____

All guards and fenders	_____	OK	_____	Needs Repair
Brakes	_____	OK	_____	Needs Repair
Lights – front, rear, side, dash	_____	OK	_____	Needs Repair
Back-up alarm – horn	_____	OK	_____	Needs Repair
Ladders, stairs, hand holds	_____	OK	_____	Needs Repair
ROPS (Roll-over protection)	_____	OK	_____	Needs Repair
Seat belts	_____	OK	_____	Needs Repair
Fire extinguisher	_____	OK	_____	Needs Repair
Glass	_____	OK	_____	Needs Repair
Tires	_____	OK	_____	Needs Repair
Electrical cords	_____	OK	_____	Needs Repair
Ground fault circuit interrupters	_____	OK	_____	Needs Repair
Electrical hand tools	_____	OK	_____	Needs Repair
Powder actuated tools	_____	OK	_____	Needs Repair
Condition of pneumatic hand tools	_____	OK	_____	Needs Repair

Other Items Checked:

Oil level and leaks	_____	OK	_____	Needs Repair	_____	Add	_____	Change
Hydraulic oil level and leaks	_____	OK	_____	Needs Repair	_____	Add	_____	Change
Anti-freeze level and leaks	_____	OK	_____	Needs Repair	_____	Add	_____	Change
Fuel level and leaks	_____	OK	_____	Needs Repair	_____	Add	_____	Change
First aid kit	_____	OK	_____	Needs Repair	_____	Add	_____	Change

Repaired by: _____

Checked by: _____

Hazard Communication Checklist

1. Have we prepared a list of all the hazardous chemicals in our workplace?
2. Are we prepared to update our hazardous chemical list?
3. Have we obtained or developed a material safety data sheet for each hazardous chemical we use?
4. Have we developed a system to ensure that all incoming hazardous chemicals are checked for proper labels and data sheets?
5. Do we have procedures to ensure proper labeling or warning signs for containers that hold hazardous chemicals?
6. Are our employees aware of the specific information and training requirements of the Hazard Communication Standard?
7. Are our employees familiar with the different types of chemicals and the hazards associated with them?
8. Have our employees been informed of the hazards associated with performing non-routine tasks?
9. Are employees trained about proper work practices and personal protective equipment in relation to the hazardous chemicals in their work area?
10. Does our training program provide information on appropriate first aid, emergency procedures, and the likely symptoms of overexposure?
11. Does our training program include an explanation of labels and warnings that are used in each work area?
12. Does the training describe where to obtain data sheets and how employees may use them?
13. Have we worked out a system to ensure that new employees are trained before beginning work?
14. Have we developed a system to identify new hazardous chemicals before they are introduced into a work area?
15. Do we have a system for informing employees when we learn of new hazards associated with a chemical?

Written Hazard Communication Program

General:

It is the Policy of **Miller Construction** to provide and maintain a safe and healthy workplace for all employees including those who work with potentially hazardous chemicals. This written program will be posted and available 24 hours a day, seven days a week at the following locations:

- 1.
- 2.

If you work with or around potentially hazardous chemicals, this program affects you. The HAZARD COMMUNICATION STANDARD is intended to inform you of any potential chemical hazards from products you may come in contact with at this facility.

Container Labeling:

All containers of chemical products received at this company and all containers used as secondary containers will contain a label listing their hazards, both physical and health hazards. If the label is missing, contact **the job foreman** so that he/she may determine what the product is that has been received, and where it should be stored. **DO NOT ATTEMPT TO USE ANY CHEMICAL THAT IS NOT READILY IDENTIFIABLE.**

Material Safety Data Sheets:

(Add name of person responsible) has the MSDSs on file from the various chemical manufacturers for all hazardous chemicals used in connection with this workplace. The MSDSs list, in English, information available about any particular chemical: health hazards, emergency and first aid procedures, how the chemical could enter the body, the safe handling and use of the chemical, name of manufacturer, etc. The MSDS file may be found in these locations:

- 1.
- 2.

Employee Training and Information:

The Site Foreman will provide training to all employees and new hires on the proper use of hazardous chemicals and potential hazards. They will be responsible for providing the following informational training to all employees:

1. Hazardous chemicals present in the workplace.
2. Location of various chemicals. What to use. What to avoid.
3. Emergency procedures in case of contact with hazardous chemicals.
4. How to read the labels.
5. Location of the MSDS files and how to read the MSDS.
6. Non-routine tasks that may be encountered.
7. Symptoms of overexposure and personal protective measures to be used.

Hazardous Materials Inventory List:

Examples: acids, aerosols, battery fluids, catalysts, caustics, cleaning agents, degreasing agents, flammables, fuels, fungicides, industrial oils, insecticides, herbicides, office copier chemicals, pesticides, surfactants, solvents, wood preservatives.

Hazard Communication Safety Data Sheets (SDS) Globally Harmonized System

The Globally Harmonized System is an internationally agreed system designed to provide a consistent format across international boundaries to ensure chemical hazards can be clearly understood by users

In 2012, OSHA revised the Hazard Communication Standard (HCS) which requires chemical manufacturers, distributors, or importers to provide Safety Data Sheets (SDSs) (formerly known as Material Safety Data Sheets or MSDSs) to communicate the hazards of hazardous chemical products. *As of June 1, 2015, the HCS will require new SDSs to be in a uniform format, and include the section numbers, the headings, and associated information under the headings below:*

Section 1, Identification includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.

Section 2, Hazard(s) identification includes all hazards regarding the chemical; required label elements.

Section 3, Composition/information on ingredients includes information on chemical ingredients; trade secret claims.

Section 4, First-aid measures includes important symptoms/ effects, acute, delayed; required treatment.

Section 5, Fire-fighting measures lists suitable extinguishing techniques, equipment; chemical hazards from fire.

Section 6, Accidental release measures lists emergency procedures; protective equipment; proper methods of containment and cleanup.

Section 7, Handling and storage lists precautions for safe handling and storage, including incompatibilities.

Section 8, Exposure controls/personal protection lists OSHA's Permissible Exposure Limits (PELs); Threshold Limit Values (TLVs); appropriate engineering controls; personal protective equipment (PPE).

Section 9, Physical and chemical properties lists the chemical's characteristics.

Section 10, Stability and reactivity lists chemical stability and possibility of hazardous reactions.

Section 11, Toxicological information includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.

Section 12, Ecological information

Section 13, Disposal considerations

Section 14, Transport information

Section 15, Regulatory information

Section 16, Other information, includes the date of preparation or last revision.

Employers must ensure that SDSs are readily accessible to employees.

The Nest - Site-Specific Safety Training Manual

Miller Construction Services



Update - 01/26 by Jake Fazzolari & Arthur J. Gallagher

Miller Construction Services Policy Letter

SAFETY AND HEALTH POLICY:

The purpose of this policy is to develop a high standard of safety throughout all operations of **Miller Construction Services**

We believe that each employee has the right to derive personal satisfaction from his/her job and the prevention of occupational injury or illness is of such consequence to this belief that it will be given top priority at all times.

It is our intention here at **Miller Construction Services** to initiate and maintain complete accident prevention and safety training programs. Each individual from top management to the working person is responsible for the safety and health of those persons in their charge and coworkers around them. By accepting mutual responsibility to operate safely, we will all contribute to the well being of personnel.



(Nate Cichocki - Project Manager)

EMERGENCY PROCEDURES:

The nearest hospital is Niagara Falls Memorial Medical Center - located at 462 Grider Street

Personnel will call 9-1-1

Miller Construction Services has site personnel who have received CPR & First Aid Training.

Miller Construction Services Safety Program

Environmental Policy

Operating within the fields of Project Services Management, **Miller Construction Services**, recognizes that its activities have wide-ranging environmental implications in both the long and short term. These can potentially be either beneficial or damaging.

Miller Construction Services will therefore pursue a policy aimed at minimizing environmental damage and maximizing opportunities for environmental enhancement.

In all of its activities, including the construction of projects and in its own administration, the company will consider environmental impact as an important part of its decision making process. **Miller Construction Services** will implement the highest ethical standards in environmental matters.

To implement this policy, the company will ensure that employees are aware of the environmental implications of our work. Where necessary, training programs will be implemented, or consultants will be utilized, in order to heighten staff awareness of the relevant issues.

On individual projects, **Miller Construction Services** will endeavor to give or to obtain the best advice for its clients concerning environmental aspects of the project. Environmental hazards and/or damage, which is uncovered or created by construction operations, will be brought to the client's attention immediately. Where it is appropriate, we will assist in tailoring designs to suit particular environmental concerns consistent with optimum solutions in cost and time. During the execution of projects, **Miller Construction Services** will manage and organize the work in a manner which will reduce, so far as is reasonably practicable, environmental impact from construction operations caused by: disposal of construction debris noise dust and/or fumes generated by construction processes mud on roads or footpaths contaminated and/or sediment laden runoff arising from the work and will take effective precautions to protect occupants of adjacent land or buildings and the general public from any danger, discomfort, disturbance, trespass or nuisance. Such provisions will include secure, well-lit and signed compounds, barriers, or screens as necessary and a well-presented clean site. **Miller Construction Services** will use their best endeavors to protect and maintain existing services and to minimize traffic flow and noise by logistics management and off site fabrication.

In pursuit of this policy, environmental considerations will be taken into account in the selection of trade contractors and subcontractors and when assessing the acquisition of plant and materials from trade sources.

All members of the company's staff will be expected to be aware of and to pursue this policy.

This [Safety Management System](#) is designed for use by the Project Management Team for the following purposes:

- ◆ Planning for a safe workplace and a safe environment.
- ◆ Communicating to employees and workers on the project the need to make safety a top priority.
- ◆ Implementing methods and procedures for controlling potential safety and environmental hazards.
- ◆ Monitoring job operations to assure compliance with regulatory requirements.
- ◆ The manual serves as a basis for establishing a safety program on your job. A current copy of the OSHA Standards should be available on site and consulted before beginning any activity.

The program provides for specific individual *responsibility* assignments to be made to key members of the project management staff for the purpose of monitoring compliance with safety requirements. Applicable pages from this manual should be duplicated to create a site-specific safety manual. Appropriate parts should be copied and given to those personnel who have related responsibilities for monitoring the workplace.

Safety and Environmental Management System - Overview

The Safety and Environmental Management System of consists of:

- ◆ **Safety and Environmental Management System** that establishes the necessary framework for the Safety Plan for your project.
- ◆ The Project **Chemical Hazard Communication Program**.

Overview

The site specific safety and environmental program formulated from the Safety and Environmental Management System, local, state and client regulations and requirements lays the basic foundation for implementing safety on the jobsite. All members of the project team are involved from the project manager down to the subcontractor's field employees. It is imperative that the site-specific safety and environmental program be used as a launching point and not the cure all. Each project will have specific and unique safety hazards that need to be addressed.

The Safety Management System provides a framework within which management can carry out their duties in respect to occupational safety and health, and improve the effectiveness of project management by providing the tools and training to do the job. The emphasis throughout our company is on ensuring that our projects are carried out

by employees that operate safely.

Protecting The Public

Scope - Protecting the Public

Reference - Local and State Codes

General - Initial safety planning shall include an evaluation of public safety exposures. These shall include:

Measures To Protect Public	Yes/No/N/A	If No, Why?
Is fencing or other type barriers or barricades required?	YES	
Is protection of public walkways required?	YES	
Will routing of general public and vehicular traffic be needed?	YES	
Are controls needed for special operations such as blasting, demolition, etc.?	YES	
Is signage needed for warnings, traffic directions, etc.?	YES	
Will communications to neighborhood residents be necessary?	NO	This will not disturb any residential areas.
Environmental impact?	YES	
Other Items		DEC Brownfield project that will be in the supervision of BE3 and the NYSDEC.

Please note that soil contamination procedures will be addressed by HSO - Scott Houck - as per Site-Specific Procedures and State and Federal Regulations will be strictly adhered to, as required.

Safety Program Procedures

Safety Orientation: Each employee will be given a safety orientation by the company site superintendent when first hired. The orientation will cover the following items:

Accident Prevention Program

- We have an accident prevention program. It consists of this safety orientation, safety meetings, and self-inspections.
- We also have basic safety rules that all employees must follow. They are:
- Never do anything that is unsafe in order to get the job done. If a job is unsafe, report it to your supervisor or foreman. We will find a safer way to do that job.
- Do not remove or disable any safety device! Keep guards in place at all times on operating machinery.
- Never operate a piece of equipment unless you have been trained and are authorized.
- Use your personal protective equipment whenever it is required.
- Obey all safety warning signs.
- Working under the influence of alcohol or illegal drugs or using them at work is prohibited.
- Do not bring firearms or explosives onto company property.
- Horseplay, running and fighting are prohibited
- Clean up spills immediately. Replace all tools and supplies after use. Do not allow scraps to accumulate where they will become a hazard. Good housekeeping helps prevent accidents.

