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# Remedial Action Work Plan (RAWP)

## Niagara Power Transformer Site

1746 Dale Road BCP Site
Buffalo, New York

Prepared For:
Niagara Power Transformer (NPT) LLC
1755 Dale Road
Cheektowaga, New York 14225

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July 2026

# TABLE OF CONTENTS

## TABLES



## FIGURES



## APPENDICES

## Certification Statement

I, Allen J. Zgaljardic, certify that I am currently a NYS registered professional engineer and that this July 2026 Remedial Action Work Plan (RAWP) for the 1746 Dale Road Site (C_____, to be issued) was prepared in accordance with applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and Green Remediation (DER-31).

I certify that all information and statements in this certification are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

Allen J. Zgaljardic, P. E.

NYS Professional Engineer #088344 Date Signature

It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.

## Executive Summary

Niagara Power Transformer, LLC (NPT), a wholly owned subsidiary of Quanta Services, Inc., has applied to enter the Brownfield Cleanup Program (BCP) with the New York State Department of Environmental Conservation (NYSDEC) and anticipates acceptance and execution of a Brownfield Cleanup Agreement (BCA) in September/October 2026. NPT seeks enrollment in the BCP to investigate and remediate a 2.16-acre property located at 1746 Dale Road and 24 Anderson Road in the Town of Cheektowaga, Erie County, New York (the Site). NPT has recently acquired both parcels and thus qualifies as a BCP Volunteer. NPT proposes to continue industrial use on the property. When completed, the Site will contain NPT's new Welding Shop and Warehouse, with additional details on this proposed use outlined in greater detail in NPT's BCP Application. NPT's Brownfield Cleanup Application is being submitted concurrently with this Remedial Action Work Plan (RAWP)and the Remedial Investigation Report (RIR).

This RAWP summarizes the nature and extent of contamination as determined from data gathered during the Remedial Investigation (RI), performed between April 9 and July 9, 2026, as well as previous investigations and remediation attempts dating back to 1998. The RAWP provides an evaluation of a Track 1 cleanup and other applicable Remedial Action alternatives, their associated costs, and the recommended and preferred remedy. The remedy described in this document is consistent with the procedures defined in DER-10, DER-31, and complies with all applicable standards, criteria, and guidance (SCG). The remedy described in this document also complies with all applicable Federal, State and local laws, regulations and requirements. The NYSDEC and New York State Department of Health (NYSDOH) have determined that this Site does not pose a significant threat to human health and the environment. The RI for this Site did not identify fish and wildlife resources.

## Site Description/Physical Setting/Site History

The Site currently consists of two parcels that will be combined into one parcel located in the County of Erie, Cheektowaga, New York and is identified as 1746 Dale Road (Section 102.03, Block 2, Lot 30) and 24 Anderson Road (Section 102.03, Block 2, Lot 29) on the Erie County Office of GIS Interactive Mapping Viewer Tax Map. A United States Geological Survey (USGS) topographical quadrangle map (**Figure 1**) shows the Site location. The Site consists of an approximately 2.16-acre area bounded by Dimar Manufacturing Corporation (a metal fabrication facility) (40 Anderson Road) to the north, Dale Road and NPT's1747 Dale Road Class 4 State Superfund (SSF) Program Site (No. 915146) adjacent to NPT's 1755 Dale Road BCP Site (C915234); both have been successfully remediated and are currently in post-closure monitoring and maintenance via individual Site Management Plans (SMPs) to the south, Anderson Road and a commercial office building (recently purchased by NPT) (25 Anderson Road) to the east, and Upstate Farms Cooperative, Inc. (a dairy product processing and distribution center) (1730 Dale Road) to the west (see **Figures 2 and 3**). A boundary map is attached to the BCA as required by Environmental Conservation Law (ECL) Title 14 Section 27-1419. The 2.16-acre property is fully described in **Appendix A** – Metes and Bounds. Global positioning system coordinates for the starting point are included.

Past Uses and Ownership – 1746 Dale Road

Historical use of the 1746 Dale Road property dates to 1924 when it was owned by Careo-Oxygen Corporation, and subsequently General American Transportation Corp. (pre-1946), Walden Properties (1946), W. Weiss & Others (1949), and The Rotary Company, Inc./RoCo, Ltd. (1954). Careo-Oxygen Co. operated an air reduction plant with buildings and railroad lines that were

removed before 1946 when the current building was constructed. The 1746 Dale Road property was historically owned by RoCo, Ltd. (formerly known as the Rotary Company, Inc.).

RoCo, Ltd (formerly known as the Rotary Company, Inc.) owned and operated the 1746 Dale Road property from 2001 to 2014. According to previous reports, RoCo's on-site operations included precision metal fabrication, metal weldments, assemblies, and metal preparation and finishing. The materials involved in the manufacturing process included stainless steel, aluminum, brass, copper, exotic metals, specialty metals, extrusions and plastics. According to a previous owner (1950s through 1994), process chemicals were used only in the Metal Prep Room located in the northwest corner of the building. A fire on July 15, 2021, caused much of the building at 1746 Dale Road property to collapse, with no apparent cleanup operations conducted until June 2023. All that remains is the northeastern portion of the building consisting of the former Brake Area, Shear Area, and Machine Shop; the northwestern portion of the building consisting of the former Metal Prep Room; and concrete building foundations (see Figure 2). Dale Anderson owned and operated the 1746 Dale Road property from 2014 to May 2026 when NPT purchased the Site.

Past Uses and Ownership – 24 Anderson Road
The 24 Anderson Road property appears to have been vacant land developed with train tracks from at least 1938 until the late-1940s or early-1950s. The tracks were removed and eastern portion of the on-site building was constructed. Westward expansion of the building occurred through the 1960s. Original occupants of the building are not known; however, since 1963, the building has been occupied by Kolk Manufacturing Inc. (silverware manufacturer), Bison Electrical Co. (electrical supplies warehouse), Buff Imprints, Inc. (silkscreen and textiles printing operation) and Davis Electrical Supply Co. from the early-1980s to 2022. NPT purchased the 24 Anderson Road property from Davis Electrical Supply Company in February 2026.

Historical occupants of the 24 Anderson Road property appear to have included activities indicative of potential environmental concern such as metal utensil manufacturing and cleaning and printing operations.

## Summary of the Remedial Investigation

Based on the results of the RI as well as previous investigations, the Constituents of Potential Concern (COPCs) for the Site in terms of achieving remedial action objectives by media, include:

- **Soil:** cVOCs
- **Groundwater:** cVOCs, 1,4-dioxane, and PAHs
- **Soil Vapor:** cVOCs

The applicable standards criteria and guidance (SCG) for Site soil are the Part 375 IUSCOs, PGWSCOs, and UUSCOs. The depth of impacted soil exceeding the UUSCOs ranges from 0 to 25 ft bgs. Based on RI and previous investigation data, Site soils are impacted with cVOCs, and to a lesser extent, arsenic and nickel.

The applicable standards criteria and guidance for Site groundwater are the AWQS/GVs. Based on RI and previous investigation data, Site groundwater has been impacted with cVOCs, PAHs, barium, and manganese at concentrations above AWQS/GVs.

Shallow groundwater at the Site flows radially from the well GW-3 vicinity in a west to east direction. Contaminants present in on-site groundwater (cVOCs and 1,4-dioxane) may be

transported across the Site via this pathway. Detected PAHs and metals (arsenic and barium) tend to adsorb strongly to soil, sediment, and particulate matter and are not expected to be transported readily with groundwater.

Finally, cVOCs were detected in soil vapor site-wide. The source of TCE is attributed to historical activities at the Site. cVOCs detected in soil vapor could potentially result in soil vapor intrusion into existing and future on-Site buildings. While the anticipated in-situ groundwater remedy is expected to remove cVOCs in soil and groundwater, a vapor barrier will be installed under the proposed new Welding Shop building as a green remedial measure, and an SSDS beneath the new building is planned. The SSDS beneath the existing building on the 24 Anderson Road property will be evaluated, repaired as necessary, and returned to operation as designed.

## Qualitative Human Health Exposure Assessment

Based on the qualitative human health exposure assessment, the potential exposure pathways for the current and future use conditions are listed below.

**Current Use Scenario:**

- Indoor Occupant/Worker – inhalation of volatile organics via indoor air migration
- Construction and Outdoor Worker – direct contact, incidental ingestion, and inhalation of non-volatile contaminants present in soil, and volatile contaminants present in groundwater during intrusive activities, and inhalation of volatile organics present in soil and groundwater via outdoor air migration.

**Future Use Scenario:**

- Indoor Occupant/Worker – inhalation of volatile organics via indoor air migration
- Construction and Outdoor Worker – direct contact, incidental ingestion, and inhalation of non-volatile contaminants present in soil, and volatile contaminants present in soil and groundwater during intrusive activities, and inhalation of volatile organics present in soil and groundwater via outdoor air migration.

In most instances, these exposures can be readily mitigated through the use of personal protective equipment (PPE); proper soil management during intrusive activities; ECs including placement of asphalt, building, and landscape cover; and construction of vapor barriers or SSDS's in existing or newly constructed buildings.

## Fish & Wildlife Assessment (FWIA)

The Site is currently developed with industrial buildings (former manufacturing, warehouse, and offices), asphalt parking, and asphalt driveways, which has limited the availability of suitable cover type for re-establishment of biota. The redevelopment plan includes the potential for additional structures. As such, based on the completed Fish and Wildlife Resource Impact Analysis Decision Key included in **Appendix F** (NYSDEC DER-10, Appendix 3C), "no fish and wildlife resources impact analysis is needed".

## Summary of the Remedy

The remedial alternatives analysis determined that 4Alternative 4 will be the goal for the Site, although a Track 2 remedy will be considered. A summary of the selected Track 4 remedial actions to address the impacts identified are presented below:

1) Site preparation, including asbestos and lead based paint abatement and demolition of a portion of the 24 Anderson existing building, demolition of the remaining 1746 structures and foundations. The estimated quantity of ~~soil/fill~~material to be removed from the Site ~~is [X] tons/cubic yards~~includes:~~.~~

24 Anderson Road Parcel:

- Asbestos containing material (ACM) abatement of interior and roof (quantity unknown currently).
- Demolition, removal, and off-site disposal of the Former Office/Showroom portion of the building, including slabs and foundations; estimated to be approximately 60 CYs.
- Interior demolition and renovations as well as roof replacement (quantity unknown currently).

1746 Dale Road Parcel:

- Demolition, removal, and off-site disposal of the remaining northeastern portion of the building (former Brake Area, Shear Area, and Machine Shop), the northwestern portion of the building (former Metal Prep Room), and concrete building foundations; estimated to be approximately 250 CYs.
- Following building and foundation demolition, excavation of an additional approximately 1,220 CYs of subsurface soil (1-foot depth) are anticipated to be removed during Site grading activities.
- Excavation of an approximately 23,000 SF of soil beneath the planned new Welding Building followed by off-site disposal of asphalt, concrete, and soil up to 4.0 ft bgs as non-hazardous waste under a Contained-In Determination (approximately 3,400 CYs).
- Dewatering of the excavation will be performed as necessary with collected water treated and discharged to the sanitary sewer under a temporary discharge permit (quantity unknown currently). A vapor barrier with minimum thickness of 6-mil will be placed over building envelope gravel followed by one-foot-thick reinforced concrete pad.

The total quantity of material expected to be disposed off-Site is approximately 4,930 CYs~~[insert quantity; breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc.]~~. ~~-~~The estimated quantity of soil and/or gravel to be imported into the Site for backfill and/or cover soil is ~~[X] tons/cubic yards~~currently unknown. The reuse of excavation spoils is not anticipated.

~~1)~~2) If necessary, localized dewatering, characterization, and treatment of water accumulated in excavations prior to discharge to an NYSDEC-approved sewer/sanitary line (pending permits), or localized dewatering with containerization, classification, and disposal at an approved receiving facility.

~~2)~~3) Collection and analysis of end-point samples following foundation excavation of the planned new Welding Shop Building to evaluate the performance of the remedy with respect to attainment of Track ~~[4]~~4 SCOs;

~~3)~~4) Groundwater remediation will include the design and implementation of an in-situ bioremediation of cVOC contamination. The in-situ bioremediation will include a series of in-situ amendment injections derived from carbon-neutral agricultural products supplemented with microbial culture to destroy the cVOCs via reductive dechlorination and

achieve the AWQS or significant reductions in contaminant levels. The groundwater characterization obtained during the RI assisted in designing the in-situ remediation strategy for groundwater.

Specifically, groundwater remediation at the Site will include direct injection of groundwater treatment amendments over an approximate 3,147 square-foot area. The amendments will be delivered over a treatment interval of approximately 3 to 13 fbgs at 60 injection point locations. An estimated 545 gallons of emulsified vegetable oil (EVO), 4,500 pounds (245 gallons) of sodium bicarbonate, 52 pounds (13 gallons) of sodium ascorbate, and 16 gallons of microbial culture will be injected. Approximately 12,321 gallons of potable water will be mixed with the amendments; therefore, the volume of water/amendments per injection point is approximately 217 gallons. The conceptual design for in-situ groundwater treatment is presented in **Figure 13**.

~~4)~~5) Screening for indications of contamination (by visual means, odor, and monitoring with PID) of all excavated soil during any intrusive Site work;

~~5)~~6) Appropriate off-Site disposal of all material removed from the Site in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal;

~~6)~~7) Import of materials to be used for backfill and cover in compliance with: (1) chemical limits and other specifications included in NYCRR Sections 375-6.7(d) and 375-6.8 (b) and DER-10 ~~Table [x]~~, (2) all Federal, State and local rules and regulations for handling and transport of material;

~~7)~~ Construction and maintenance of a site cover consisting of ~~[summary of cover types]~~minor soil landscaped areas and hardscape (i.e., asphalt parking/driveways, existing building, and newly constructed building) to prevent human exposure to residual contaminated soil/fill remaining under the Site. Diagrams ~~A diagram~~ showing the design detail for each cover type ~~is shown in **Figure**~~ will be provided upon completion~~[x]~~.

A map showing the aerial distribution of each of the cover types to be built at the Site is included in **Figure 15**~~[x]~~. The components of the site cover system will be documented in the FER. Maintenance of this site cover system will be described in the SMP.

8) Recording of an Environmental Easement, including Institutional Controls, to prevent future exposure to any residual contamination remaining at the Site (a copy of the Environmental Easement ~~is provided in Appendix [x]~~ upon completion of the selected remedy);

9) Publication of a Site Management Plan for long term management of residual contamination as required by the Environmental Easement, including plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;

10) All responsibilities associated with the Remedial Action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and local rules and regulations.

11) A remedial program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. 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. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;

- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.
- Progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the FER, including a comparison to the analyses provided in this RAWP~~goals established during the remedial program~~. ~~Regular updates to the metrics used (SEFA, SiteWiseTM or otherwise approved method) should be included.~~

~~o~~

The Climate Screening process and results will be documented in the form of a completed checklist and brief letter report. ~~If the Climate Screening results indicate that a CVA is necessary, a complete CVA Report will be developed. The CVA Report will be included as an Appendix or Attachment in relevant documents and/or submitted as a standalone report.~~A completed climate screening checklist for the remediation phase is provided in the RIR under separate cover. An updated checklist will be included in the FER to document the post-remediation status of the Site.

Remedial activities will be performed at the Site in accordance with this NYSDEC-approved RAWP and the NYSDEC-issued Decision Document. All deviations from the RAWP and/or Decision Document will be promptly reported to NYSDEC for approval and fully explained in the FER.

# 1.0 Introduction

Niagara Power Transformer, LLC (NPT), a wholly owned subsidiary of Quanta Services, Inc., has applied to enter [[Applicant / Volunteer / Participant] name(s)] entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC), with acceptance and execution of the BCA anticipated in [month, year]September/October 2026,. NPT seeks admission into the BCP to investigate and remediate a [size]2.16-acre property located at 1746 Dale Road and 24 Anderson Road [address and location] in the Town of Cheektowaga, Erie County, [village, county] New York. [BCA Applicant]NPT has recently acquired both parcels and thus qualifies as a BCP is a Volunteer [Participant or Volunteer] in the Brownfield Cleanup Program. NPT proposes to redevelop the Site consistent with its historical industrial use[Site usage type, i.e., Restricted Residential use, Commercial use, etc.] is proposed for the property. When completed, the Site will contain NPT's new Welding Shop and Warehouse, with additional details on this proposed use outlined in greater detail in NPT's BCP Application[general description of Site usage]. Refer to the Brownfield Cleanup Program (BCP) application for additional details.

This Remedial Action Work Plan (RAWP) summarizes the nature and extent of contamination as determined from data gathered during the Remedial Investigation (RI), performed between April 9 and July 9, 2026, as well as previous investigations and remediation attempts dating back to 1998[date] and [date]. It provides an evaluation of a Track 1 cleanup and other applicable Remedial Action alternatives, their associated costs, and the recommended and preferred remedy. The remedy described in this document is consistent with the procedures defined in DER-10, DER-31, and complies with all applicable standards, criteria and guidance. The remedy described in this document also complies with all applicable Federal, State and local laws, regulations and requirements. The NYSDEC and New York State Department of Health (NYSDOH) have determined that this Site does not [does/does not] pose a significant threat to human health and the environment. The RI for this Site did not [did/did not] identify fish and wildlife resources.

Per DER-10 Section 3.10, a Fish and Wildlife Resources Impact Analysis (FWRIA) has been performed and can be found in Section [x]. This RAWP includes appropriate measures for delineating and protecting the identified resource and for monitoring construction related impacts consistent with DER-10 FWRIA Part 3. These resources are identified on remedial drawings. The NYSDEC Division of Fish and Wildlife and/or Division of Marine Resources and the NYS Natural Heritage Program will be contacted, as defined in DER-10, and, at a minimum, all substantive technical requirements for applicable resource related permits (e.g., 6 NYCRR Parts 608, 661, 663) will be met.

A formal Remedial Design document will not [will/will not] be prepared.

The [Remedial Design Work Plan or draft Remedial Design Report] will be submitted by [scheduled date].

## 1.1 Site Location and Description

The Site is currently two parcels that will be combined into one parcel located in the County of Erie[county name], Cheektowaga[City], New York and is identified as 1746 Dale Road (Section 102.03, Block xxx2, Lot xxx 30) and 24 Anderson Road (Section 102.03, Block 2, Lot 29) on the Erie County Office of GIS Interactive Mapping Viewer [City] Tax Map. A [United States Geological Survey (USGS) topographical quadrangle or other suitable type] map (**Figure1** [x]) shows the Site location. The Site is situated onconsists of an approximately 2.16[x]-acre area bounded by Dimar

Manufacturing Corporation (a metal fabrication facility) (40 Anderson Road) [road, feature] to the north, Dale Road and NPT's1747 Dale Road Class 4 State Superfund (SSF) Program Site (No. 915146) adjacent to NPT's 1755 Dale Road BCP Site (C915234); both have been successfully remediated and are currently in post-closure monitoring and maintenance via individual Site Management Plans (SMPs) [road, feature] to the south, Anderson Road and a commercial office building (recently purchased by NPT) (25 Anderson Road) [road, feature] to the east, and Upstate Farms Cooperative, Inc. (a dairy product processing and distribution center) (1730 Dale Road) [road, feature] to the west (see **Figures 2 and 3** [x]). A boundary map is attached to the BCA as required by Environmental Conservation Law (ECL) Title 14 Section 27-1419. The 2.16[size]-acre property is fully described in **Appendix A**[x] – Metes and Bounds. GA global positioning system coordinates for the starting point are is included.

## 1.2 Contemplated Redevelopment Plan

The Remedial Action to be performed under the RAWP is intended to make the Site protective of human health and the environment consistent with the contemplated end use. The proposed redevelopment plan and end use is described herein to provide the basis for this assessment. However, the Remedial Action contemplated under this RAWP may be implemented independent of the proposed redevelopment plan.

The proposed redevelopment of the Site is to construct a new Welding Shop and Warehouse in support of NPT's industrial transformer operations. **Figure 4** presents a rendering of the preliminary redevelopment plan. The draft Site layout and landscaping plan is presented in **Figure 5**; plans are still being finalized as of the date of this RAWP.

## 1.3 Description of Surrounding Property

The Site is located on the corner of Dale and Anderson Roads in an industrial area of the Town of Cheektowaga, Erie County, New York. The Site is bounded to the east by Anderson Road and a commercial office building (recently purchased by NPT) (25 Anderson Road), to the west by Upstate Farms Cooperative, Inc. (a dairy product processing and distribution center) (1730 Dale Road), and to the north by Dimar Manufacturing Corporation (a metal fabrication facility) (40 Anderson Road). South of the Site is Dale Road and NPT's 1747 Dale Road Class 4 State Superfund (SSF) Program Site (No. 915146) adjacent to NPT's 1755 Dale Road BCP Site (C915234); both the 1747 SSF and 1755 BCP Dale Road Sites have been successfully remediated and are currently in post-closure monitoring and maintenance via individual SMPs. The 1747 Dale Road Site consists of NPT's main Welding Shop/Office Building and Warehouse and the 1755 Dale Road BCP Site consists of NPT's main Winding and Assembly Buildings.

Holy Mother of the Rosary Cemetery is located southwest of the Site. The nearest residential property is approximately 1,000 feet to the southeast of the Site.

Adjacent property owners and usage are presented in **Figure 3**.

## 2.0 Description of Remedial Investigation Findings

The Site was investigated in accordance with ~~the scope of work presented in the NYSDEC-approved Remedial Investigation (RI) Work Plan dated [month, year] and [add any supplemental RI Work Plans here]~~ NYSDEC DER-10; *Technical Guidance for Site Investigation and Remediation* (May 2010) and TRC's proposals to NPT dated April 6, 2026 and June 28, 2026. The investigation was conducted between April 9[~~date~~] and July 9, 2026[~~date~~]. The Remedial Investigation Report (RIR) was submitted to NYSDEC along with the BCP Application and this RAWP on July 21, 2026[~~insert date~~] ~~and approved by NYSDEC on [insert date]~~. NYSDEC acceptance of the BCP Application, approval of the RIR, and this RAWP are pending.

For purposes of evaluating the remedial alternatives associated with the proposed Site redevelopment, the analytical results of the soil samples were compared to the Part 375 Industrial-Use Soil Cleanup Objectives (IUSCOs). Groundwater sample results were compared to the applicable Part 703 Ambient Water Quality Standard or Guidance Value (AWQS/GV) (*NYSDEC TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values, June 1998, revised January 1999, April 2000, June 2004, October 2021, and February 2023*). Analytical results of the vapor intrusion sampling were compared to the guidelines set forth in the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" document dated October 2006 (latest update February 2024).