Reporting Injuries:

- If you are injured or become ill on the job, report this to your site supervisor
 - If first aid trained personnel are involved in a situation involving blood, they should:
 - Avoid skin contact with blood/other potentially infectious materials by letting the victim help as much as possible, and by using gloves provided in the first aid kit.
 - Remove clothing, etc. with blood on it after rendering help.
 - Wash thoroughly with soap and water to remove blood. A 10% chlorine bleach solution is good for disinfecting areas contaminated with blood (spills, etc.).
 - Report such first aid incidents within the shift to supervisors (time, date, blood presence, exposure, names of others helping).
- **First aid kit locations at this jobsite include:**
 - The Job trailer or Foreman's Vehicle

Temperature Extremes

Workers subjected to temperature extremes, radiant heat, humidity, or air velocity combinations which, over a period of time, may produce physical illness. Protection by use of adequate controls, methods or procedures, or use of protective

clothing will be provided to employees working in these conditions. Excessive exposure to heat is referred to as heat stress and excessive exposure to cold is referred to as cold stress.

Heat related illness (HRI) and cold-induced illnesses (Hypothermia/frostbite) are well known, recognized workplace hazards. All work operations involving exposure to temperature extremes, either humidity/heat extremes or cold extremes have the potential for inducing heat stress and heat related illnesses or cold stress resulting in frostbite or hypothermia, therefore, **Miller Construction Services** has developed a policy to address these issues. All employees will receive training relating to the causes and effects, as well as the personal and environmental factors that may lead to temperature extreme related illnesses. Each employee will be provided with training and materials that include but are not limited to:

- The chosen method or methods to assess the risk for HRI or cold stress.
- A section covering training elements to provide employees information on what the employer will do when working in extreme weather conditions.
- A section on first aid including how to identify HRI symptoms and cold stress systems. The proper first aid application for an individual that is suffering from HRI or cold weather illness, and procedures for summoning medical aid personnel.
- A section identifying where and how adequate drinking water will be supplied. An evacuation map for the building is posted. It shows the location of exits, fire extinguishers, first aid kits, and where to assemble outside.

Fire Emergency

- A fire extinguisher or fire extinguishers will be covered as part of this orientation.
- If you discover a fire: Tell another person immediately. Call or have them call 911 and a supervisor.
- If the fire is small (such as a wastebasket fire) and there is minimal smoke, you may try to put it out with a fire extinguisher.
- If the fire grows or there is thick smoke, do not continue to fight the fire.
- Tell other employees in the area to evacuate.
- Go to the designated assembly point outside the building.

Identification of hazardous chemicals used at this location:

- Safe use and emergency actions to take following an accidental exposure.
- We use a limited number of chemicals. You will receive a separate orientation as part of our chemical hazard communication program on the hazards of these chemicals before you work with them or work in an area where they are used.
- Some tasks in our company require an employee to wear PPE to protect against injury.
- You will be instructed by (*your site supervisor in the use and care of PPE*) using the manufacturer's instructions on how to use and care for these PPE.

On-the-job training about what you need to know to perform the job safely:

- Before you are first assigned a task, your site supervisor will show you what to do along with safety instructions and required PPE.
- We have established safety rules and personal protective equipment (PPE) requirements based upon a hazard assessment for each task.
- Do not use equipment or attempt to do any of these tasks until you have received the required training and PPE.

Safety Meetings and Self-Inspections

- **Employee Safety Meetings**
- At the beginning of each job and at least weekly thereafter.

- Review of any walk-around safety inspections conducted since the last safety meeting.
- Review of any citation to assist in correction of hazards.
- Evaluation of any accident investigations conducted since the last meetings to determine if the cause of the unsafe acts or unsafe conditions involved were properly identified and corrected.
- Document attendance and other subjects discussed.
- *Maintain records for one year.*

• **Self-inspections**

- At the beginning of each job, and at least weekly thereafter.
- Include one member of management and one employee, elected by the employees, as their authorized representative.
- Document walk-around safety inspection.
- *Maintain records until the completion of the job.*

Safety Disciplinary Policy

Miller Construction Services believes that a safety and health Accident Prevention Program is unenforceable without some type of disciplinary policy. Our company believes that in order to maintain a safe and healthful workplace, the employees must be cognizant and aware of all company, State, and Federal safety and health regulations as they apply to the specific job duties required. The following disciplinary policy is in effect and will be applied to all safety and health violations.

The following steps will be followed unless the seriousness of the violation would dictate going directly to Step 2 or Step 3.

1. A first time violation will be discussed orally between company supervision and the employee. This will be done as soon as possible.
2. A second time offense will be followed up in written form and a copy of this written documentation will be entered into the employee's personnel folder.
3. A third time violation will result in termination.

If an employee of this company knowingly and willingly violates any of the safety rules or procedures, or puts his/her self in an imminent danger situation, the employee will be immediately discharged.

General Safe Work Practices for Construction

Personal Protective Equipment

- Suitable clothing must be worn; long pants, at least short-sleeved shirts and adequate foot wear.
- Hard hats, safety glasses or goggles must be used when a potential hazard exists. (Safety glasses must be ANSI Z87 or Z87.1 approved).

- Hearing protection (earplugs or earmuffs) must be used in high noise areas.
- Gloves (as needed).

Housekeeping

- Always store materials in a safe manner. Tie down or support materials if necessary to prevent falling, rolling, or shifting.
- Shavings, dust scraps, oil or grease should not be allowed to accumulate. Good housekeeping is a part of the job.
- Trash piles must be removed as soon as possible. Trash is a safety and fire hazard.
- Immediately remove all loose materials from stairs, walkways, ramps, platforms, etc.
- Do not block aisles, traffic lanes, fire exits, gangways, or stairs.

Other general safe work practices

- Avoid shortcuts – use ramps, stairs, walkways, ladders, etc.
- Do not remove, deface or destroy any warning, danger sign, or barricade, or interfere with any form of accident prevention device or practice provided for your use or that is being used by other workers.
- Get help with heavy or bulky materials to avoid injury to yourself or damage to material.
- Do not use tools with split, broken, or loose handles, or burred or mushroomed heads. Keep cutting tools sharp and carry all tools in a container.
- Know the correct use of hand and power tools. Use the right tool for the job.

Fall protection

- Fall hazards of 6 feet or more will be outlined and addressed in our jobsite fall protection work plan.
- Fall hazards of less than 6 feet will be protected by covers, guardrails or other methods and will be addressed in our self-inspections and safety meetings.
- Standard guardrails must be erected around all floor openings and open-sided surfaces. Contact your supervisor for the correct specifications.

Electrical

- Ground-fault circuit interrupters (GFCI) will be used when ever possible.
- Electric cords will be inspected daily and repaired or replaced as necessary.
- Do not operate any power tool or equipment unless you are trained in its operation.
- Use tools only for their designed purpose.

Ladder safety

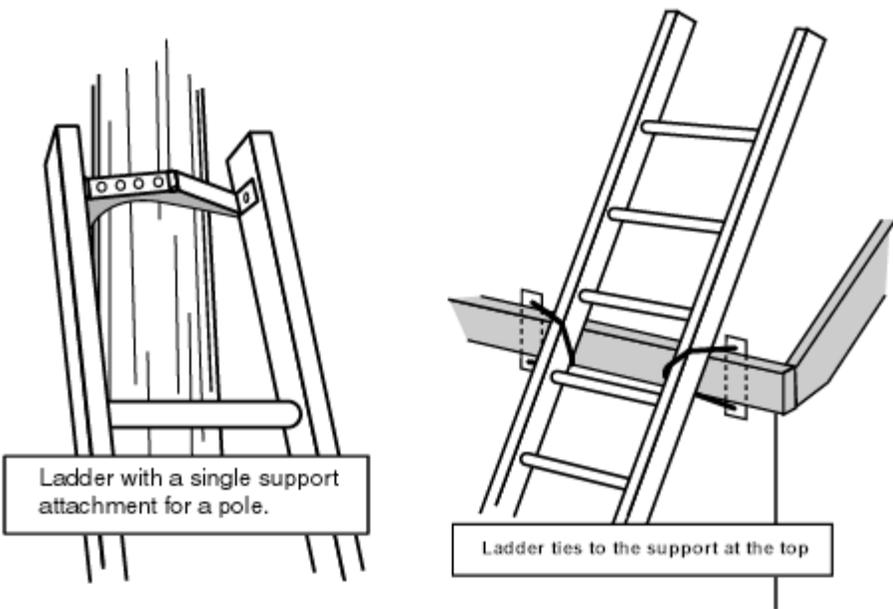
- Inspect before use for physical defects.
- Ladders are not to be painted except for numbering purposes.
- Do not use ladders for skids, braces, workbenches, or any purpose other than climbing.
- When you are ascending or descending a ladder, do not carry objects that will prevent you from grasping the ladder with both hands.
- Always face the ladder when ascending and descending.
- If you must place a ladder over a doorway, barricade the door to prevent its use and post a warning sign.
- Only one person is allowed on a ladder at a time.
- Do not jump from a ladder when descending.
- All joints between steps, rungs, and side rails must be tight.
- Safety feet must be in good working order and in place.
- Rungs must be free of grease and/or oil.

Stepladders

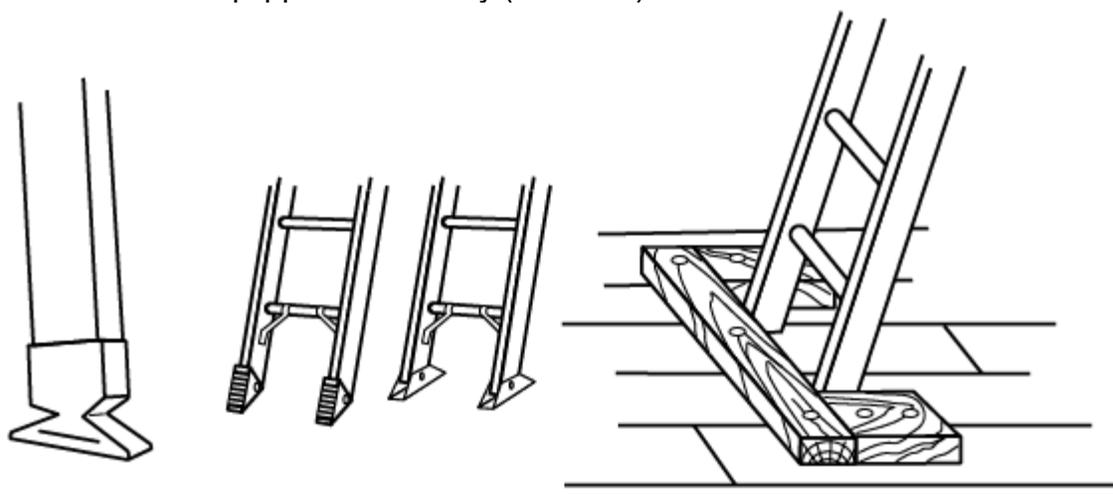
- Do not place tools or materials on the steps or platform of a stepladder
- Do not use the top two steps of a stepladder as a step or stand.
- Always level all four feet and lock spreaders in place.
- Do not use a stepladder as a straight ladder.

Straight type or extension ladders

- All straight or extension ladders must extend at least three feet beyond the supporting object when used as an access to an elevated work area.
- After raising the extension portion of a two or more stage ladder to the desired height, check to ensure that the safety dogs or latches are engaged.
- All extension or straight ladders must be secured or tied off at the top.