### 2.1 Summary Remedial Investigations Performed

#### *2.1.1 Remedial Investigation Findings – Soil*

Several subsurface soil investigations have been completed across the Site. To supplement the previous environmental data and to further investigate contamination at the Site, TRC performed the RI concurrently with NPT's geotechnical assessment. Between April 29 and May 8, 2026, TRC field personnel performed drilling oversight of 10 borings across the BCP Site. RI borings, identified as B1-25, B2-25, B3-25, B4-R, and B5-25 through B10-25, were completed via rear-mounted drill rig equipped with 4.25-inch hollow stem augers to approximately 25 ft bgs with one exception, boring B4-R was advanced to bedrock refusal at 49.5 ft bgs.

Sixteen (16) soil samples (including quality assurance/quality control (QA/QC) samples) were collected were collected during the RI. Soil samples were collected from varying soil depths within the upper 25 feet of overburden to close out data gaps with one exception; one soil sample was collected from 45-47 ft bgs at boring B4-R, just above bedrock.

As presented in **Table 1** and **Figure 6**, RI results for subsurface soil include the following:

- TCE and breakdown compounds 1,1,1-TCA, 1,1-DCA, 1,1-DCE, 1,2-DCA, cis-1,2-DCE, trans-1,2-DCE, and VC exceeded the individual PGWSCOs at boring B2-25 (6.0 – 8.0).
- TCE exceeded the PGWSCO at borings B1-25 (23.0 – 25.0) and B6-25 (6.0 – 9.0).
- Part 375 SVOCs, PCBs, pesticides, and total metals were reported as non-detect or well below the individual IUSCOs and/or PGWSCOs with one exception; arsenic at soil sample B2-25 (6.0 – 8.0) was reported at a concentration exceeding the Part 375 IUSCO. Arsenic detection is considered limited to the vicinity of boring B2-25, and not a site-wide contaminate.
- Emerging contaminates PFAS and 1,4-dioxane were all reported as non-detect, and hence, well below the individual Guidance Values, IUSCOs, and/or PGWSCOs.

### 2.1.2 Remedial Investigation Findings – Groundwater

Subsequent to reaching 25.0 ft bgs at borings B5-25, B2-25, B6-25, B7-25, and B8-25, TRC personnel provided oversight for the installation of five (5) groundwater monitoring wells, identified as MW-1 through MW-5, respectively, to further investigate on-Site groundwater flow direction and quality. The newly installed wells provided supplemental site-wide coverage to the four existing monitoring wells installed during previous investigations, identified as GW-1, GW-2, GW-3, and GW-5. The groundwater monitoring well network at the Site includes the four existing and five newly installed wells as shown in **Figure 7**.

On April 9, 2026, TRC field personnel performed an inspection and integrity assessment of existing monitoring wells GW-1, GW-2, GW-3, and GW-5 to determine their usability and efficacy to monitor groundwater at the Site. Overall, the existing monitoring well network was in good condition, except for some minor repairs, and determined useable to effectively monitor groundwater flow and quality at the Site.

Between April 29 and May 8, 2026, new monitoring wells MW-1 through MW-5 were installed at the Site. On April 14-15, 2026, existing monitoring wells GW-1, GW-2, GW-3, and GW-5 were developed and on May 11-12, 20206 newly installed RI wells MW-1 through MW-5 were developed. Each network monitoring well was developed using dedicated disposable polyethylene bailers via surge and purge methodology in accordance with NYSDEC protocols and TRC Field Operating Procedures (FOPs).

Groundwater samples were collected from the four (4) existing wells (GW-1, GW-2, GW-3, and GW-5) on April 20, 2026, and from the five (5) newly installed RI monitoring wells (MW-1 through MW-5) on May 15, 2026. Groundwater samples were collected via low-flow/minimal drawdown procedures utilizing non-dedicated peristaltic pump and dedicated high density polyethylene (HDPE) and silicone tubing.

As presented in **Tables 2 and 3** (existing wells and newly installed RI wells, respectively) and **Figure 7**, RI results for groundwater include the following:

- There were no visual (i.e., sheen or LNAPL) or olfactory concerns identified during groundwater well installation or development.
- Groundwater flow appears to be radially from the vicinity of well GW-3 in a west to east direction (see **Figures 8 and 9**).
- There were several Part 375 VOCs reported at concentrations exceeding individual AWQS/GVs in groundwater during the RI, primarily chlorinated volatile organic compounds (cVOCs) TCE and its breakdown products cis-1,2-DCE, trans-1,2-DCE, 1,1,1-TCA, 1,1-DCA, 1,1-DCE, 1,2-DCA, and VC. This coincides with cVOC concentrations reported in previous investigations.
- There were several Part 375 SVOCs reported at concentrations exceeding individual AWQS/GVs in groundwater during the RI, all were PAHs, which are formed through the incomplete combustion of organic material (i.e., coal, oil, gas, wood, and garbage). These exceedances are suspected to be present because of the July 2021 fire that destroyed most of the 1746 Dale Road building.
- There were only two Part 375 total metals reported at concentrations exceeding individual AWQSs in groundwater during the RI; barium (well GW-3) and manganese (well MW-3). Since both metals can be associated with either previous remediation efforts (barium at

well GW-3) or are naturally occurring (manganese at well MW-3) and each was localized and only detected at one well location, neither metal is considered a site-wide contaminate.

- There were no individual Part 375 PCBs reported at a concentration exceeding the individual AWQSs in groundwater during the RI. However, the total PCB concentration (the sum of nine individual Aroclors) at well MW-5 (0.183) exceeded the AWQS of 0.09 ug/L. This slight exceedance at only one location is not considered to be of concern at the Site.
- Pesticides were not detected at a concentration exceeding the AWQSs across the Site.
- RI groundwater analysis indicated only one detection of per- and polyfluoroalkyl substances (PFAS) (identified as perfluorooctanesulfonic acid, or PFOS) at a concentration slightly exceeding NYSDEC Guidance Values in well GW-2, located in the western portion of the Site. PFOS was reported as non-detect at well MW-2 located in the eastern portion of the Site. All remaining PFAS compounds were reported as non-detect. This detection may have been the result of possible firefighting foam usage during the July 2021 fire, although this has not been confirmed. As such, PFAS in groundwater is not considered to be of concern at the Site.
- 1,4-Dioxane was detected in groundwater from three of the five newly installed RI wells at a concentration exceeding the AWQS, including wells MW-1, MW-2, and MW-3. 1,4-dioxane has historically been used as a stabilizer in chlorinated solvents like 1,1,1-trichloroethane (TCA), although no documentation of 1,4-dioxane use at the Site has been identified. Because 1,4-dioxane and cVOCs frequently coexist in contaminated groundwater plumes, treating them is highly complex; their differing chemical structures often require sequential or co-metabolic remediation strategies.

### *2.1.3 Remedial Investigation Findings – Soil Vapor*

Soil vapor sampling and/or laboratory analysis were not performed during the RI. However, previous soil vapor assessments were performed which provided the necessary information to evaluate the soil vapor intrusion (SVI) pathway. Below is a timeline of investigations and remediation efforts historically conducted at the Site.

- On November 27, 2007, and according to the SMP, an Intrusive Soil Vapor Sampling and Analysis (ISVSA) was performed which included the collection of fourteen (14) samples: one upwind (AM #8), one downwind (AM #7), and six co-located subslab vapor (SV #1 through SV #6) with six ambient air (AM #1 through AM #6) samples. Subslab sample locations targeted the vicinity of well GW-3 and borings BH-6, BH-10, and BH-13. One blind duplicate ambient air sample was collected from location #1. Each sample was collected over 24 hours and analyzed for VOCs via Method TO-15. A site walkthrough conducted in the areas proposed for sampling within the RoCo (1746 Dale Road) and Davis Electrical (24 Anderson Road) buildings, and no indoor sources were identified. Analytical results of the ISVSA compared to the most recent NYSDOH SVI Decision Matrices A through F indicate that MITIGATION for TCE is required at location #1 (Metal Prep Room; subslab vapor at 303 ug/$m^3$ with ambient air at 3.84 ug/$m^3$), location #3 (Upstate Warehouse at that time; subslab vapor at 9.68 ug/$m^3$ and ambient air at 3.78 ug/$m^3$), and location #6 (southwest corner of Davis Electrical building; subslab vapor at 17.7 ug/$m^3$ and ambient air at 1.08 ug/$m^3$). IDENTIFY SOURCE(S) AND RE-SAMPLE OR MITIGATE is required for TCE at location #2 (just east of Metal Prep Room), location #4 (just southeast of well GW-1), and location #5 (southeast area of Davis Electrical building).

No further action was required for PCE and 1,1,1-trichloroethane (1,1,1-TCA) at all six locations.

- In August 2014, Iyer Engineering Group, PLLC (IEG) collected a subslab vapor sample within the Metal Prep Room with a reported concentration of 190,000 ug/m$^3$. This was a significant increase compared to the November 2007 result reported in the ISVSA Report of 303 ug/m$^3$. To address the high TCE concentrations, IEG installed a subslab vapor extraction (SVE) system within the Metal Prep Room of the 1746 Dale Road property. The SVE system consisted of two (2) SVE points, connected via above ground PVC piping to a carbon filtration drum and roof fan, prior to atmospheric discharge above the Metal Prep Room.
- On May 5, 2020, soil vapor sampling/analysis and SVE system evaluation was conducted by Wittman GeoSciences, PLLC within the Metal Prep Building. Sampling consisted of collecting one in-line SVE effluent vapor sample from both SVE vapor extraction points (SV-01/VP1 and SV-02/VP2) for VOCs via Method TO-15. Elevated TCE concentrations were detected in both subslab vapor samples SV-01/VP1 (67.7 ug/m$^3$) and SV-02/VP2 (57.5 ug/m$^3$). Indoor air samples were not collected so a direct comparison of the results to the NYSDOH SVI Decision Matrices A through F could not be completed by TRC. Instead, using the subslab vapor results only, and regardless of indoor air concentration, Matrix A indicates MITIGATE for TCE at extraction point SV-01/VP1 and Matrix C indicates MONITOR or MITIGATE for VC at extraction point SV-01/VP1. SVE system evaluation concluded that an open trench within the Metal Prep Room should be filled with concrete to prevent SVE system short-circuiting, manometer readings should be performed monthly to ensure system operation, and due to a significant reduction in subslab TCE concentrations (190,000 down to 67.7 and 57.5 ug/m3, respectively) warranted carbon drum removal.
- In December 2022, Haley and Aldrich Inc. conducted an SVI assessment within the 24 Anderson Road building. Although the total number and exact location of the subslab vapor and ambient indoor air samples is unknown (TRC was not provided the report), it is known that the results from two sample locations, identified as HA-5 and HA-6 (both located along the southern portion of the building), indicated NYSDOH Matrix A MITIGATION for TCE at both locations. In March 2023, Davis Electrical contracted Mitigation Tech LLC to install a subslab depressurization system (SSDS) within the 24 Anderson Road building. The SSDS consists of fourteen (14) suction pits and four (4) roof top mounted fans. System effectiveness was determined via eighteen (18) test points (4 permanent and 14 temporary); each were measured while the system was operational with a vacuum greater than -0.004 inches of water column (in. WC), ranging from -0.090 to -0.007 inches of water column (in. WC).

Soil vapor analytical results from previous investigations are presented in **Table 4**. Sample locations with corresponding analytical results and NYSDOH Matrix determinations as well as the SSDS installed within the 24 Anderson Road building are presented in **Figure 10**.

SVI will continue to a viable pathway for contaminant migration at the Site. As such, engineering controls (ECs), such as an SSDS will need to be implemented as part of the selected remedy for the Site.

### ~~*2.1.2 Borings and Wells*~~

~~Text here.~~

### ~~2.1.3 Samples Collected~~

~~Text here.~~

### ~~2.1.4 Chemical Analytical Work Performed~~

~~Text here.~~

### ~~2.1.5 [Geophysical Work, Test Pits, Other]~~

~~Text here.~~

### ~~2.1.6 Best Management Practices~~

~~Text here.~~

### ~~2.1.7 Documentation~~

~~Text here.~~

~~Below is a summary of RI findings.~~

## 2.2 Significant Threat

~~The NYSDEC and NYSDOH have determined that this Site [does/does not] pose a significant threat to human health and the environment. Notice of that determination has been provided for public review. A copy of the notice is included in Appendix [x].~~

A significant threat determination to human health and the environment has not yet been made. Upon determination, notice will be provided for public review.

## 2.3 Site History

### 2.3.1 Past Uses and Ownership – 1746 Dale Road

Historical use of the 1746 Dale Road property dates to 1924 when it was owned by Careo-Oxygen Corporation, and subsequently General American Transportation Corp. (pre-1946), Walden Properties (1946), W. Weiss & Others (1949), and The Rotary Company, Inc./RoCo, Ltd. (1954). Careo-Oxygen Co. operated an air reduction plant with buildings and railroad lines that were removed before 1946 when the current building was constructed. The 1746 Dale Road property was historically owned by RoCo, Ltd. (formerly known as the Rotary Company, Inc.). The Rotary Company, Inc., sold certain assets including its name to the Husvar Group in 1994. The company then changed its name to RoCo, Ltd. The Husvar Group leased the property from RoCo, Ltd. in 1994 to approximately 1998. In 1999 the property was leased to Diversified Manufacturing, Inc. Most recently, the 1746 Dale Road property was last leased to Upstate Farms Cooperative, Inc. for warehouse space.

RoCo, Ltd (formerly known as the Rotary Company, Inc.) owned and operated the 1746 Dale Road property from 2001 to 2014. According to previous reports, RoCo's on-site operations included precision metal fabrication, metal weldments, assemblies, and metal preparation and finishing. The materials involved in the manufacturing process included stainless steel, aluminum, brass, copper, exotic metals, specialty metals, extrusions and plastics. According to a previous owner (1950s through 1994), process chemicals were used only in the Metal Prep Room located in the northwest corner of the building. A fire on July 15, 2021, caused much of the building at 1746 Dale Road property to collapse, with no apparent cleanup operations conducted until June 2023. All that remains is the northeastern portion of the building consisting of the former Brake Area, Shear Area, and Machine Shop; the northwestern portion of the building consisting of the

former Metal Prep Room; and concrete building foundations (see **Figure 2**). Dale Anderson owned and operated the 1746 Dale Road property from 2014 to May 2026 when NPT purchased the Site.
~~Text here.~~

### *2.3.2 Past Uses and Ownership – 24 Anderson Road*

The 24 Anderson Road property appears to have been vacant land developed with train tracks from at least 1938 until the late-1940s or early-1950s. The tracks were removed and eastern portion of the on-site building was constructed. Westward expansion of the building occurred through the 1960s. Original occupants of the building are not known; however, since 1963, the building has been occupied by Kolk Manufacturing Inc. (silverware manufacturer), Bison Electrical Co. (electrical supplies warehouse), Buff Imprints, Inc. (silkscreen and textiles printing operation) and Davis Electrical Supply Co. from the early-1980s to 2022. NPT purchased the 24 Anderson Road property from Davis Electrical Supply Company in February 2026.

Historical occupants of the 24 Anderson Road property appear to have included activities indicative of potential environmental concern such as metal utensil manufacturing and cleaning and printing operations.

### ~~*2.3.2*~~*2.3.3 ~~Phase I and Phase II Reports~~Previous Investigations & Remediations*

Previous environmental investigations completed on-Site have identified elevated levels of cVOCs exceeding 6NYCRR Part 375 Industrial-Use Soil Cleanup Objectives (IUSCOs) and Protection of Groundwater SCOs (PGWSCOs).

Subsurface volatile organic compound (VOC) contamination was associated with the use of trichloroethene (TCE) dating back to the 1950s. Site investigations revealed contamination beneath the former Metal Prep Room in the northwest corner of the 1746 Dale Road property, with TCE levels as high as 153,000 ppb in groundwater well GW-3. Below is a list of previous investigation and/or remediation reports conducted at the Site. Copies of the referenced reports are provided electronically in the Remedial Investigation Report (under separate cover). Relevant soil borings, monitoring wells, injection points, soil samples, groundwater samples, and subslab vapor/air samples are presented in **Figures 6 (soil), 7 (groundwater) and 10 (subslab vapor/air)**.~~Text here.~~

- CEM Services, Inc. Compliance Sampling Reports for 1746 Dale Road, Cheektowaga, NY (SSF Site No. 915300), March 25, 2016.
- Farmer Environmental Group. Phase I Environmental Site Assessment (ESA) for 24 Anderson Road, Cheektowaga, NY, October 24, 2025.
- Farmer Environmental Group. Phase I Environmental Site Assessment (ESA) for 1746 Dale Road, Cheektowaga, NY (SSF Site No. 915300), January 14, 2026.
- Frontier Technical Associates Inc. Analytical Data Report for Soil Investigation Report for 1746 Dale Road, Cheektowaga, NY, March 3, 2000.
- Haley & Aldrich of New York. Phase II Vapor Intrusion Investigation Report for 24 Anderson Road, Cheektowaga, NY, February 2023.
- Haley & Aldrich of New York. Subslab Depressurization System Installation Report for 24 Anderson Road, Cheektowaga, NY, May 2023.

- Iyer Environmental Group, PLLC. Groundwater Investigation Report for Dale Anderson LLC, 1746 Dale Road, Cheektowaga, NY (SSF Site No. 915300), October 2014.
- Iyer Environmental Group, PLLC. Remedial Action Work Plan (RAWP) for 1746 Dale Road, Cheektowaga, NY (SSF Site No. 915300), September 2015 (revised).
- Leader Professional Services, Inc. Voluntary Cleanup Program (VCP) Site Investigation/Remedial Alternatives Report for Roco LTD. Site (V00422), 1746 Dale Road, Cheektowaga, NY, March 11, 2002.
- Leader Professional Services, Inc. Voluntary Cleanup Program (VCP) Supplemental Site Investigation (SSI), Bioremediation Pilot Study (BPS) Report, and Remedial Action Plan (RAP) Report for Roco LTD. Site (V00422), 1746 Dale Road, Cheektowaga, NY, October 13, 2003.
- Leader Professional Services, Inc. Voluntary Cleanup Program Remedial Action Plan Report for Roco LTD. Site (V00422), 1746 Dale Road, Cheektowaga, NY, March 2007.
- Leader Professional Services, Inc. Voluntary Cleanup Program (VCP) Intrusive Soil Vapor Sampling and Analysis Work Plan for Roco LTD. Site (V00422), 1746 Dale Road, Cheektowaga, NY, October 2007.
- Leader Professional Services, Inc. Voluntary Cleanup Program (VCP) Supplemental Remedial Action Plan (SRAP) for Roco LTD. Site (V00422), 1746 Dale Road, Cheektowaga, NY, June 30, 2008.
- Leader Professional Services, Inc. Site Management Plan (SMP) for Roco LTD. Site (V00422), 1746 Dale Road, Cheektowaga, NY, February 2011.
- Panamerican Environmental, Inc. Phase II Subsurface Environmental Assessment Report for 1746 Dale Road, Cheektowaga, NY, October 1999.
- Tritech Environmental Health and Safety, Inc. Phase II Environmental Site Assessment Report for 1730 Dale Road and 90 Anderson Road, Cheektowaga, NY, July 2000.
- Whitestone Associates Engineering & Geology NY, PLLC. Report of Geotechnical Investigation for 1746 Dale Road (SSF Site No. 915300) and 24 Anderson Road, Cheektowaga, NY, June 4, 2026.
- Wittman GeoSciences, PLLC. Proposed Work Plan for 1746 Dale Road, Cheektowaga, NY (SSF Site No. 915300), February 18, 2020.
- Wittman GeoSciences, PLLC. Compliance Management Report – SVES Evaluation and Monitoring Well Sampling for 1746 Dale Road, Cheektowaga, NY (SSF Site No. 915300), June 15, 2020.

### ~~2.3.3~~2.3.4 Sanborn Maps

Available ~~All~~ Sanborn Maps ~~available~~ for this Site were reviewed prior to preparation of the RAWP and are provided in **Appendix B**. Sanborn Maps from 1939 and 1949 were reviewed by TRC for both the 24 Anderson and 1746 Road properties. Findings for each property are summarized below:

- 1939
  - The 24 Anderson Road property map depicted north of Walden Avenue with a series of railroad tracks crossing the central and eastern portions on a north-south

orientation. A vacant commercial building was shown on the east-adjoining property and Walden Avenue was depicted to the south followed by residences.

- The 1746 Dale Road property map depicted north of Walden Avenue with a series of railroad tracks crossing the central and eastern portions on a north-south orientation. A vacant commercial building was shown on the east-adjoining property and Walden Avenue was depicted adjacent to the south followed by residences.

- 1949
  - The 24 Anderson Road map depicted railroad tracks had been replaced by a one-story factory building and one story shed in the eastern section of the property. The east-adjoining factory building had expanded and was labeled as Road Machinery Sales & Service. A contractor's equipment warehouse and repair shop were shown on the south-adjoining property.
  - The 1746 Dale Road map depicted railroad tracks were no longer present, and a one-story building was depicted in the southwest corner of the property (labeled as contractor's equipment warehouse and repair shop). The east-adjoining factory building had expanded and was labeled as Road Machinery Sales & Service. The north adjoining railroad tracks had been replaced by a factory building in the eastern portion of that property.

No historical land uses indicative of apparent environmental concern (e.g., gasoline stations, dry cleaning facilities) were identified on or in close proximity to either the 24 Anderson or 1746 Dale Road properties on the historical Sanborn (i.e., fire insurance) maps reviewed by TRC.

## 2.4 Geologic and Hydrogeologic Conditions

### *2.4.1 Overburden*

The Site is located on the Lake Erie Plain of the Erie-Ontario Lowlands, which is approximately six to twelve miles wide, and extends from the Onondaga Escarpment (northern border) to northern Chautauqua County. This Plain is typified by little topographic relief and gently slopes southwestward towards Lake Erie, except in the immediate vicinity of major drainage ways. The surficial geology of the Erie-Ontario Lowlands has developed from lacustrine and glaciolacustrine deposits or till that may contain both limestone and shale.

According to the United States Department of Agriculture (USDA) Web soil survey, Site soils are characterized as Urban Land (Ud). Urban land is described as heavily developed, human-altered areas. More than 85% of its surface is covered by impervious materials like buildings, roads, and parking lots. Because natural soil properties are typically obliterated, subsurface investigations are required to determine actual soil type(s).