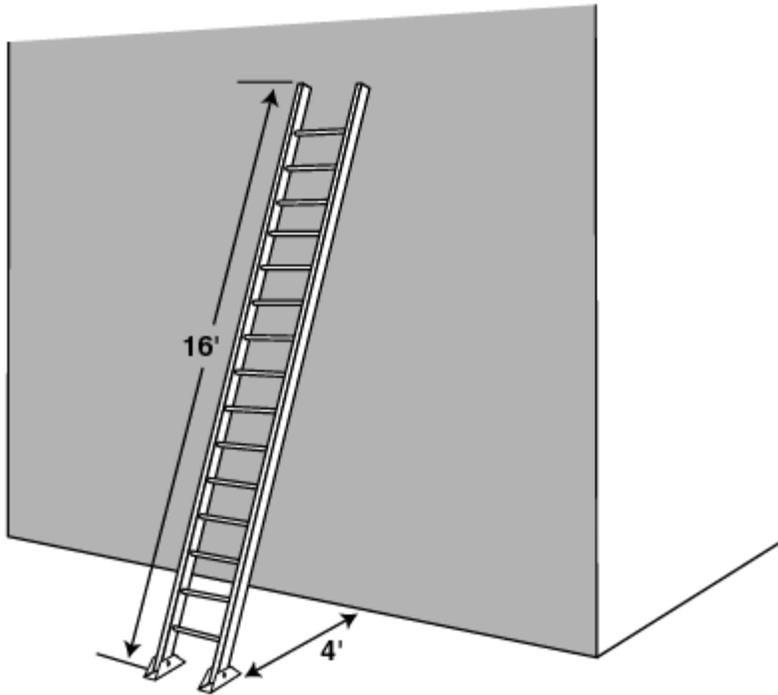
- All ladders must be equipped with safety (non-skid)



Rubber Safety Feet Spikes Cleats Nailed to the Floor
Ladders with supports on the bottom.

feet.

- Portable ladders must be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is about one-quarter of the working length of the ladder.



Trenching and Excavating

1. The determination of the angle of repose and design of the supporting system shall be based on careful evaluation of pertinent factors, such as:
 - a. Depth and/or cut/soils classification
 - b. Possible variation in water content of the material while excavation is open
 - c. Anticipated changes in materials from exposure to air, sun, water, or freezing
 - d. Loading imposed by structures, equipment, or overlaying or stored material
 - e. Vibration from equipment, blasting, traffic, or other sources

Approximate Angle of Repose For sloping of sides of excavations

Note:
Clays, silts, loams or
non-homogenous soils
require shoring and bracing

The presence of ground water
requires special treatment

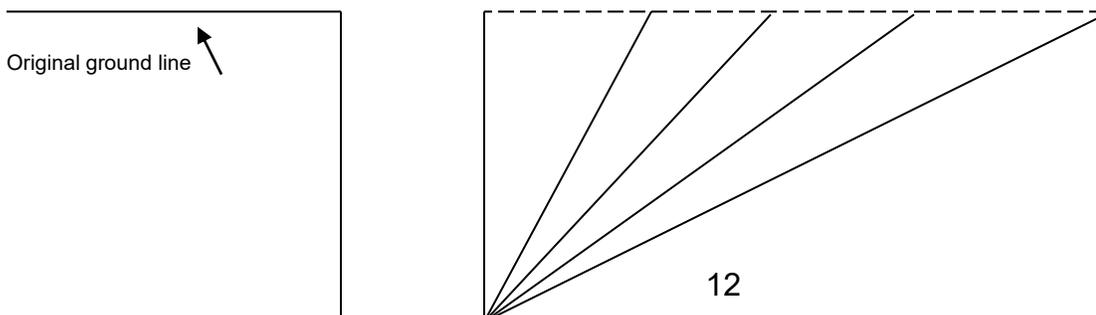
Solid
rock and
compact
shale
(90°)

Compacted
angular
gravels,
glacial
till
½:1
(63°26')

Recommended
slope
For
Average
soils
1:1
(45°)

Compacted
sharp
sand
1 ½:1
(33°41')

Well
rounded
loose
sand
2:1
(26°34')



2. Walkways or bridges with standard railings **must be provided** when employees or equipment are required to cross over excavations.
3. The walls and faces of all excavations in which employees are exposed to danger from moving ground **must be guarded** by a shoring system, sloping of the ground, or some other equivalent means.
4. **No person must be permitted** under loads handled by power shovels, derricks, or hoists.
5. **All employees must be protected** with personal protective equipment for the protection of the head, eyes, respiratory system, hands, feet, and other parts of the body.

Daily Trenching Log

DAILY TRENCHING LOG

DATE:	SIGNATURE:		
WEATHER:	PROJECT:		
Was One Call System contacted: Yes _____ No _____			
Protective system:	Trench shield (box) _____	Wood shoring _____	
	Sloping _____	Other _____	
Purpose of trenching:	Drainage _____	Water _____	
	Sewer _____	Gas _____	
	Other _____		
Were visual soil tests made: Yes _____ No _____			
If yes, what type?			
Were manual soil tests made: Yes _____ No _____			
If yes, what type?			
Type of soil:	Stable Rock _____	Type A _____	Type B _____ Type C _____
Surface encumbrances: Yes _____ No _____			
If yes, what type?			
Water conditions:	Wet _____	Dry _____	Submerged _____
Hazardous atmosphere exists: Yes _____ No _____			
<i>(If yes, follow confined space entry procedures policy; complete Confined Space Entry Permit; monitor for toxic gas(es))</i>			
Is trenching or excavation exposed to public vehicular traffic (exhaust emission): Yes _____ No _____			
<i>(If yes, refer to confined space entry procedures; complete Confined Space Entry Permit; monitor for toxic gas(es))</i>			
Measurements of trench: Depth _____ Length _____ Width _____			

Is ladder within 25 feet of all workers:	Yes _____	No _____
Is excavated material stored two feet or more from edge of excavation:	Yes _____	No _____
Are employees exposed to public vehicular traffic: Yes _____ <i>(If yes, warning vests required)</i>		No _____
Are other utilities protected: <i>(Water, sewer, gas or other structures)</i>	Yes _____	No _____
Are sewer or natural gas lines exposed: Yes _____		No _____
<i>(If yes, refer to confined space entry procedures policy; complete Confined Space Entry Permit; monitor for toxic gas(es))</i>		
Periodic inspection:	Yes _____	No _____
Did employees receive training in excavating:	Yes _____	No _____

Scaffold Safety Rules

1. General

Before starting work on a scaffold, inspect it for the following:

- a. Are guardrails, toeboards, and planking in place and secure?
 - b. Are locking pins at each joint in place?
 - c. Are all wheels on moveable scaffolds locked?
2. Do not attempt to gain access to a scaffold by climbing on it (unless it is specifically designed for climbing – always use a ladder).
 3. Scaffolds and their components must be capable of supporting four times the maximum intended load.
 4. Any scaffold, including accessories such as braces, brackets, trusses, screw legs, ladders, etc., damaged or weakened in any way, must be immediately repaired or replaced.
 5. Scaffold planks must extend over their end supports not less than 6 inches or more than 12 inches, unless otherwise specifically required.
 6. Scaffold platforms must be at least 18 inches wide unless otherwise specifically required or exempted.
 7. Where persons are required to work or pass under the scaffold, scaffolds shall be provided with a screen between the toeboard and guardrail, extending along the entire opening. The screen must be made of No. 18 gauge U.S. Standard wire, ½ inch mesh or equivalent protection.

8. All scaffolds must be erected level and plumb, and on a solid footing.
9. Do not change or remove scaffold members unless authorized.
10. Do not allow workers to ride on a rolling scaffold when it is being moved. Remove or secure all materials and tools on deck before moving.
11. Do not alter any scaffold member by welding, burning, cutting, drilling, or bending.

Motorized vehicles and equipment

1. Do not ride on motorized vehicles or equipment unless a proper seat is provided for each rider.
2. Always be seated when riding authorized vehicles (unless they are designed for standing).
3. Do not operate any motorized vehicle or equipment unless you are specifically authorized to do so by your supervisor.
4. Always use your seat belts in the correct manner.
5. Obey all speed limits and other traffic regulations.
6. Always be aware of pedestrians and give them the right-of-way.
7. Always inspect your vehicle or equipment before and after daily use.
8. Never mount or dismount any vehicles or equipment while they are still in motion.
9. Do not dismount any vehicle without first shutting down the engine, setting the parking brake and securing the load.
10. Do not allow other persons to ride the hook or block, dump box, forks, bucket or shovel of any equipment.
11. Each operator must be knowledgeable of all hand signals and obey them.
12. Each operator is responsible for the stability and security of his/her load.

Forklift safety

Prior to performing work on or around Powered Industrial Trucks (forklifts) employees will receive training in:

- Forklift safety hazards
- Types of forklifts (powered industrial trucks)
- Forklift operator training requirements

You are at the end of the Sample Employee Safety Program. Please be sure that you have added all the required information to make it specific to your business. If you have any further information to add, please do so. Otherwise delete this message.

Job Orientation Guide

Company: Miller Construction Services Employee: _____
 Trainer: _____ Hire Date: _____
 Date: _____ Position: _____

This checklist is a guideline for conducting employee safety orientations for employees new to Miller Construction Services. Once completed and signed by both supervisor and employee, it serves as documentation that orientation has taken place.

	Date	Initials
1. Explain the company safety program, including:		
Orientation	_____	_____
On-the-job training	_____	_____
Safety meetings	_____	_____
Accident investigation	_____	_____
Disciplinary action	_____	_____
2. Use and care of personal protective equipment, (Hard hat, fall protection, eye protection, etc.)	_____	_____
3. Line of communication and responsibility for immediately reporting accidents.		
A. When to report an injury	_____	_____
B. How to report an injury	_____	_____
C. Who to report an injury to	_____	_____
D. Filling out accident report forms	_____	_____
4. General overview of operation, procedures, methods and hazards as they relate to the specific job	_____	_____
5. Pertinent safety rules of the company and WISHA	_____	_____
6. First aid supplies, equipment and training		
A. Obtaining treatment	_____	_____
B. Location of Facilities	_____	_____
C. Location and names of First-aid trained personnel	_____	_____
7. Emergency plan		
A. Exit location and evacuation routes	_____	_____
B. Use of fire fighting equipment (extinguishers, hose)	_____	_____
C. Specific procedures (medical, chemical, etc.)	_____	_____
8. Vehicle safety	_____	_____
9. Personal work habits		
A. Serious consequences of horseplay	_____	_____
B. Fighting	_____	_____
C. Inattention	_____	_____
D. Smoking policy	_____	_____
E. Good housekeeping practices	_____	_____
F. Proper lifting techniques	_____	_____

NOTE TO EMPLOYEES: Do not sign unless ALL items are covered and ALL questions are satisfactorily answered.

The signatures below document that the appropriate elements have been discussed to the satisfaction of both parties, and that both the supervisor and the employee accept responsibility for maintaining a safe and healthful work environment.

Date: _____ Supervisor's Signature: _____

Date: _____ Employee's Signature: _____

FALL PROTECTION WORK PLAN

COMPANY: _____ DATE: _____
SITE ADDRESS: _____
REPORT PREPARED BY: _____ TITLE: _____

- 1) SPECIFIC WORK AREA: _____
- 2) ACTIVITIES: _____
- 3) IDENTIFY ALL FALL HAZARDS IN THIS AREA: _____

4) CHECK THE METHOD OF FALL RESTRAINT OR ARREST TO BE UTILIZED:

- | | | |
|---------------------------------|---|-------------------|
| 慌 STANDARD GUARDRAIL | 慌 FULL BODY HARNESS | 慌 SCISSOR LIFT |
| 慌 SECURED TO EXISTING STRUCTURE | 慌 TIE-OFF POINT CAPABLE OF 5000 LB/PERSON | 慌 BOOM LIFT |
| 慌 SHOCK ABSORBING LANYARD | 慌 RETRACTABLE LANYARD | 慌 FORKLIFT BASKET |
| 慌 SCAFFOLD W/GUARDRAIL | 慌 OTHER (SPECIFY) | |
| 慌 WARNING LINE | 慌 WARNING LINE & SAFETY MONITOR (See WAC 296-155-24521) | |

5) DESCRIBE PROCEDURES FOR ASSEMBLY, MAINTENANCE, INSPECTION AND DIASSEMBLY OF THE SYSTEM (IF ADDITIONAL SPACE IS REQUIRED, COMPLETE ON THE BACK OR THIS FORM OR ATTACH A SEPARATE SHEET.)

6) DESCRIBE PROCEDURES FOR HANDLING AND SECURING TOOLS, EQUIPMENT AND MATERIALS AND FOR PROVIDING OVERHEAD PROTECTION FOR WORKERS (IF ADDITIONAL SPACE IS REQUIRED, COMPLETE ON THE BACK OF THIS FORM OR SEPARATE SHEET):

7) DESCRIBE THE METHOD FOR PROMPT, SAFE REMOVAL OF INJURED WORKER(S):
(Calling 911 is not sufficient as a means of rescue)

8) I CERTIFY THAT I HAVE RECEIVED FALL PROTECTION ORIENTATION INCLUDING THE MATERIAL COVERED IN THIS FALL PROTECTION WORK PLAN.

EMPLOYEE NAME:

DATE:

Walk-Around Safety Inspection

- Power lines:** Minimum 10' clearance / insulate – de-energize, under 50 kw; over 50 kw – refer to Chapter 155
- Trench/excavation:** Any trench four feet or more must be sloped, shored or braced
- Guardrails:** Any opening four feet or more above ground level must be guarded
- Standard guardrail:** Top rail = 39" to 45" above working surface. Midrail = halfway between top rail and floor. Toeboard = 4".
- Scaffold:** Fully planked
- Scaffold:** Fall protection provided if fall hazards over 10 feet exist
- Stairs:** Four or more risers must have handrails
- Fall protection:** Any exposure to fall hazards of 10' or greater must be eliminated by the use of safety harness/belt, lanyard or lifeline, horizontal lines, or cantenary lines. Positive fall restraint/protection must be utilized at all times. Two lanyards may be necessary at the beam/upright traverse points. No exposure at any time is allowed.
- Fall protection work plan:** Job specific, in writing; available on-site for all fall hazards above 10'.
- Open belts and pulleys, chains and sprockets, points of operation** must be guarded to prevent accidental contact. Air compressors and electric motor pulleys are the most common hazards.
- Radial saws:** Cutting head must return easily to start position when released; blade must not extend past the edge of the worktable; off/on switch should be at front of operator's position.
- Table saws:** Upper hood guard; anti-kickback, push stick, belt and pulley guarded
- Circular saws:** Blade guard instantly returns to covering position
- Never wedge or pin a guard.**
- Ladders:** Extended 36" above landing and secured to prevent displacement
- Floor holes/openings:** Covered and secured; be sure no tripping hazards in the area.
- Extension cords/electric power tools:** Marked/covered by Assured Grounding Program
- Clothing:** Minimum of short sleeve shirts, long pants, and substantial footwear; no recreational shoes
- Hard hats:** readily accessible at all times; worn when overhead hazard exists
- Oxygen/acetylene storage areas:** Cylinders chained and separated
- Personal protective equipment:** Head, eye, ear, respiratory, and leg protection – high visibility vests when required
- Housekeeping:** Workers are responsible for their own area of exposure
- First aid/fire extinguishers:** Available and readily accessible

Other hazards observed: _____

Supervisor's signature

Date

Employee's signature

Date

Equipment Safety Inspection Checklist

Date: _____

Project: _____

Equipment: _____

All guards and fenders	_____	OK	_____	Needs Repair
Brakes	_____	OK	_____	Needs Repair
Lights – front, rear, side, dash	_____	OK	_____	Needs Repair
Back-up alarm – horn	_____	OK	_____	Needs Repair
Ladders, stairs, hand holds	_____	OK	_____	Needs Repair
ROPS (Roll-over protection)	_____	OK	_____	Needs Repair
Seat belts	_____	OK	_____	Needs Repair
Fire extinguisher	_____	OK	_____	Needs Repair
Glass	_____	OK	_____	Needs Repair
Tires	_____	OK	_____	Needs Repair
Electrical cords	_____	OK	_____	Needs Repair
Ground fault circuit interrupters	_____	OK	_____	Needs Repair
Electrical hand tools	_____	OK	_____	Needs Repair
Powder actuated tools	_____	OK	_____	Needs Repair
Condition of pneumatic hand tools	_____	OK	_____	Needs Repair

Other Items Checked:

Oil level and leaks	_____	OK	_____	Needs Repair	_____	Add	_____	Change
Hydraulic oil level and leaks	_____	OK	_____	Needs Repair	_____	Add	_____	Change
Anti-freeze level and leaks	_____	OK	_____	Needs Repair	_____	Add	_____	Change
Fuel level and leaks	_____	OK	_____	Needs Repair	_____	Add	_____	Change
First aid kit	_____	OK	_____	Needs Repair	_____	Add	_____	Change

Repaired by: _____

Checked by: _____

Hazard Communication Checklist

1. Have we prepared a list of all the hazardous chemicals in our workplace?
2. Are we prepared to update our hazardous chemical list?
3. Have we obtained or developed a material safety data sheet for each hazardous chemical we use?
4. Have we developed a system to ensure that all incoming hazardous chemicals are checked for proper labels and data sheets?
5. Do we have procedures to ensure proper labeling or warning signs for containers that hold hazardous chemicals?
6. Are our employees aware of the specific information and training requirements of the Hazard Communication Standard?
7. Are our employees familiar with the different types of chemicals and the hazards associated with them?
8. Have our employees been informed of the hazards associated with performing non-routine tasks?
9. Are employees trained about proper work practices and personal protective equipment in relation to the hazardous chemicals in their work area?
10. Does our training program provide information on appropriate first aid, emergency procedures, and the likely symptoms of overexposure?
11. Does our training program include an explanation of labels and warnings that are used in each work area?
12. Does the training describe where to obtain data sheets and how employees may use them?
13. Have we worked out a system to ensure that new employees are trained before beginning work?
14. Have we developed a system to identify new hazardous chemicals before they are introduced into a work area?
15. Do we have a system for informing employees when we learn of new hazards associated with a chemical?

Written Hazard Communication Program

General:

It is the Policy of **Miller Construction Services** to provide and maintain a safe and healthy workplace for all employees including those who work with potentially hazardous chemicals. This written program will be posted and available 24 hours a day, seven days a week at the following locations:

1. Job Trailer located at 437 1st Street Niagara Falls NY 14301
- 2.

If you work with or around potentially hazardous chemicals, this program affects you. The HAZARD COMMUNICATION STANDARD is intended to inform you of any potential chemical hazards from products you may come in contact with at this facility.

Container Labeling:

All containers of chemical products received at this company and all containers used as secondary containers will contain a label listing their hazards, both physical and health hazards. If the label is missing, contact **the job foreman** so that he/she may determine what the product is that has been received, and where it should be stored. **DO NOT ATTEMPT TO USE ANY CHEMICAL THAT IS NOT READILY IDENTIFIABLE.**

Safety Data Sheets:

The Site Foreman has the SDSs on file from the various chemical manufacturers for all hazardous chemicals used in connection with this workplace. The SDSs list, in English, information available about any particular chemical: health hazards, emergency and first aid procedures, how the chemical could enter the body, the safe handling and use of the chemical, name of manufacturer, etc. The SDS file may be found in these locations:

1. Job Trailer located at 437 1st Street Niagara Falls NY 14301
- 2.

Employee Training and Information:

The Site Foreman will provide training to all employees and new hires on the proper use of hazardous chemicals and potential hazards. They will be responsible for providing the following informational training to all employees:

1. Hazardous chemicals present in the workplace.
2. Location of various chemicals. What to use. What to avoid.
3. Emergency procedures in case of contact with hazardous chemicals.
4. How to read the label.
5. Location of the SDS files and how to read the SDS.
6. Non-routine tasks that may be encountered.
7. Symptoms of overexposure and personal protective measures to be used.

Hazardous Materials Inventory List:

Examples: acids, aerosols, battery fluids, catalysts, caustics, cleaning agents, degreasing agents, flammables, fuels, fungicides, industrial oils, insecticides, herbicides, office copier chemicals, pesticides, surfactants, solvents, wood preservatives.

Hazard Communication Safety Data Sheets (SDS) Globally Harmonized System

The Globally Harmonized System is an internationally agreed system designed to provide a consistent format across international boundaries to ensure chemical hazards can be clearly understood by users

In 2012, OSHA revised the Hazard Communication Standard (HCS) which requires chemical manufacturers, distributors, or importers to provide Safety Data Sheets (SDSs) (formerly known as Material Safety Data Sheets or MSDSs) to communicate the hazards of hazardous chemical products. *As of June 1, 2015, the HCS will require new SDSs to be in a uniform format, and include the section numbers, the headings, and associated information under the headings below:*

Section 1, Identification includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.

Section 2, Hazard(s) identification includes all hazards regarding the chemical; required label elements.

Section 3, Composition/information on ingredients includes information on chemical ingredients; trade secret claims.

Section 4, First-aid measures includes important symptoms/ effects, acute, delayed; required treatment.

Section 5, Fire-fighting measures lists suitable extinguishing techniques, equipment; chemical hazards from fire.

Section 6, Accidental release measures lists emergency procedures; protective equipment; proper methods of containment and cleanup.

Section 7, Handling and storage lists precautions for safe handling and storage, including incompatibilities.

Section 8, Exposure controls/personal protection lists OSHA's Permissible Exposure Limits (PELs); Threshold Limit Values (TLVs); appropriate engineering controls; personal protective equipment (PPE).

Section 9, Physical and chemical properties lists the chemical's characteristics.

Section 10, Stability and reactivity lists chemical stability and possibility of hazardous reactions.

Section 11, Toxicological information includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.

Section 12, Ecological information

Section 13, Disposal considerations

Section 14, Transport information

Section 15, Regulatory information

Section 16, Other information, includes the date of preparation or last revision.

Employers must ensure that SDSs are readily accessible to employees.

Crystalline Silica

Exposure Control Policy, Program & Procedure

Part 1

Silica Exposure Prevention & Control: Introduction

Silica is the second most common mineral on earth, found in the common form as “sand” and “rock”. Silica is the compound formed from the elements silicon (Si) and oxygen (O) and has a molecular form of SiO₂. The three main forms or ‘polymorphs’ of silica are alpha quartz, cristobalite and tridymite. The polymer most abundant and most hazardous to human health is alpha quartz, and is commonly referred to as crystalline silica.

Health Hazards Associated with Silica Exposure

The health hazards of silica come from breathing in the dust. If crystalline silica becomes airborne through industrial activities, exposures to fine crystalline silica dust (*specifically exposure to the size fraction that is considered to be respirable*) can lead to a disabling, sometimes fatal disease called silicosis. The fine particles are deposited in the lungs, causing thickening and scarring of the lung tissue. The scar tissue restricts the lungs’ ability to extract oxygen from the air. This damage is permanent, but the symptoms of the diseases may not appear for many years. As noted in the following Figure, (respirable) silica dust is very small, and is not visible to the human eye.

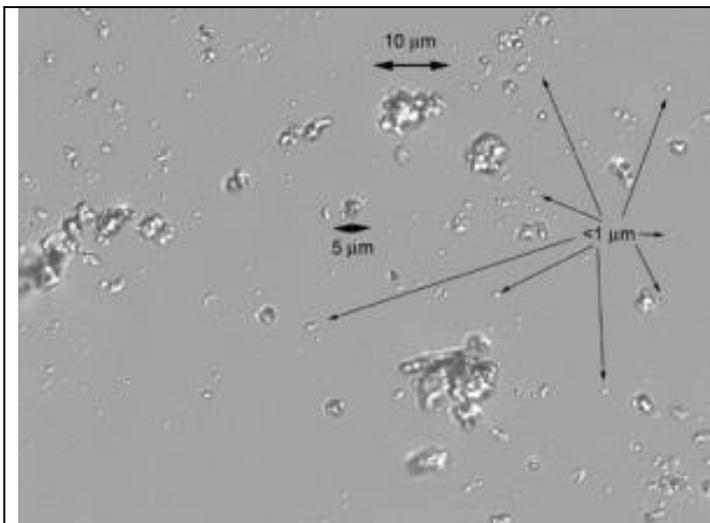


Figure 1: Crystalline silica up close. 1000 times magnification of sand dust. These particles are small enough to be trapped in lung tissue.

A worker may develop any of three types of silicosis, depending on the concentration of silica dust and the duration of the exposure:

- Chronic Silicosis: Develops after 10 or more years of exposure to crystalline silica and relatively low concentrations.
- Accelerated Silicosis: Develops 5 to 10 years after initial exposure to crystalline silica at high concentrations.
- Acute Silicosis: Develops within weeks, or 4 to 5 years, after exposure to very high concentrations of crystalline silica.

Initially, workers with silicosis may have no symptoms; however, as the disease progresses, workers may experience:

- Shortness of Breath.
- Severe Cough.
- Weakness.

These symptoms can worsen over time and lead to death. Exposure to silica has also been linked to other diseases, including bronchitis, tuberculosis, and lung cancer.

Silica Exposures at Miller Construction Services

Many of the activities performed on Miller Construction Services Projects result in the creation/release of silica dust, thus exposing our employees. These activities include, but are not necessarily limited to:

COMPANY SPECIFIC EXPOSURES

Examples include:

- *Sweeping*
- *Jack-hammering*
- *Saw-cutting*
- *Drilling (of concrete)*
- *Excavating and Truck Loading activities.*

Part 2

Silica Exposure Prevention & Control: Statement of Purpose

Miller Construction Services is committed to providing a safe and healthy workplace to our employees, recognizing the right of workers to work in a safe and healthy work environment and ensuring that Miller Construction Services's activities do not adversely affect the health and safety of any other persons.