The surface of the Site consists of asphalt pavement, remaining concrete foundations, and three vacant buildings (see **Figure 2**). The predominate soil in the vicinity of the Site is a glaciolacustrine lean clay (CL) with variable amounts of sand and gravel and silt partings, reportedly deposited when the Lake Erie plain was occupied by a series of glacial lakes from approximately 10,000 to 14,000 years ago. This deposit consists predominantly of a medium to stiff, gray to brown, silty clay to clayey silt and is generally not conducive to groundwater flow. The overburden unit at the Site is approximately 49.5 feet thick.

A typical geologic cross section is shown in **Figure 11**[x].

### 2.4.2 Bedrock

Overburden soils overlie a grey, unweathered, hard, fossiliferous, Onondaga Limestone bedrock of the Middle Devonian Formation. Depth to bedrock at the Site was determined during the April/May 2026 geotechnical assessment to be 49.5 ft bgs. Bedrock was encountered at depths ranging from 44 to 54 ft bgs at the NPT 1747 Dale Road SSF and 1755 Dale Road BCP Sites, both of which are located south of the Site, across Dale Road.

### 2.4.3 Hydrogeology

On-Site borings completed during the Phase II ESA by Frontier Technical Associates, Inc. (borings B4A through B9A) encountered no groundwater to a maximum depth of 20-ft bgs. The soils were described as "fine sand to silty clays with some gravel", but no groundwater. During the most recent April/May 2026 RI, groundwater was not encountered at three borings; B1-25 (northeast corner of 24 Anderson Road), B3-25 (southeast corner of 1746 Dale Road), and B9-25 (northwest corner of 24 Anderson). Boring locations are shown in **Figure 6**.

Groundwater was identified during VCP investigations at a depth between 1.0 and 10 ft bgs. The TriTech Environmental Health and Safety, Inc. Phase II ESA reported groundwater from 8.0 to 9.0 ft bgs, immediately west of the Site on the adjacent Upstate Farms property (1730 Dale Road). During the most recent round of water levels measured on July 9, 2026, depth to the groundwater was measured between 1.29 (MW-1) and 7.11 (GW-5) ft bgs. Based on the competed investigations at the Site, the overburden soil beneath the asphalt and concrete covered surface is a glaciolacustrine deposit (lean clay (CL) with variable amounts of silt and sand partings down to approximately 16 ft bgs. The RI determined that shallow groundwater is present in the upper 16 feet of overburden, and within these partings, at the Site. Below this interbedded lean clay is a denser lean clay with fine gravel down to a grey, unweathered, hard, limestone bedrock at approximately 49.5 ft bgs (Onondaga Limestone), with no observable groundwater.

Historically and based on May 5, 2020 groundwater elevations from the four existing on-site (GW-1, GW-2, GW-3, and GW-5) and two off-site (GW-4 and GW-7) monitoring wells (as reported in the June 2020 CMR by Wittman), the direction of groundwater flow was assumed to be north to south. Assuming a north to south groundwater flow direction, the 2020 hydraulic gradient was calculated to be approximately 0.130 feet/feet (between wells GW-3 and GW-5). However, based on more recent April/May 2026 and July 9, 2026 groundwater elevations (with better site-wide coverage) from nine on-site monitoring wells (GW-1, GW-2, GW-3, GW-5, and MW-1 through MW-5) during the RI, the direction of groundwater flow appears to be radially from the vicinity of well GW-3 in a west to east direction.

The calculated 2026 hydraulic gradient is approximately 0.012 feet/feet for the April/May 2026 event and 0.006 feet/feet for the July 2026 event (between wells GW-3 and MW-2), indicating possible seasonal variability in groundwater flow velocity. Isopotential maps prepared using static depth to water measurements and calculated groundwater elevations from July 2026 indicate a radial groundwater flow direction from the vicinity of well GW-3 on the western side of the Site to the eastern side of the Site.
A groundwater flow map is shown in ~~Figure~~ **Figures 8** (April/May 2026) **and 9** (July 9, 2026)[~~x~~].

The isolated saturated silt and sand partings layer(s) interbedded within a low permeable, unsaturated, lean clay unit at the Site, appears to be under significant pressure, causing higher static depth to groundwater measurements at on-site monitoring wells versus depths to first groundwater observed during boring advancement. The lack of observable groundwater in the lean clay above (from grade to approximately 7 ft bgs) and below (from 16.5 to 49.5 ft bgs) the

saturated silt and sand partings further verifies this assumption. Below is summary of the depth to groundwater observations:

| Boring (Well) | First Observed Groundwater (ft bgs) | Static Depth to Groundwater (July 9, 2026) (ft bgs) |
|---|---|---|
| GW-1 | 12.0 | 2.01 |
| GW-2 | 5.0 | 2.06 |
| GW-3 | 4.5 | 3.02 |
| GW-5 | Not specified | 7.11 |
| B2-25 (MW-2) | 7.0 | 1.33 |
| B5-25 (MW-1) | 10.5 | 1.29 |
| B6-25 (MW-3) | 7.0 | 1.44 |
| B7-25 (MW-4) | 14.0 | 5.97 |
| B8-25 (MW-5) | 16.0 | 2.90 |

The depth to water disparity (between first observed and static measurements) is an indication that shallow groundwater observed at the Site, and within the silt and sand partings, may be a confined, or at least semi-confined, condition with a strong upward vertical gradient. *The narrowing disparity between first observed and static measurements of less than one foot at well GW-3 (4.5 versus 3.02 ft bgs, respectively) may explain the presence of an assumed radial flow from that well, which may represent a release of the confining pressure (i.e. semi-confined).* An assumed west to east groundwater flow direction across the Site is further confirmed via the west to east plume configuration of groundwater impacts identified during the RI (see Section 4.2).

## 2.5 Contamination Conditions

### *2.5.1 Conceptual Model of Site Contamination*

Based on the results of the RI as well as previous investigations, the Constituents of Potential Concern (COPCs) for the Site in terms of achieving remedial action objectives by media, include:

- **Soil:** cVOCs
- **Groundwater:** cVOCs, 1,4-dioxane, and PAHs
- **Soil Vapor:** cVOCs

The applicable standards criteria and guidance (SCG) for Site soil are the Part 375 IUSCOs, PGWSCOs, and UUSCOs. The depth of impacted soil exceeding the UUSCOs ranges from 0 to 25 ft bgs. Based on RI and previous investigation data, Site soils are impacted with cVOCs, and to a lesser extent, arsenic and nickel. Site soil analysis is discussed below:

- TCE was detected exceeding the PGWSCO and UUSCO at three boring locations, B1-25 (23-25), B2-25 (6-8), and B6-25 (6-8).
- TCE breakdown products 1,1,1-TCA, 1,1-DCA, 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE, and VC were detected concentrations exceeding the PGWSCOs and UUSCOs.
- TCE breakdown product 1,2-DCA was detected at a concentration exceeding the PGWSCO.

- There were no SVOC, pesticide, PCB, 1,4-dioxane, or PFAS impacts detected at the Site; each was reported as non-detect.
- Arsenic was detected at a concentration exceeding IUSCOs, PGWSCOs, and UUSCOs at one boring, B2-25 (6-8). Nickel was reported at a concentration exceeding the UUSCO at the same boring.

The applicable standards criteria and guidance for Site groundwater are the AWQS/GVs. Based on RI and previous investigation data, Site groundwater has been impacted with cVOCs, PAHs, barium, and manganese at concentrations above AWQS/GVs. Site groundwater analysis is discussed below:

- Parent cVOC TCE was detected at concentrations above AWQSs at the Site. Interestingly, TCE was reported at downgradient wells MW-2 and MW-3, and not in source area groundwater from well GW-3, as historically reported. This may be the direct result of semi-successful and historical in-situ groundwater treatment conducted in 2007/2008. As such, TCE is a concern at the Site.
- Detections of TCE breakdown products 1,1,1-DCA, 1,1-DCA, 1,1-DCE, 1,2-DCA, cis-1,2-DCE, trans-1,2-DCE, and VC in six of the nine on-site wells are evidence of incomplete HRC groundwater remediation performed in 2007/2008. As such, TCE breakdown products are a concern at the Site.
- There were several PAHs reported at concentrations exceeding individual AWQS/GVs in groundwater during the RI, which are formed through the incomplete combustion of organic material (i.e., coal, oil, gas, wood, and garbage). These heavier PAHs are highly insoluble and have an affinity to bind tightly to particulate matter. These exceedances are suspected to be present because of the July 2021 fire that destroyed most of the 1746 Dale Road building. As such, PAHs are not a concern at the Site.
- The total PCB concentration (the sum of nine individual Aroclors) at well MW-5 (0.183) exceeded the AWQS of 0.09 ug/L. PCBs do not break down readily, and move through the environment via air, water, and soil. An exceedance of total PCBs at only one location, and not other locations across the Site, is not considered to be a site-wide issue.
- Pesticides were not detected in sit-wide groundwater and are therefore not considered to be of concern at the Site.
- The barium exceedance in groundwater from source area well GW-3 is attributed to previous groundwater remediation efforts using HRC; as sulfate was removed from the subsurface, barium dissolved into the groundwater, increasing the concentration. The vicinity of well GW-3 was the primary target during the three HRC injection events. As such, barium is not considered to be of concern at the Site.
- Manganese is a naturally occurring metal, and its elevated detection in well MW-3 is not well understood. Manganese was elevated across the Site ranging from 27.15 to 257.7 mg/L. As such, manganese is not considered to be of concern at the Site.
- Perfluorooctanesulfonic acid (PFOS) was detected at a concentration slightly exceeding NYSDEC Guidance Values at one upgradient well location in the western portion of the Site (GW-2). PFOS was reported well below the NYSDEC Guidance Value at a second downgradient well location (MW-2) located at the eastern portion of the Site. All remaining PFAS compounds were reported as non-detect. This detection may have been the result of possible firefighting foam usage during the July 2021 fire, although this has not been

confirmed. Based on these residual concentrations, PFAS in groundwater is not considered to be of concern at the Site.

- 1,4-Dioxane was detected in groundwater from three of the five newly installed RI wells at a concentration exceeding the AWQS, including downgradient wells MW-1, MW-2, and MW-3. 1,4-dioxane has historically been used as a stabilizer in chlorinated solvents like 1,1,1-TCA, although no documentation of 1,1,1-TCA (and 1,4-dioxane) use at the Site has been identified. Because 1,4-dioxane and cVOCs frequently coexist in contaminated groundwater plumes, treating them is highly complex; their differing chemical structures often require sequential or co-metabolic remediation strategies. As such, 1,4-dioxane is a concern at the Site.

Shallow groundwater at the Site flows radially from the well GW-3 vicinity in a west to east direction. Contaminants present in on-site groundwater (cVOCs and 1,4-dioxane) may be transported across the Site via this pathway. Detected PAHs and metals (arsenic and barium) tend to adsorb strongly to soil, sediment, and particulate matter and are not expected to be transported readily with groundwater. The exposure pathway for impacted groundwater to human receptors is limited to ingestion or direct dermal exposure through excavation work. The Site and surrounding area are serviced by a municipal (supplied) water service, with no evidence of potable wells in the area.

Finally, cVOCs were detected in soil vapor Site-wide. The source of TCE is attributed to historical activities at the Site. cVOCs detected in soil vapor could potentially result in soil vapor intrusion into existing and future on-Site buildings. While the anticipated in-situ groundwater remedy is expected to remove cVOCs in soil and groundwater, a vapor barrier will be installed under the proposed new Welding Shop building as a green remedial measure, and an SSDS beneath the new building is planned. The SSDS beneath the existing building on the 24 Anderson Road property will be evaluated, repaired as necessary, and returned to operation as designed.