This commitment includes ensuring every reasonable precaution is taken to protect our employees (and others) from the adverse health effects associated with exposure to silica.

Part 3

Silica Exposure Prevention & Control: Responsibilities

Due to the risk posed by respirable silica, it is critical that all personnel involved in activities that could potentially create silica dust take specific actions to ensure that, as much as practicable, a hazard is not created. In recognition of this, the following (Silica related) responsibilities have been established and must be adhered to:

Senior Management) is responsible for:

- Regularly evaluating new equipment and technologies that become available, as able/appropriate, purchasing the “best available” equipment/technologies (*within Miller Construction Services’s capabilities*). Equipment/technologies with (silica) dust suppression and/or capture technologies will generally be given preference over equipment/technologies that lack such.
- Implementing a suitable respirable silica exposure monitoring program, or otherwise ensuring representative exposure monitoring results are available. The purpose of the program will ensure that (*over time*) *Miller Construction Services* has quantifiable silica exposure data available for all regularly occurring, as well as reasonably foreseeable, work activities.
- Ensuring project and/or task specific Exposure Control Plans (ECPs) are developed communicated and effectively implemented as appropriate.
- Ensuring that all employees (*i.e. Managers, Supervisors and Workers*) receive the necessary education and training related to this Policy, as well as project/task specific ECPs.
- Maintaining applicable records (*i.e. exposure sampling, inspections, respirator fit tests, training records, etc.*) in accordance with *Miller Construction Services’s* record retention procedures/practices.
- (*In conjunction with the Miller Construction Services’s Health & Safety Committee/* Conducting a review of this Policy, as well as: (1) project/task specific ECP’s, (2) available exposure monitoring data, (3) Industry/Regulatory information, and (4) new/emerging equipment/technologies on a regular (*i.e. annual*) basis.

Supervisors (i.e. Superintendents/Foreman) are responsible for:

- Obtaining a copy of the project/task specific ECPs (*and/or other similar such information*), and ensuring such are made available at each work site.
- Ensuring that all the tools, equipment, PPE and materials (*including water*) necessary to implement the ECP is available (*and in good working order*) prior to allowing work activities to commence.
- Ensuring that all workers (*under the supervisor’s direction and control*) have received the necessary education and training. As appropriate, each supervisor must ensure that workers are available to “demonstrate competency” for identified tasks.

- Ensuring that workers adhere to the project/task specific ECP, including PPE and personal hygiene (*i.e. including be clean shaven where the respirator seals to the user's face*) requirements.
- Coordinating work activities with the Owner/Prime Contractor as required, and/or otherwise implementing the controls necessary to protect others (*i.e. erecting of barricades and signage*) who could be adversely effected by **Miller Construction Services's** acts (*or omissions*).

Employees (and subcontracted employees) are responsible for:

- Knowing the hazards of silica dust exposure.
- Using the assigned protective equipment in an effective and safe manner.
- Working in accordance with the project/task specific ECP.
- Reporting (*immediately*) to their supervisor, any hazards (*i.e. unsafe conditions, unsafe acts, improperly operating equipment, etc.*).

Part 4

Silica Exposure Prevention & Control: Exposure Limits

Exposure Limits/Considerations: The Occupational Health & Safety Regulation (OHSR) lists an occupational exposure limit (OEL) for respirable crystalline silica (including quartz) of 0.025 milligrams per cubic metre (mg/m³). This is a concentration to which nearly all workers could be exposed for eight hours a day, five days a week, without adverse health effects. However, as a suspected carcinogen, crystalline silica is also an ALARA substance, and exposures must be reduced to levels **As Low As Reasonably Achievable** below the OEL.

Part 5

Silica Exposure Prevention & Control: Risk Identification

Risk Identification: Silica is contained on many of the products used/encountered on [Miller Construction Services]'s Projects (i.e. the Lafarge Materials Safety Data Sheet (MSDS) for concrete reveals the potential for up to 90% crystalline silica, while Aggregate supplier (Mainland Sand & Gravel Ltd.) Identifies the potential for between 50-77% Silica in aggregate), and (silica) dust can be readily released through the various tasks performed by Miller Construction Services.

The health hazards of silica come from breathing in the dust. In addition to identifying the specific activities/areas where personnel could be exposed to silica dust, the "amount" of exposure and "duration" of exposure must also be considered. With consideration to these three factors, activities performed by Miller Construction Services (or that are otherwise occurring in proximity to Miller Construction Services's activities) that expose our employees (as well as members of the public and other workers) to the dust include, but are not necessarily limited to:

- Surface preparation activities such as: (1) the use of Blow-Packs, (2) the use of Bobcats with "sweeper" attachments, (3) the use of Sweeper trucks and (4) hand sweeping.
- Jack-hammering (of both asphalt and concrete).
- Saw-cutting (of both asphalt and concrete).
- Drilling (of concrete).
- Granular Surface Preparation activities (i.e. grading and rolling), and
- Operation and use of milling equipment/machinery (i.e. milling and conveyance/discharge of milled materials on conveyor).

Part 6

Silica Exposure Prevention & Control: Risk Assessment

Risk Assessment: *Miller Construction Services* will use a variety of methods to assist with the “assessment” of (*possible and actual*) silica exposures. These methods will include, but may not necessarily be limited to:

- Reviewing data/reports available in the public domain (*i.e. Information available through regulatory agencies (including Work Safe BC) and industry associations (including the BC Construction Safety Alliance)*).
- Regularly consulting with the Safety Resources/Safety Managers from firms who perform similar work (*i.e. through ATAC (Asphalt Technical Advisory Committee)*).
- Implementing a suitable respirable silica exposure monitoring program. This program will ensure that (*over time*) *Miller Construction Services* has quantifiable silica exposure data available that is representative of all regularly occurring, as well as reasonably foreseeable work activities. Exposure monitoring will generally be conducted “in-house”, although assistance (*i.e. actual monitoring and/or interpretation of results*) may be obtained through outside consultants/hygienists.

Part 7

Silica Exposure Prevention & Control: Risk Control

Control Methods: When determining measures to reduce or eliminate worker exposure to silica dust, **Miller Construction Services** will generally select a combination of controls, listed in order of preference:

- Elimination and Substitution.
- Engineering.
- Administrative.
- Personnel Protection Equipment (PPE).

Substitution and Elimination: Whenever possible, **Miller Construction Services** will substitute products containing silica with products that do not contain *(or contain a lower percentage of)* crystalline silica. While there have historically been few “substitution” options available, **Miller Construction Services** recognizes the importance of planning work in order to minimize the amount of silica dust generated. During the planning phases of a project, **Miller Construction Services** will advocate for the use of methods that reduce the need for cutting, grinding, or drilling of concrete surfaces.

Engineering Controls: Engineering controls are those controls which aim to control or otherwise minimize the release of crystalline silica. Two “common” engineering control options are available to **Miller Construction Services** in many circumstances. These include the Local Exhaust Ventilation (LEV) and Wet Dust Suppression (WDS) systems.

LEV Systems: Tools/appliance specific LEV systems are available on some tools/appliances. Such LEV systems are generally comprised of a shroud assembly, a hose attachment, and a vacuum system. Dust-laden air is collected within the shroud, drawn into the hose attachment, and conveyed to the vacuum, where it is filtered and discharged. “Large scale” LEV systems, such those available on some Vacuum Trucks and Mobile Sweepers, may also be employed (at times) on **Miller Construction Services** projects.

When/if LEV systems are used, **Miller Construction Services** will employ the following systems and safe work practices:

- Vacuum attachment systems that capture and control dust at its source whenever possible.
- Dust control systems will be maintained in optimal working condition.
- Grinding wheels will be operated at the manufacturer’s recommended RPM (*operating in excess of this can generate significantly higher airborne dust levels*).
- HEPA or good quality, multi-stage vacuum units (*approved for use with silica dust*) will be used in accordance with the manufacturer’s instructions.
- Whenever possible, concrete grinding will be completed when the concrete is wet (*thus dust release will be significantly reduced*).

WDS Systems: Unlike LEV systems, many tools/appliances at **Miller Construction Services** are equipped with WDS systems (*i.e. on the Milling equipment, sweeper equipped Bobcats, as well as attachments on various hand held/portable, abrasive/cutting equipment*). When WDS Systems are not available, (*as a standard or retrofitted part of a tool/appliance*), similar effects can also be achieved by manually wetting the surface (*i.e. with a mister or with a hose*).

When WDS systems are used, **Miller Construction Services** will employ the following systems and safe work practices:

- If water is not readily available on the specific **Miller Construction Services** project, the project supervisor will arrange to have a water tank delivered to the site for use.
- Pneumatic or fuel (*i.e. gasoline*) powered equipment will generally be used instead of electrically powered equipment if water is the method of dust control, unless the electrical equipment is specifically designed to be used in such circumstances.
- Pressure and flow rate will be controlled in accordance with the tool manufacturer's specifications.
- When sawing concrete, tools that provide water directly to the blade will be used if possible.
- Wet slurry will be cleaned from work surfaces when the work is complete, if/when necessary.

Administrative Controls: Administrative controls are those that aim to control or otherwise minimize the release of silica through the use of work procedure and work methods, rather than by affecting the actual physical work. Common examples of administrative controls include, but are not limited to:

- Posting of warning signs.
- Rescheduling of work as to avoid the activities of others.
- Relocating unprotected workers away from dusty areas.

When administrative controls are used, **Miller Construction Services** will employ the following systems and safe work practices:

- In conjunction with the Owner/Prime Contractor, suitable exposure control strategies (*both within and outside Miller Construction Services's capabilities/responsibilities*) will be discussed and determined. As necessary/appropriate, supplemental (to this policy/procedure) project and task specific Exposure Control Plans will be developed.
- Suitable housekeeping, restricted work area, hygiene practices, training and supervision procedures/standards will be determined and implemented on **Miller Construction Services** projects.
- As appropriate, barriers will be erected around known silica dust generating activities, and/or warning signs will be posted.
- As able, work activities will be scheduled to minimize the silica related effect on, and from, others.

Personal Protective Equipment Controls: When used in conjunction with the other (*i.e. Engineering and Administrative*) controls elsewhere identified, personal protective equipment and clothing can help further reduce our employee's exposure to silica dust.

An air purifying respirator fitted with HEPA cartridges is the most common piece of PPE that would be used by **Miller Construction Services** to minimize exposure to silica dust. Dependent on the effectiveness of the other (*i.e. engineering*) control measures employed, either a "full face piece" or "1/2 face piece" respirator would be used by personnel (*In the majority of situations a 1/2 face respirator will be used. When working indoors or in other areas with poor ventilation, a full face respirator may be required*). Both of these respirators are "seal dependent", and thus the users must be "fit tested" and clean shaven where the respirator seals to the face.

In addition to respiratory PPE, protective clothing (*i.e. disposable/washable coveralls*) may be used and/or required to help prevent the contamination of the worker's personnel clothing.

Part 8

Silica Exposure Prevention & Control: Education and Training

Education and Training: Prior to performing activities, or working on project sites where personnel could be exposed to silica dust, **Miller Construction Services** will ensure that personnel receive suitable education and training. As necessary, personnel will be trained to a level of "demonstrated competency". While not necessarily an exhaustive list, education and training may include:

- The hazards and risks associated with exposure to silica dust.
- The signs and symptoms of silica related diseases.
- General and specific silica exposure reduction methods/strategies (*i.e. as detailed in the general/specific exposure control plans*).
- The use of specific pieces of equipment and control systems (*i.e. LEV and WDS systems*).
- The use and care of respiratory (and other) personal protective equipment.
- How to seek first aid (*i.e. for respiratory related concerns, including those that may be caused/associated with silica dust exposure*), and
- How to report items of the concern (*i.e. those related to silica dust*).

The education and training detailed will be delivered to **Miller Construction Services** employees through a variety of forums, including but not necessarily limited to:

- New Employee Orientations.
- Project/Site Orientations.
- Equipment/task specific training (*in accordance with Miller Construction Services's Policy, all personnel must be trained to a level of "demonstrated competency" prior to using required tools, equipment and appliances*).
- Start of shift "tool box talks".
- Regularly scheduled crew "Tailgate Meetings".
- Notifications and Bulletins (*those developed in house and those acquired from other reputable sources*).