### *2.5.2 Description of Areas of Concern*

Based on Site observations, Site development history, and the findings of the previous environmental reports, three areas of concern (AOCs) were identified.

#### 2.5.2.1 AOC 1 – Contaminated Subsurface Fill

Subsurface soils on the Site are impacted with elevated concentrations of cVOCs and one location with arsenic. cVOC concentrations were detected above the individual PGWSCOs and UUSCOs at three boring locations. No other contaminants were identified in soil during the RI.

#### 2.5.2.2 AOC 2 – Groundwater Impacts

cVOCs, SVOCs (specifically PAHs), barium, and manganese were detected above the NYSDEC AWQS/GVs in groundwater at the Site. The cVOCs are likely the result of historical Site use. Elevated PAHs and barium, however, are likely the result of other attributable events; PAHs may be remnants of the building fire in July 2021 where most of the 1746 Dale Road building was destroyed, and barium was likely dissolved in groundwater, the result of sulfate reducing bacteria from historical groundwater remediation efforts. Manganese is a naturally occurring metal in NY groundwater.

#### 2.5.2.3 AOC 3 – Soil Vapor Impacts

cVOCs are present in the vapor phase at the Site and are likely the result of historical Site use. Soil vapor appears to be the result of the cVOC plume in groundwater, which flows radially from

the western side of the site in a west to east direction, and not the result of contaminated subsurface soil.

### 2.5.3 Identification of Standards, Criteria and Guidance

The following standards and criteria typically will apply to Site Characterizations, Remedial Investigations, remedy selection, UST closures, remedial actions and Site management activities:

- DER-10: Technical Guidance for Site Investigation and Remediation
- DER-13: Strategy for Evaluating Soil Vapor Intrusion at Remedial Sites in New York New York State Department of Environmental Conservation
- DER-23: Citizen Participation Handbook for Remedial Programs (revised January 12, 2021)
- DER-31: Green and Sustainable Remediation (January 2011)
- DER-33: Institutional Controls – A Guide to Drafting and Recording Institutional Controls
- 6 NYCRR Part 257: Air Quality Standards~~Text here~~
- 6 NYCRR Part 375: Environmental Remediation Programs (December 31, 2025)
- 6 NYCRR 375 Table 375-6.8(a) and Table 375-6.8(b)
- 6 NYCRR Parts 700-706, TOGS 1.1.1: Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations (June 1998)
- 29 CFR Part 1910.120: Hazardous Waste Operations and Emergency Response
- Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites (October 1994)
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (Final October 2006, updated February 2024)
- Citizen Participation in New York's Hazardous Waste Site Remediation Program: A Guidebook (June 1998)
- USEPA Office of Solid Waste and Emergency Response Directive 9355.047FS Presumptive Remedies: Policy and Procedures (September 1993)
- USEPA Office of Solid Waste and Emergency Response Directive 9355.048FS Presumptive Remedies
- 40 CFR Part 144: Underground Injection Control Program
- CP-43: Groundwater Monitoring Well Decommissioning Policy (November 2009)
- Sampling, Analysis, and Assessment of Per-and-Polyfluoroalkyl Substances, Under NYSDEC Part 375 Remedial Programs (April 2023).

### 2.5.4 Soil Contamination

Subsurface soil contamination was identified at the Site in the upper 25 feet during the RI. A summary of those detections and a comparison to applicable SCGs (i.e., Part 375 UUSCOs, IUSCOs, and PGWSCOs) are discussed below.

#### 2.5.4.1 Summary of Soil Data

cVOCs and arsenic were detected in subsurface soil during the RI at three boring locations B1-25 (23-25), B2-25 (6-8), and B6-25 (6-9). SVOCs, 1,4-dioxane, PCBs, pesticides, other total metals, and PFAS were not detected in any soil samples during the RI. These detections coincide with detections reported in previous investigations.

#### 2.5.4.2 Comparison of Soil with SCGs

Several cVOCs were detected at concentrations exceeding individual UUSCOs and PGWSCOs at boring B2-25 (6-8) and only one cVOC (TCE) at borings B1-25 (23-25) and B6 (6-9). cVOC concentrations above the IUSCOs were not reported.

Based on RI and historical analytical results obtained from the various reports, the following concentration ranges should be expected in subsurface soil at the Site:

- **PCE:** non-detect (several locations) to130 mg/kg (B4A (4'-6'))
- **TCE:** non-detect (several locations) to 257 mg/kg (B4 (1'-7'))
- **cis-1,2-DCE:** non-detect (several locations) to 8.1 mg/kg (B4A (6'-8'))
- **trans-1,2-DCE:** non-detect (all locations) to 0.21 mg/kg (B2-25 (6'-8'))
- **1,1-DCA:** non-detect (several locations) to 5.600 mg/kg (B5A (10'-12'))
- **1,1-DCE:** non-detect (several locations) to 32 mg/kg (B2-25 (6'-8'))
- **1,2-DCA:** non-detect (several locations) to 0.24 mg/kg (B2-25 (6'-8'))
- **VC:** non-detect (several locations) to 0.29 J mg/kg (B2-25 (6'-8'))
- **Arsenic:** non-detect (several locations) to 43.4 mg/kg (B2-25 (6'-8'))

### *2.5.5 On-Site and Off-Site Groundwater Contamination*

Groundwater contamination was identified at the Site in the upper 16 feet during the RI. A summary of those detections and a comparison to applicable SCGs (i.e., AWQS/GVs) are discussed below.

#### 2.5.5.1 Summary of Groundwater Data

cVOCs (six of the nine wells), PAHs (five of the nine wells), 1,4-dioxane (three wells), total PCBs (one well), barium (one well), manganese (one well), and PFOS (one well) were detected in groundwater during the RI. Except for emerging contaminants (1,4-dioxane and PFAS), these detections coincide with detections reported in previous investigations.

#### 2.5.5.2 Comparison of Groundwater with SCGs

Based on the RI data, the following detections were reported:

- Several cVOCs were detected at concentrations exceeding individual AWQS/GVs at existing wells GW-1, GW-2, and GW-3, and newly installed RI wells MW-1, MW-2, and MW-3. There were no cVOC exceedances at wells GW-5, MW-4, and MW-5.
- PAHs were detected at concentrations exceeding the AWQS/GVs at wells GW-1, GW-2, GW-3, GW-5, and MW-1.
- Emerging contaminant 1,4-dioxane was detected at a concentration exceeding the AWQS at wells MW-1, MW-2, and MW-3 and non-detect at wells MW-4 and MW-5. PFOS was

detected at a concentration exceeding the NYSDEC Guidance Value at well GW-2 and non-detect or below the Guidance Value at well MW-2.

- Manganese was detected at a concentration exceeding the AWQS at well MW-3 and barium at well GW-3.

Based on RI and historical analytical results obtained from the various reports, the following concentration ranges should be expected in subsurface soil at the Site:

- **PCE:** non-detect (all locations)
- **TCE:** non-detect (several wells) to 810 ug/L (MW-3)
- **cis-1,2-DCE:** non-detect (several wells) to 9,200 ug/L (GW-3)
- **trans-1,2-DCE:** non-detect (several locations) to 43 ug/L (GW-4)
- **1,1,1-TCA:** non-detect (several locations) to 1,300 ug/L (MW-2)
- **1,1-DCA:** non-detect (all locations) to 32,000 ug/L (MW-2)
- **1,1-DCE:** non-detect (several locations) to 300 ug/L (MW-2)
- **1,2-DCA:** non-detect (all locations) to 180 ug/L (MW-2)
- **VC:** non-detect (several locations) to 23,000 D ug/L (GW-3)
- **PFOS:** non-detect (one location) to 3.49 ng/L (GW-2)

### *2.5.6 On-Site and Off-Site Soil Vapor Contamination*

Soil vapor contamination was identified at the Site in the vadose zone during previous investigations. A summary of those detections and a comparison to applicable SCGs (i.e., NYSDOH SVI Decision Matrices) are discussed below.

#### 2.5.6.1 Summary of Soil Vapor Data

During a November 2007 SVI investigation conducted at the Site, six collocated subslab vapor and indoor ambient air locations were analyzed for VOCs (TO-15), four of which were within the 1746 Dale Road building (before the fire) (#1, #2, #3, and #4) and two within the 24 Anderson building (#5 and #6). In each of the analyzed subslab vapor samples, cVOCs TCE, PCE, and 1,1,1-TCA were detected in subslab vapor, and each to a lesser extent in ambient indoor air.

During an October 2014 investigation within the Metal Prep Room, one pre-SVE subslab vapor sample was collected and analyzed for VOCs (TO-15). No co-located indoor ambient air samples were collected. cVOCs TCE, PCE, cis-1,2-DCE, and 1,1-DCE (as well as toluene) were detected.

During a June 2020 SVI investigation within the Metal Prep Room, two post-SVE subslab vapor samples were analyzed for VOCs (TO-15). No co-located indoor ambient air samples were collected. In each of the analyzed subslab vapor samples, cVOCs TCE, PCE, cis-1,2-DCE, and VC (as well as toluene) were detected.

#### 2.5.6.2 Comparison of Soil Vapor with SCGs

Comparison of the November 2007 subslab vapor to collocated indoor ambient air samples using NYSDOH's Decision Matrices indicated a MITIGATE result for TCE at three locations (#1, #3, and #6) and IDENTIFY SOURCE(S) & RESAMPLE OR MITIGATE at the three remaining locations (#2, #4, and #5) during the November 2007 event. Comparison of the June 2020 subslab

vapor results to NYSDOH's Decision Matrices indicated MITIGATE for TCE and MONITOR/MITIGATE for VC at one of the two sample locations.

Based on historical analytical results obtained from the various reports, the following concentration ranges should be expected in subslab vapor at the Site:

- **PCE:** non-detect (several locations) to 710 J ug/m$^3$ (SV-01 from 2014)
- **TCE:** non-detect to 190,000 ug/m$^3$ (SV-01 from 2014)
- **cis-1,2-DCE:** non-detect to 2,300 ug/m$^3$ (SV-01 from 2014)
- **1,1-DCA:** non-detect (several locations to 2.54 ug/m3 (SS#5 from 2007)
- **1,1-DCE:** non detect (several locations) to 800 J ug/m$^3$ (SV-01 from 2014)
- **VC:** non-detect (several locations) to 6.16 ug/m$^3$ (SV-01 from 2020)
-

~~***2.5.4 Soil/Fill Contamination***~~

~~**2.5.4.1 Summary of Soil/Fill Data**~~

~~**2.5.4.2 Comparison of Soil/Fill with SCGs**~~
~~Table [x] shows exceedances from Track 1 Unrestricted SCOs for all soil/fill at the Site. Figure [x] is a spider map that shows the location and summarizes exceedances from Track 1 Unrestricted SCOs for all soil/fill.~~

~~***2.5.5 On-Site and Off-Site Groundwater Contamination***~~

~~**2.5.5.1 Summary of Groundwater Data**~~

~~**2.5.5.2 Comparison of Groundwater with SCGs**~~
~~A table that indicates exceedances of Class GA Ambient Water Quality Standards (AWQS) in monitoring wells prior to the remedy is shown in Table [x]. A spider map that indicates the location(s) of and summarizes exceedances of AWQS prior to the remedy is shown in Figure [x].~~

~~***2.5.6 On-Site and Off-Site Soil Vapor Contamination***~~

~~**2.5.6.1 Comparison of Soil Vapor with SCGs**~~
~~A table of soil vapor data collected prior to the remedy is shown in Table [x]. A spider map that indicates the location(s) of and summarizes soil vapor data prior to the remedy is shown in Figure [x].~~

~~***2.5.7 [Other Media]***~~

## 2.6 Environmental and Public health assessments

### ~~*2.5.8*~~*2.6.1 Qualitative Human Health Exposure Assessment*

A qualitative exposure assessment consists of characterizing the exposure setting (including the physical environment and potentially exposed human populations), identifying exposure pathways, and evaluating contaminant fate and transport.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has the following five elements:

- Receptor population
- Contaminant source
- Contaminant release and transport mechanism
- Point of exposure
- Route of exposure

An exposure pathway is complete when all five elements of an exposure pathway are documented; a potential exposure pathway exists when any one or more of the five elements comprising an exposure pathway is not documented but could reasonably occur. An exposure pathway may be eliminated from further evaluation when any one of the five elements comprising an exposure pathway does not exist in the present and will not exist in the future.

#### 2.6.1.1 Receptor Population

The receptor population includes the people who are or may be exposed to contaminants at a point of exposure. The identification of potential human receptors is based on the characteristics of the Site, the surrounding land uses, and the probable future land uses. The Site is presently vacant land and buildings covered with hardscape. Under current Site use conditions, receptors would include site workers (i.e. environmental, construction, and outdoor workers).

The reasonably anticipated future use of the Site is for industrial-like purposes, which is consistent with surrounding property use and Town of Cheektowaga zoning. Exposed receptors under the future use scenario may be comprised of indoor occupants, indoor workers, outdoor workers (e.g., groundskeepers or maintenance staff), and construction workers who may be employed at or perform work on the property. Site visitors/customers may also be considered receptors; however, their exposure would be similar to that of the indoor worker but at a lesser frequency and duration. Therefore, consideration of the indoor worker is conservatively protective of the Site visitor.

#### 2.6.1.2 Contaminant Sources

The source of contamination is defined as either the source of contaminant release to the environment (such as a waste disposal area or point of discharge) or the impacted environmental medium (soil, air, biota, water) at the point of exposure. Section 2.7 discusses the COPCs present in Site media at elevated concentrations. In general, these are limited to cVOCs, and, to a lesser extent, select PAHs and inorganic compounds in soil, groundwater, and soil vapor.

#### 2.6.1.3 Contaminant Release & Transport Mechanisms

Contaminant release and transport mechanisms carry contaminants from the source to points where people may be exposed and are specific to the type of contaminant and site use. For non-volatile COPCs present in Site soil, contaminant release and transport mechanisms will generally be limited to fugitive dust migration and direct contact during intrusive work (e.g., during excavation and construction), as the Site is substantially covered by buildings, asphalt parking, asphalt driveways.

For volatile COPCs present in groundwater, the potential exists for exposure through pathways associated with soil gas migration. This would include both the outdoor pathway (primarily to construction workers involved in subsurface activities where volatiles are present at elevated

concentration) as well as the indoor vapor intrusion pathway, also referred to as "soil vapor intrusion" or SVI.

Concerning the indoor air pathway, the NYSDOH has issued a guidance document for assessing potential impacts to indoor air via soil vapor intrusion (*Guidance for Evaluating Soil Vapor Intrusion in New York State*, October 2006, revised February 2024). The subslab vapor and indoor air samples collected during the November 2007 ISVSA were assessed by the NYSDOH Soil Vapor Intrusion Guidance Matrices (A through F). Based on the concentrations of TCE, the matrices recommended: "MITIGATE" at three of six sample locations.

As such, under the future (un-remediated) use scenario, SVI is a relevant transport mechanism. Concerning the outdoor air pathway, the potential exists for exposure to VOCs under the current and future use scenarios for construction workers in select areas of the Site.

#### 2.6.1.4 Point of Exposure

The point of exposure is a location where actual or potential human contact with a contaminated medium may occur. Based on the exceedances of PGWSCOs for cVOCs and of the IUSCO for arsenic in soils and exceedances of AWQS/GVs for cVOCs and PAHs in groundwater, the point of exposure is defined as the central portion of the Site.

#### 2.6.1.5 Route of Exposure

The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, dermal absorption). Based on the types of receptors and points of exposure identified above, potential routes of exposure are listed below:

**Current Use Scenario:**

- Indoor Occupant/Worker – inhalation
- Construction and Outdoor Worker – skin contact, inhalation, and incidental ingestion

**Future Use Scenario:**

- Indoor Occupant/Worker – inhalation
- Construction and Outdoor Worker – skin contact, inhalation and incidental ingestion

#### 2.6.1.6 Exposure Assessment Summary

Based on the above assessment, the potential exposure pathways for the current and future use conditions are listed below.

**Current Use Scenario:**

- Indoor Occupant/Worker – inhalation of volatile organics via indoor air migration
- Construction and Outdoor Worker – direct contact, incidental ingestion, and inhalation of non-volatile contaminants present in soil, and volatile contaminants present in groundwater during intrusive activities, and inhalation of volatile organics present in soil and groundwater via outdoor air migration.

**Future Use Scenario:**

- Indoor Occupant/Worker – inhalation of volatile organics via indoor air migration
- Construction and Outdoor Worker – direct contact, incidental ingestion, and inhalation of non-volatile contaminants present in soil, and volatile contaminants present in soil and groundwater during intrusive activities, and inhalation of volatile organics present in soil and groundwater via outdoor air migration.

In most instances, these exposures can be readily mitigated through the use of personal protective equipment (PPE); proper soil management during intrusive activities; ECs including placement of asphalt, building, and landscape cover; and construction of vapor barriers or SSDS's in existing or newly constructed buildings.

### ~~2.5.9~~2.6.2 Fish & Wildlife Remedial Impact Analysis

The Site is currently developed with industrial buildings (former manufacturing, warehouse, and offices), asphalt parking, and asphalt driveways, which has limited the availability of suitable cover type for re-establishment of biota. The redevelopment plan includes the potential for additional structures. As such, based on the completed Fish and Wildlife Resource Impact Analysis Decision Key included in Appendix F of the RIR (NYSDEC DER-10, Appendix 3C), "no fish and wildlife resources impact analysis is needed".

### 2.6.3 Qualitative Off-Site Exposure Assessment

During the RI, soil borings were advanced across the Site, including areas proximate to Site property boundaries. These sampling locations were used in conjunction with previously collected data to complete this qualitative off-site exposure assessment and evaluate potential remedial measures to address Site contamination.

As discussed in Section 6.0 of the RIR, contaminants in on-Site soil could potentially migrate off-site as fugitive dust emissions during intrusive activities. However, given the NYSDEC and NYSDOH requirements for dust monitoring and controls during intrusive activities at remedial program construction sites, it is unlikely that site-related contaminants would reach off-site receptors at significant exposure point concentrations. Once impacted soil areas of concern are remediated, and either all impacted soil is removed under Track 1 USCOs cleanup, or targeted soil is removed and a Site cover system is installed as an EC under a Track 4 IUSCOs cleanup, potential off-site exposure will be eliminated.

## ~~2.6 Interim Remedial Action~~

## 2.7 Remedial Action Objectives

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) have been identified for this Site.

### 2.7.1 Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

### 2.7.2 Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

### ~~2.7.3 Surface Water~~

~~RAOs for Public Health Protection~~

- ~~Prevent ingestion of contaminated water.~~
- ~~Prevent contact or inhalation of contaminants from impacted water bodies.~~
- ~~Prevent surface water contamination that may result in fish advisories.~~

~~RAOs for Environmental Protection~~

- ~~Restore surface water to ambient water quality standards for each contaminant of concern.~~
- ~~Prevent impacts to biota due to ingestion/direct contact with contaminated surface water that would cause toxicity or bioaccumulation through the marine or aquatic food chain.~~

### ~~2.7.4 Sediment~~

~~RAOs for Public Health Protection~~

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

~~RAOs for Environmental Protection~~

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

### ~~2.7.5~~2.7.3 Soil Vapor

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

## 2.8 Green Remediation (DER-31)

During remedial action field activities, NYSDEC DER-31 “Green Remediation” implementation objectives will be considered. DER-31: Green Remediation provides the framework for DER's approach to remediating sites in the context of the larger environment, a concept known as “Green Remediation”. Green Remediation (or greener cleanups) is defined as “the practice of considering all environmental effects of remedy implementation and incorporating options to minimize the environmental footprint of cleanup actions.” It is intended to be a holistic approach which improves the overall sustainability of remedial cleanups by promoting the use of more sustainable practices and technologies. Such practices and technologies are less disruptive to the environment, generate less waste, increase reuse and recycling, and emit fewer pollutants, including greenhouse gases (GHGs), to the atmosphere. The approach also recognizes the potential for positive economic and social benefits of site reuse and supports coordination of site reuse and remediation to affect the most beneficial and sustainable reuse of the site. Please note that final end use is dictated by local zoning codes. DEC’s role is to ensure that the remedy is protective for the intended end use. Green Remediation concepts and techniques considered during remedial activities will include:

- Require a Green Remediation Implementation Plan submittal from the selected Contractor to detail procedures and tracking of these items;
- During redevelopment construction activities, green building strategies such as those outlined in the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) should be considered;
- LEED includes guidelines and recommendations for new construction, and existing building operations and management that fall under six categories important for reducing the environmental impact of facilities of all types:
    - Sustainable sites
    - Water efficiency
    - Energy and atmosphere
    - Materials and resources
    - Indoor environmental quality
    - Innovation in operations
- As noted across the LEED categories, resources other than energy that can be conserved include water, raw materials for materials consumed, topsoil, paper for reports, and landfill space. Conserving one resource typically conserves other resources and has other sustainability benefits. For example, recycling construction and demolition debris or metal will reduce consumption of landfill space and may also save energy and reduce air emissions by reducing material transportation. Another example is the use of waste-to energy plants for waste disposal rather than landfills in states where these plants are currently operating. This also reduces the consumption of landfill space and results in energy production from waste processing. Other examples of resource conservation include treated water reinjection, the reuse of treated soil onsite, and the beneficial reuse of sediments.
- The use of “green” construction and project management products and materials such as ecofriendly concrete or the use of native plants for site restoration also advances the sustainability objectives of the project. It is important to understand that green remediation

implies minimizing the entire footprint of the remediation project, which includes the environmental impacts of products and materials associated with the project. For example, eco-friendly concrete generally refers to concrete that is produced with a certain percentage of fly-ash (a waste product from the coal-firing process). This type of "green" concrete takes a problematic substance out of the waste stream and reduces the cumulative amount of energy associated with the production of concrete. The use of native plants for site restoration helps to conserve water and eliminate the need for potentially harmful fertilizers and pesticides.

Other approaches or considerations may be approved by NYSDEC on a case-by-case basis.

- Prohibiting idling vehicles and equipment, when possible, to reduce emission of $CO_2$, $N_2O$, $CH_4$, and other greenhouse gases contributing to climate change;
- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term when choosing a site remedy;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development;
- Implementing the use of particulate detectors to monitor and minimize dust export of contaminants;
- Implementing the use of VOC detectors to monitor and minimize VOC exposures; and
- Coordinating sampling events to maximize on-site efforts while minimizing travel to/from the Site (economy of scale implementing multiple sampling events).