Part 9

Silica Exposure Prevention & Control: Safe Work Procedures

Miller Construction Services will ensure that suitable written procedures for controlling the risk of silica exposure are developed. This document/table summarizes the silica control options generally available on **Miller Construction Services** sites/projects, and will be complimented with project/tasks specific Exposure Control Plans as necessary. This document and any supplemental work procedures/ECPs will be made readily available for review by all affected workers.

COMPANY SPECIFIC WRITTEN INSTRUCTIONS

EXAMPLE

Division/Task		Control Methods	Personal Protection Equipment	Comments
"Company Operations"	1. Use of flusher truck	No specific engineering/administrative controls required.	No specific PPE controls required	<p>The use of a flusher truck to remove debris/sediment from a surface to prepare it for driving in operations desirable/preferred, as the activity will generally generate little/no silica dust, and will improve drive aisles within the operations.</p> <p>The use of a flusher truck is not always practical/possible for reasons including: (1) increased costs and (2) the availability of such equipment, scheduling of staff at exact moments when the flusher truck required. The service will be included in general operator daily duties. Use of recycled water, availability is preferred.</p>

Part 10

Silica Exposure Prevention & Control: Documentation

In accordance with Record/Statistics Procedures detailed in the latest revision of **Miller Construction Services**'s "Health & Safety Manual", records associated with Crystalline Silica Program will be maintained in accordance with the following:

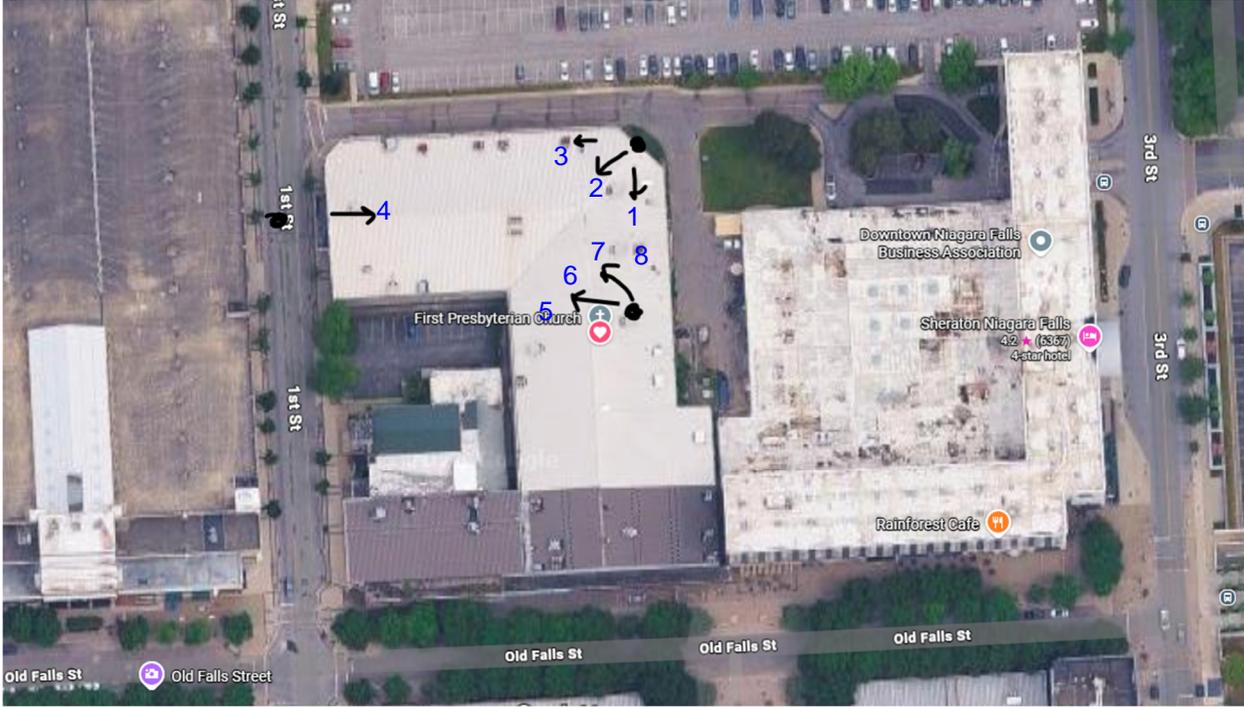
Record Type	Location(s)	Retention Requirement
Silica Policy, Program and Procedure	• (i.e. Head Office)	• Current Revision •
Project/Task Specific Silica ECPs	•	• LOP •
Exposure Monitoring Results	•	• LOP • LOP + ___ years
Workplace Inspections	•	•
First Aid Records/Reports of Exposure	•	•
Incident Investigation Reports	•	•
WorkSafeBC/Regulator Reports and Correspondence	•	•
Respirator Fit Tests	•	• LOE + ___ years
Equipment Maintenance and Repair Logs	•	• LOS + ___ years
New Employee Orientation Records	•	• LOE + ___ years
Site/Project Orientation Records	•	• LOE + ___ years
Tool Box Talk Records	•	•
Crew Safety Meeting Records	•	•
Job/Task Specific Training Records	•	• LOE + ___ years

*LOP – Length of Project

*LOE – Length of Employment

*LOS – Length of Service

EXHIBIT E



1



2



3



4



5



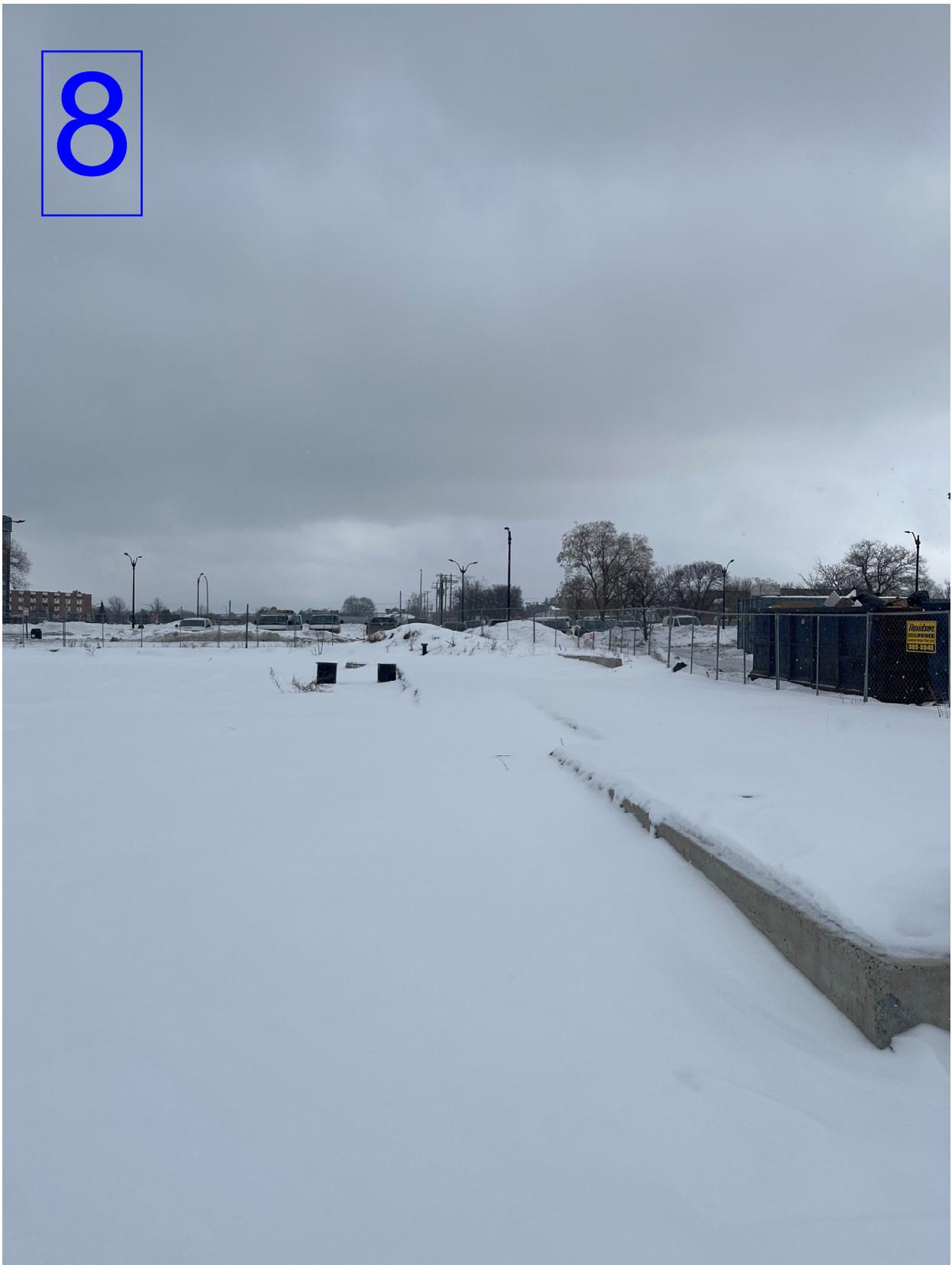
6



7



8



LOCATION REQUEST CONFIRMATION

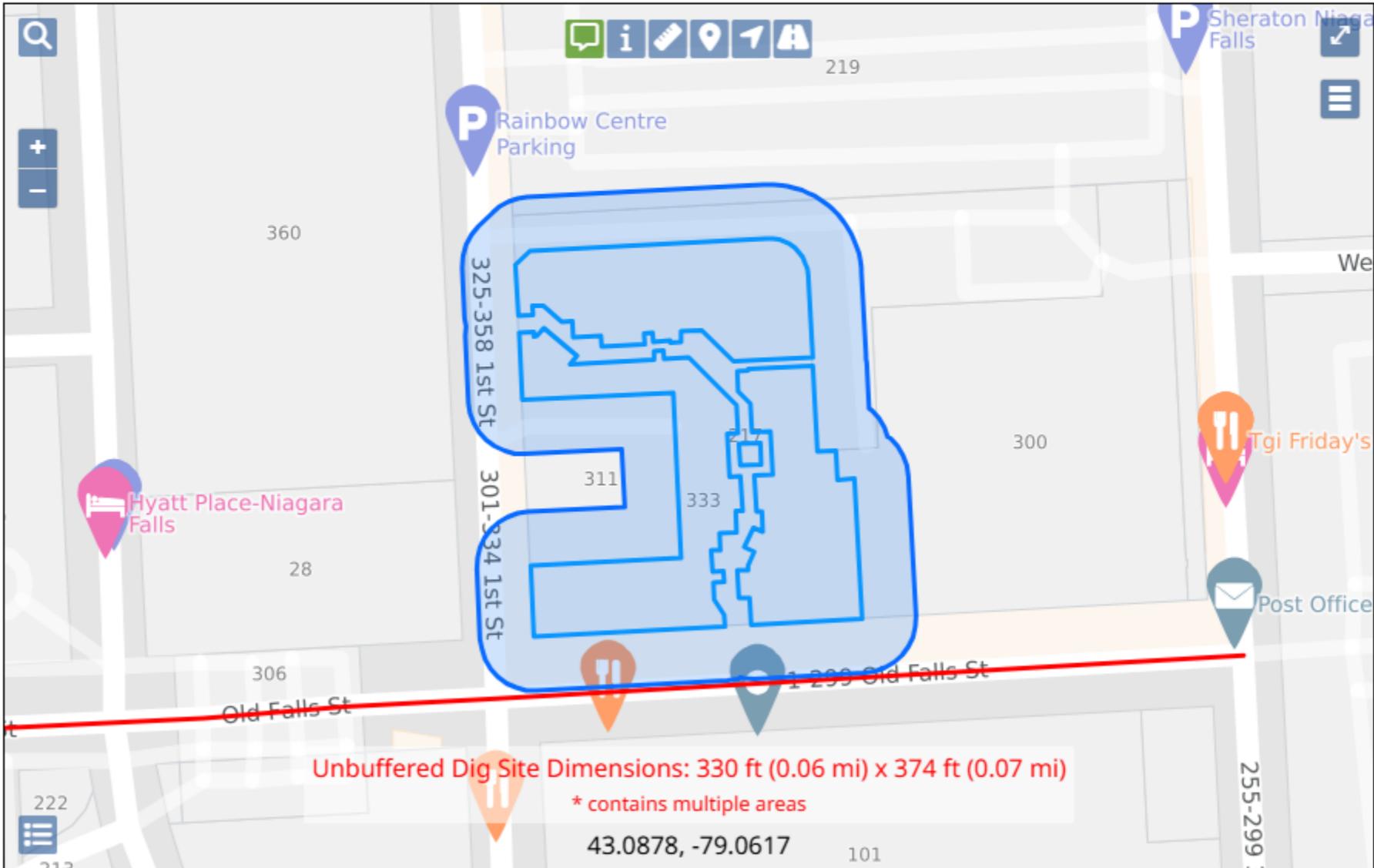


Thank you for contacting UDig NY.

Below is a copy of your map created using the Exactix web submission option and the list of utilities being notified.

Your Ticket Number is 02126-000-424

Exhibit F



Unbuffered Dig Site Dimensions: 330 ft (0.06 mi) x 374 ft (0.07 mi)
 * contains multiple areas
 43.0878, -79.0617

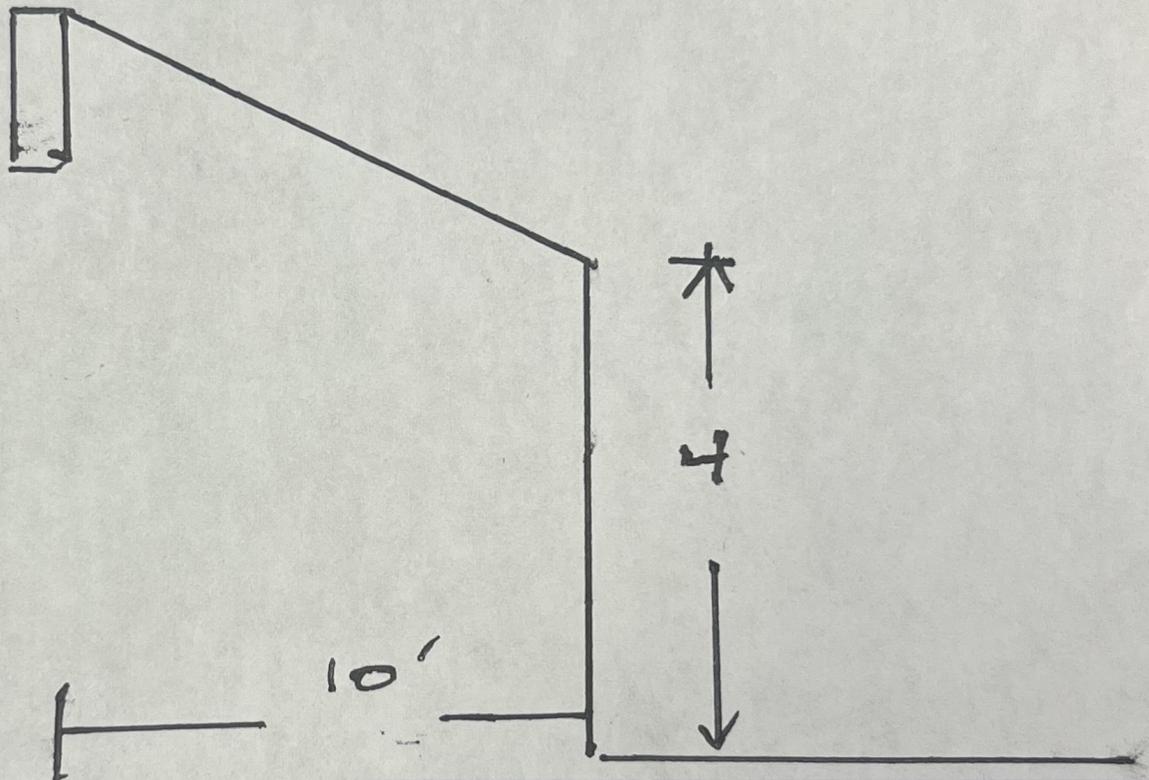
Service Areas	
CHARTER COM NORTHEAST WESTERN NY CHARTER COM NE W NY	USIC LOCATING APR (800) 262-8600
CITY OF NIAGARA FALLS CIT NIAGARA FALLS	THOMAS MIKLEJN (716) 286-4853
NATIONAL GRID / WEST / ELECTRIC NAT GRID / WEST / ELECTRIC	PREMIER LEVERAGE (866) 507-3010 x3
NATIONAL FUEL GAS NIAGARA FALLS NFG241 NFG / NIAGARA FALLS	NFG NIAGARA FALLS CONSTRUCTION CLERK (716) 278-9200
NIAGARA FALLS WATER AUTHORITY NIAGARA FALLS WTR AUTH	MIKE EAGLER (716) 283-9770
NYS DOT BUFFALO REGION 5 NYS DOT TFC BUFF	NYS DOT BUFFALO TRAFFIC SIGNAL UNIT (716) 847-2070
VERIZON BUFFALO VERIZON / BUFFALO	VERIZON NFLSR (844) 661-0660

Reliable
Onsite Services[®]
TYPE C

1 1/2 : 1

34°

EXHIBIT G



$$3' \text{ v} = 4.5' \text{ H}$$

Based upon Exhibit G, the start of the sloped excavation will be at the project boundary. If it is necessary to slope the excavated cell this will be what is constructed. The excavated area will be completely fenced off, thus reducing any/all pedestrian traffic or public safety concern. Maintenance and Protection of Traffic (MPT) may be required at the road/sidewalk areas and will be determined if needed as the project is on-going.

PROUDLY SERV

Portable Restrooms - Waste Holdin
Restroom & Shower Trailers - Te

If this sloping method is not sufficient, it may require us to utilize the existing foundation wall that is located on the property line to act as shoring stability temporarily. The foundation wall and all underlying soils above bedrock will be removed following the interior site remediation in accordance with the unrestricted remedy.

www.UnitedRent

716-393

Utilizing a smaller cell-based excavation approach and backfilling with stone immediately after excavation will help us minimize any large sloping needs along the property line.

EXHIBIT H

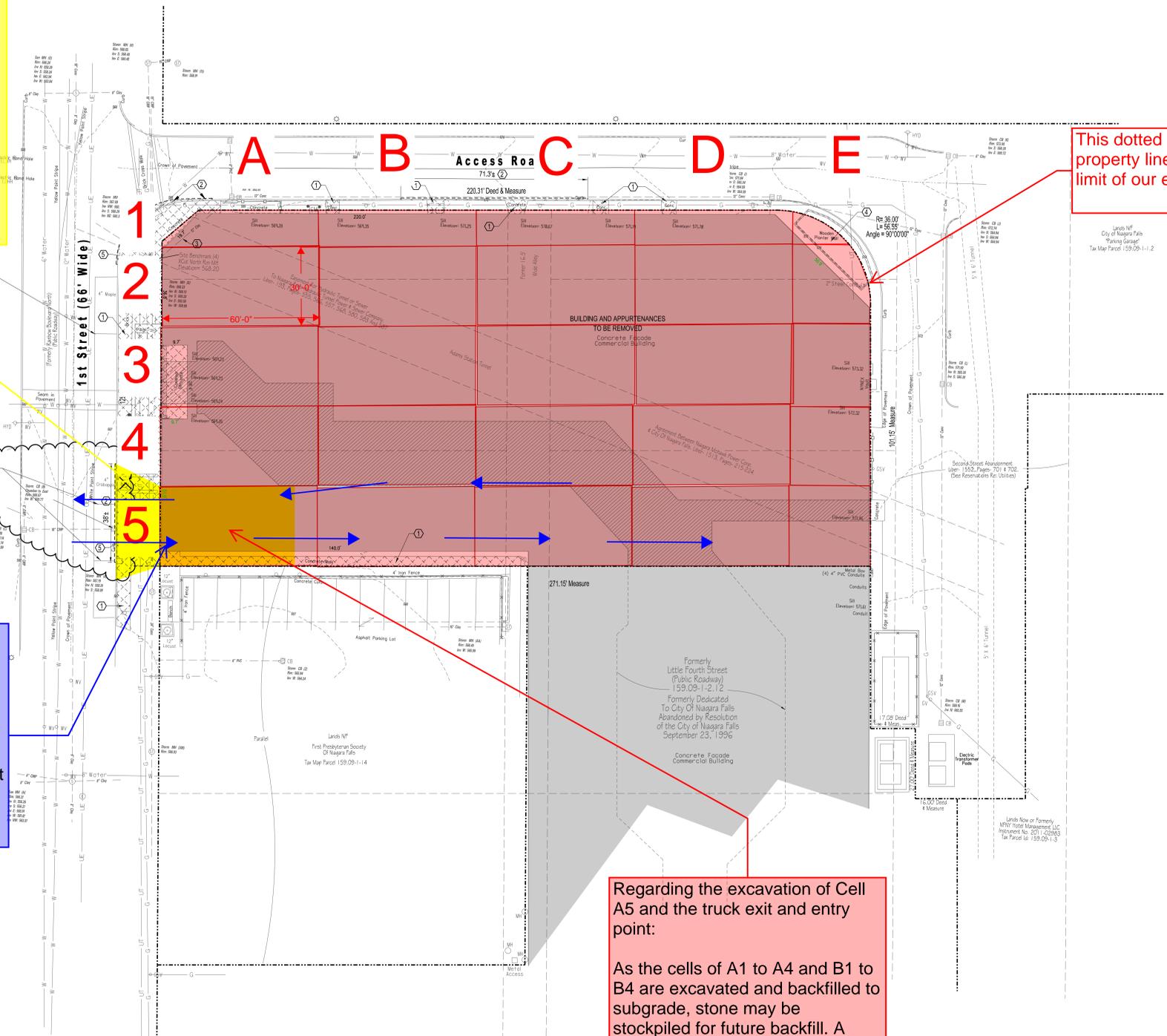
Construction Entrance will be constructed prior to start. From existing photos and demolition plan, the existing concrete slab and foundation will be removed in a 30ft x 50ft long section and backfilled with 12" compacted stone above stabilization fabric. If possible, the remaining portion of the existing building slab will stay intact and be utilized as a flat level surface for loading of spoils into trucks.

This dotted line marks the property line and will be the limit of our excavation.

Truck Enter and exit path. Trucks will be direct loaded with spoils and taken to Landfill. We will be utilizing the existing building slab as a flat level surface. Truck path will change as the project progresses depending on which cell we are excavating at that point in time. During this change, the trucks will then be driving on backfilled and compacted stone.

Regarding the excavation of Cell A5 and the truck exit and entry point:

As the cells of A1 to A4 and B1 to B4 are excavated and backfilled to subgrade, stone may be stockpiled for future backfill. A 30x15 area will be excavated first at the property line at A5 and will be filled with backfill from the road. The excavated spoils will stay on site and temporarily stockpiled at B5 or C5. We will continue this process into the site until that cell is finished. Trucks will be rerouted after A5 is backfilled to accommodate a clean truck route in and out of the site.



DEMOLITION PLAN NOTES

- CONTRACTOR TO REMOVE & DISPOSE OF ALL ITEMS INDICATED & ANY ITEMS INCIDENTAL TO THE CONSTRUCTION AS REQUIRED.
- CONTRACTOR SHALL PROTECT/PRESERVE ALL EXISTING ITEMS TO REMAIN INCLUDING, BUT NOT LIMITED TO BUILDINGS, PAVEMENT, OVERHEAD & BURIED UTILITIES, TREES, LANDSCAPING, ETC. DAMAGE TO ITEMS SCHEDULED TO REMAIN SHALL BE REPAIRED OR REPLANTED AT NO ADDITIONAL COST TO THE OWNER.
- UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL HAVE ALL UNDERGROUND FACILITIES LOCATED AND MARKED PRIOR TO EXCAVATION/DEMOLITION/CONSTRUCTION.
- DISCONNECT, CAP AND REMOVE/ABANDON EXISTING UTILITIES FOR ALL BUILDINGS TO BE DEMOLISHED. UNLESS NOTED OTHERWISE, ALL UTILITY TERMINATIONS SHALL BE IN ACCORDANCE WITH THE APPLICABLE UTILITY COMPANY REQUIREMENTS.
- CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIALS/DEBRIS REMOVED FROM THE SITE.
- CONTRACTOR TO OBTAIN HIGHWAY WORK PERMIT PRIOR TO THE START OF CONSTRUCTION. CALL FOR STAKEOUT OF UTILITIES BEFORE STARTING WORK. NOTIFY ENGINEER OR OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES FOUND IN THE FIELD.
- THIS PLAN IS PREPARED FROM A SURVEY SHOWING KNOWN SURFACE FEATURES. IT IS INTENDED AS A GUIDE TO THE CONTRACTOR, NOT AS A COMPLETE AND UNIVERSAL DEMOLITION PLAN. SEE THE SITE PLAN. MORE FEATURES (NOT INDICATED) MAY REQUIRE DEMOLITION TO CONSTRUCT THE SITE PLAN. CONTRACTOR MUST VISIT THE SITE TO CONFIRM DEMOLITION EFFORT PRIOR TO BIDDING.
- REMOVE CONCRETE SIDEWALK AND/OR PAVEMENT TO THE LIMITS INDICATED. SAW CUT CONCRETE TO THE NEAREST EXISTING CONTROL/EXPANSION JOINT.
- BUILDING DEMOLITION SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS/REGULATIONS.
- MAINTAIN STORM SEWER CONTINUITY & POSITIVE DRAINAGE DURING DEMOLITION, REMOVAL & CONSTRUCTION OF STORM SEWERS & INLETS.

DEMOLITION PLAN SHEET KEYNOTES

- REMOVE EXISTING CONCRETE/ASPHALT PAVEMENT & SUBGRADE AND/OR MASONRY UNITS
- SAWCUT PAVEMENT AND REMOVE EXISTING FULL REVEAL CURB TO NEAREST JOINT
- REMOVE STORM PIPE
- REMOVE PLANTER
- REMOVE LIGHT POLE & FIXTURE, STORE AND REINSTALL ON NEW BASE-SEE SITE PLAN

DEMOLITION PLAN LEGEND

CONCRETE/ASPHALT PAVEMENT/MASONRY UNITS TO BE REMOVED

HCR SHARS NO. 20230391

Drawn By: S.S.
Checked By: V.O.
Project Manager: V.O.

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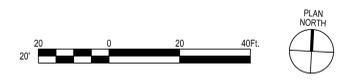
Revisions
9/24/2025 ASI -009

The Nest
333 1st Street
Niagara Falls, NY 14303
SWBR Project Number 22234.00

Community Services for Every1
180 Oak Street
Buffalo, NY 14203

C-102 DEMOLITION PLAN

DECEMBER 6TH, 2024
CONSTRUCTION DOCUMENTS





NIAGARA FALLS WATER BOARD
5815 Buffalo Ave. NF NY 14304
716-283-9770

METER NUMBER

HM-53

APPLICATION/PERMIT FOR HYDRANT USE

PERMIT NO: 337

METER SIZE: 1" (2")

DATE 4/2/25

EXHIBIT I

COMPANY NAME: Miller Construction Services
 ADDRESS: 3305 Haseley Dr. NF, NY 14304
 PHONE #: 535-0979 (David Saintz)
 LOCATION: 427-15+ Office - 731-6415
Fax - 731-6485
 PURPOSE OF WORK: Dust Control (demo underground)
 PERMIT VOID AFTER: 4/2026
 AUTHORIZED SIGNATURE: J. Basher

HYDRANT METER SERIAL NO.: 70329637 WRENCHES ISSUED YES NO
 FIRE HOSES ISSUED YES NO
 STARTING METER READ: 00182 ENDING METER READ: _____
 TOTAL CONSUMPTION: _____

FOR THE PURPOSE OF BILLING, IT SHALL BE DEEMED THAT A CUBIC FOOT OF WATER CONSUMED SHALL CONSTITUTE A CUBIC FOOT OF WASTEWATER DISCHARGED UNLESS THE OWNER OF THE PREMISES SHALL PROVIDE AT HIS EXPENSE AN APPROVED SEPARATE METER TO MEASURE EITHER THE FLOW TO THE SEWER OR TO CONSUMPTIVE USES. IN THIS INSTANCE, SUCH MEASUREMENT OF NET FLOW TO THE SEWER SHALL BE THE BASIS OF BILLING (SEE WATER BOARD RULES AND REGULATIONS).

David Saintz
SIGNATURE OF RENTER (OUT)
(David)

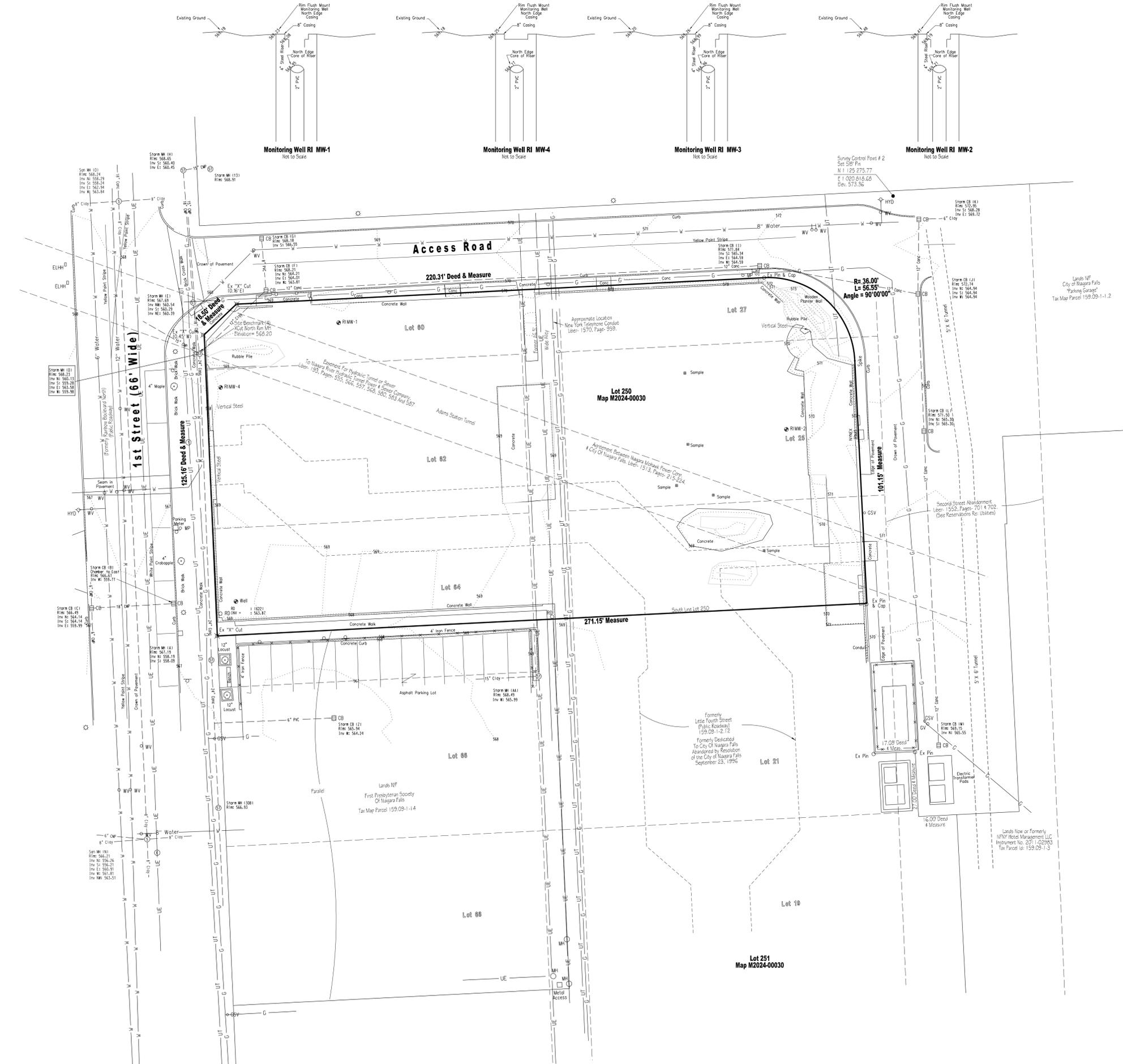
CONDITION OF METER (LIST ANY DAMAGE) OUT good IN _____
 DATE RETURNED _____ DAYS TO BE CHARGED _____

SIGNATURE OF RENTER (IN) SIGNATURE OF METER SHOP
 THERE WILL BE A MANDATORY MONTHLY METER INSPECTION FOR THE LENGTH OF USE.

- USE A REGULATION HYDRANT WRENCH ONLY. THE USE OF ANY OTHER TYPE OF WRENCH IS EXPRESSLY FORBIDDEN!
- THIS PERMIT MUST BE KEPT ON THE JOB AT ALL TIMES, MUST BE PRODUCED UPON DEMAND OF A WATER FACILITY INSPECTOR, POLICE OFFICER, OR OTHER CONSTITUTED AUTHORITY, AND MUST BE SURRENDERED AT THE WATER FACILITY OFFICE UPON COMPLETION OR WORK OR NO OTHER FUTURE PERMIT WILL BE ISSUED. VIOLATION OF ANY CITY ORDINANCE WILL RENDER THIS PERMIT NULL AND VOID, AS ALSO VIOLATION OF WATER FACILITY'S RULES AND REGULATIONS.

APPENDIX J

Pre-Remediation Topographic/Contour Map



Legend

Abbreviations	Symbols	Line Styles
Ex - Existing	⊙	--- SA --- Sanitary Sewer
E - East	⊙	--- ST --- Storm Sewer
N - North	⊙	--- W --- Water Line
W - West	⊙	--- G --- Gas Line
S - South	⊙	--- T --- Telephone Wires or Cables
R.O.W. - Right of Way	⊙	--- E --- Electric Wires or Cables
A.K.A. - also known as	⊙	--- OH --- Overhead Wires
Electric Meter	⊙	--- --- Contour Line
Monitoring Well	⊙	--- --- Centerline of Ditch
Electric Hand Hole	⊙	--- --- Crown of Pavement
Deciduous Tree	⊙	--- --- Centerline of Road
Coniferous Tree	⊙	--- --- Right of Way Line
Coniferous Tree	⊙	--- --- Building Setback Line
Electric Manhole	⊙	--- --- Easement Line
Signal Pole	⊙	--- --- Property Line
Cable Manhole	⊙	--- --- Underground Electric
Water Manhole	⊙	--- --- Paint Stripe
Traffic Manhole	⊙	--- --- Former Boundary Parcel Line
Large Rock	⊙	--- --- UFC --- Underground Cable TV
		--- --- UFO --- Underground Fiber Optic
		--- --- LE --- Underground Electric

- Notes:
- 1) North as shown on this Map is True North at 78°35' Meridian of West Longitude, as established by GPS Static Survey:
 - Control Point 1 Set Pin N. 1125537.25, E. 1020750.65
 - JAVAD GPS Receiver 944
 - Static GPS Observations January 18, 2023
 - New York State Plane Coordinates West Zone (3103)
 - REF FRAME: NAD83(2011)(EPOCH:2010.0000) ITRF2014 (EPOCH:2023.0096)

Base Stations used:

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE (m)
NONE	BNFY	N 42° 52' 39.17321" W 78° 53' 25.58440"	72704.149	
NONE	NYBT	N 42° 59' 17.96015" W 78° 07' 20.37550"	72727.013	
NONE	NYFD	N 42° 25' 41.78558" W 79° 20' 22.71958"	76768.760	
NONE	NYHB	N 42° 43' 02.66340" W 78° 50' 47.27349"	44744.448	
NONE	NYLP	N 43° 09' 54.85475" W 78° 45' 13.35707"	26419.420	

- Linear Unit - International Foot. Combined scale factor: 0.99993423. All dimensions shown are Ground.
- 2) Elevations as shown on this Map are based on NAVD83 Datum. Site Benchmark: as observed by static GPS observation on Nail 1 is 574.38 (NAVD88 (Computed using Geoid12B)).
 - 3) Utilities as shown on this map are plotted from field locations of visible structures and information provided by others. Niagara Boundary & Mapping Services, along with the undersigned Land Surveyor assumes no responsibility as to the accuracy of underground utilities. Contractor must call UFPO three working days prior to any excavation construction activities.
 - 4) Contour interval is 1.0' Foot
 - 5) Spot elevations present in CAD file are turned off for plotting clarity.
 - 6) Little Fourth Street is shown by Record Data as Mapped by Frank T. Tripi in 1986.

Niagara Boundary
And Mapping Services

P.O. Box 1120
Levittown, NY 14092
(716) 297-9584
E-Mail: info@niagaraboundary.com

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Map Showing Topographic Survey of a portion of

333 First Street

Deed Reference: Instrument No. 2019-04063
Tax ID: 159.09-1-2.11 & 159.09-1-2.12

LOT	SECTION	TOWNSHIP	RANGE
43			
City: Niagara Falls			
COUNTY: Niagara			
STATE: New York			
DATE: December 20, 2024			
SCALE: 1" = 20'			
JOB NO.: 4551-24			
RESURVEYED:			

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