~~2.8~~

~~2.9~~

## 2.9 Climate Change Vulnerability Assessment

The Climate Change Vulnerability Assessment considers the climate resiliency and vulnerability to climate change of the preferred Site remedy. The first step is to conduct a climate screening.

- Climate screening is a high level desktop review of the site and potential changes in climate hazards. If the screening identifies potential exposure to climate hazards, a Climate Vulnerability Assessment (CVA) will need to be conducted. A CVA will identify adaptation measures to account for projected climate hazard exposures.
- For sites susceptible to climate change, require a Climate Adaptation Plan, which will incorporate findings and recommendations from the Climate Vulnerability Assessment.

- Consideration of the Site Elevation, Clim AID Region, Remedial Stage/site classification, Contamination, Proposed/Current Remedy, proximity to any sensitive receptors, whether the Site is in a disadvantaged community (DAC) or potential environmental justice area and remediation timeframe; and
- The relevance to the Site and the Remedy of Precipitation, Extreme Heat or Cold, Sea Level Rise, Flooding, Storm Surge, Wildfire, Drought, Storm Severity, Landslides and other hazards.

If potential impacts from climate hazards are identified, a climate vulnerability assessment must be conducted. This Climate Change Vulnerability Assessment should consider the reliability of energy, potential for flooding/droughts, increased erosion potential, proximity to water bodies, and any other environmental factors subject to change. If already completed in a previous phase, the Climate Change Vulnerability Assessment should be updated as necessary throughout the environmental cleanup.

The Climate Screening Checklist was completed during the RI and the results of that screening are provided in the RIR. Based on TRC's climate screening, potential exposure to climate hazards was not identified for this project and therefore a Climate Vulnerability Assessment (CVA) is not required.

# 3.0 Description of Remedial Action Plan

## 3.1 Remedial Alternatives Analysis

In accordance with DER-10 Section 4.4(d)2, remedial alternatives will be developed and comparatively assessed for the Site against the following NYSDEC defined cleanup tracks.

### *3.1.1 Alternative 1 – Track 1*

6NYCRR Part 375-3.8(e)(1) allows the site to be used for any purpose without restriction (i.e., unrestricted use) provided site media meets 6 NYCRR Part 375 SCOs. The soil cleanup must achieve the unrestricted use criteria (UUSCOs) set forth in 6 NYCRR Table 375-6.8(a) for all soils above bedrock without the use of institutional/engineering controls.

Exceedances of Part 375 UUSCOs were noted in four soil samples during the RI and previous investigations that will require removal under Alternative 1; specifically, cVOCs, arsenic, and nickel (see **Figure 6**). In July 2026, groundwater was encountered between 1.29 and 7.11 ft bgs; therefore, dewatering would be required for the Alternative 1 excavation. Based on the RI data and previous investigations, the total depth of soil impact requiring removal under Alternative 1 is 25 ft bgs, which will require remediation of four areas of the Site (approximately 70-feet by 70-feet each) under Alternative 1; the vicinity of existing well GW-3 and borings B1-25, B2-25, and B6-25. Therefore, the in-place volume of impacted soil (saturated and unsaturated) requiring remediation under Alternative 1 is approximately 20,000 cubic yards (CY) for complete removal of cVOCs, arsenic, and nickel. The Alternative 1 excavation plan is presented in **Figure 12**.

Based on total concentrations, impacted soil at the Site is assumed to be characteristically non-hazardous and would therefore be disposed of in a commercial solid waste disposal facility under a Contained-In Determination to relieve land ban exclusions related to listed (cVOC-impacted soil). Excavated materials would require handling and preparation for off-site transportation and disposal. Due to the shallow groundwater table, a dewatering system would be installed to facilitate excavation activities. Water generated during the dewatering activities would be treated on-site via temporary water treatment system and then discharged to the sanitary sewer under a temporary discharge permit. Excavated areas would be backfilled with material meeting the BCP import criteria presented in DER-10 and Part 375 to the pre-excavation elevations and grades, and all disturbed areas would be restored with either topsoil and grass seeding, hardscape, or concrete. Under the Alternative 1, groundwater concentrations would be expected to decrease over time since the source will have been removed. However, a restriction on groundwater use may be included as a component of the remedial program per Part 375-3.8(e)(1)(iii).

For Alternative 1, temporary institutional and engineering controls are allowed up to five (5) years from issuance of the COC. One option to achieve an Alternative 1 cleanup would involve the complete removal and/or remediation of the on-site soil with exceedances to the UUSCO, which were encountered during the RI to 25 ft bgs. A feasible remedial technology that may be used to implement this alternative involves the excavation of the contaminated soil to 25 ft bgs and transportation to an approved off-Site NYSDEC-approved landfill for disposal. Post-excavation samples (i.e., endpoint samples) would be collected at the target excavation depth. If the confirmation samples result in exceedances of UUSCOs, the excavation would continue until UUSCOs are achieved or until bedrock is encountered whichever is encountered first. Therefore, the planned excavation should be sufficiently deep to fulfill Alternative 1 requirements for soils and will achieve the Alternative 2 remedy as a contingency in the event that the excavation for Alternative 1 is not feasible.

Under Alternative 1, temporary institutional and engineering controls may be implemented to address contamination in groundwater and soil vapor so long as the volunteer has demonstrated to the department's satisfaction that there has been a bulk reduction in groundwater contamination to asymptotic levels and soil vapor remedial objectives have been achieved (and the ICs or ECs are no longer necessary),at the time the Certificate of Completion (COC) is issued. If the Volunteer has not demonstrated to the department's satisfaction that there has been a bulk reduction in groundwater contamination to asymptotic levels and soil vapor remedial objectives have not been achieved at the time the COC is issued, the Volunteer shall receive a Track 2 COC. The Volunteer may petition the department for a modification of the COC at any time up until five years after issuance of the COC. If the volunteer demonstrates that there has been bulk reduction in groundwater contamination to asymptotic levels and soil vapor remedial objectives have been achieved (and the ICs or ECs are no longer necessary), a modified Track 1 COC will be issued.

The proposed groundwater remediation will include the design and implementation of an in-situ bioremediation of cVOC contamination. The in-situ bioremediation will likely include a series of in-situ amendment injections derived from carbon-neutral agricultural products supplemented with microbial culture to destroy the cVOCs via reductive dechlorination and achieve the AWQS or significant reductions in contaminant levels. The groundwater characterization obtained during the RI assisted in designing the in situ remediation strategy for groundwater. TRC's groundwater remediation alternatives assessment is provided in **Appendix C**.

The detailed design of the treatment, which will include the location of the injection points, quantity of groundwater amendment and microbial supplements to be injected, and injection method, will be provided to NYSDEC and NYSDOH for review and approval prior to implementation. Following remediation, continued periodic monitoring of the contaminant levels in the Site groundwater monitoring wells will constitute an IC/EC until the groundwater concentrations are below the AWQS/GVs or until they reach asymptotic levels that are accepted by NYSDEC. If groundwater concentrations do not reach AWQS/GVs or the asymptotic levels are not accepted by the NYSDEC or NYSDOH, then the remedy will be considered a Track 2 (or Track 4) remedy as described in the following sections. The conceptual design for in-situ groundwater treatment and post-treatment sampling is presented in **Figure 13**.

Due to the elevated levels of cVOCs (PCE and TCE) in soil vapor, the remedy will include the installation of an SSDS underneath the planned new Welding Shop building. The design for the proposed new building has not been completed as of the time of writing this RAWP. Once the building design is completed, the designs for the SSDS piping and the vapor barrier will be developed and submitted for NYSDEC and NYSDOH approval.

In March 2023, an SSDS was installed within the 24 Anderson Road building. The SSDS consists of fourteen (14) suction pits and four (4) roof top mounted fans (see **Figure 10**). The SSDS was operational from about March 2023 to sometime in 2025 when the building was vacated and the SSDS has not been operational since that time. It should be noted that as part of the redevelopment plan for the Site, the Former Office/Showroom on the southeast corner of the 24 Anderson Road building are slated to be demolished and removed from the Site. As such, the SSDS installed within the Office/Showroom area of the 24 Anderson Road building will require modification to include removal of four suction pits, relocation of one suction point/manometer, and relocation of one roof fan. Prior to start-up and following demolition, the SSDS beneath the existing building at the 24 Anderson Road property will be evaluated, repaired/modified as necessary, and returned to operation as designed.

### 3.1.2 Alternative 2 – Track 2

6NYCRR Part 375-3.8(e)(2) soil cleanups may consider the current, intended, or reasonably anticipated future use in determining the appropriate cleanup levels for soil. This alternative requires that the remedial party implement a cleanup that achieves the SCOs in 6 NYCRR 375-6.7(b) for the top 15 feet of soil (or bedrock if less than 15 feet). IC/ECs are allowed for soil (for the top 15 feet of soil or bedrock if less than 15 feet) for less than five years (defined as short-term controls). Institutional and engineering controls that limit site use and the use of on-site groundwater can be used without regard to duration. Track 2 cleanups at restricted-residential, commercial, or industrial use sites require site management plans to ensure that material removed from the site (post-remedial action) is managed appropriately and to ensure that any buffer zone protecting adjacent residential use sites or ecological resources is maintained.

Based on RI data and previous investigations, the total depth of soil impact requiring removal under Alternative 2 is 15 ft bgs, which will require remediation of four areas of the Site (approximately 70-feet by 70-feet each) under Alternative 2; the vicinity of existing well GW-3, and borings B1-25, B2-25, and B6-25. Groundwater samples collected across the Site also contained concentrations of cVOCs above AWQS/GVs. In July 2026, groundwater was encountered between 1.29 and 7.11 ft bgs; therefore, dewatering would be required for Alternative 2 excavations. Therefore, the in-place volume of impacted soil (saturated and unsaturated) requiring remediation under Alternative 2 is approximately 12,000 cubic yards (CY) for complete removal of cVOCs, arsenic, and nickel. The Alternative 1 excavation plan is presented in **Figure 12**.

Remedial cleanups pursuant to this alternative may consider the intended future use in determining the appropriate cleanup levels for soil. Alternative 2 requires the Volunteer implement a cleanup that achieves soil cleanup objectives (SCOs) from tables in 6 NYCRR 375-6.7(b) that is consistent with the intended Site use for the top 15 feet of soil (or bedrock if less than 15 feet). There are two applicable Track 2 SCOs that are consistent with the intended use for the Site – IUSCOs and PGWSCOs. The Site remediation pursuant to Track 2 Industrial would involve excavation and disposal of the contaminated soils to meet the lower of these two (2) SCOs. IC/ECs that limit Site use and on-Site groundwater use can be used without regard to duration. The Alternative 2 excavation plan is presented in **Figure 12**.

The groundwater remediation would be as described under Alternative 1. If the active in-situ bioremediation treatment remedy is applied and groundwater concentrations do not meet the AWQS/GVs or reach asymptotic levels accepted by the NYSDEC within five (5) years following issuance of the COC, then the groundwater monitoring and wells will be considered a long-term EC and Alternative 2 will be the fallback contingency. The conceptual design for in-situ groundwater treatment and post-treatment sampling is presented in **Figure 13**.

If the soil vapor levels do not reach the “no action” level as described in the NYSDOH Matrices (February 2024) within five (5) years following issuance of the COC, then the SSDS will continue to act as a permanent EC and the remedy will be Track 2 Industrial.

If Alternative 2 only achieves the IUSCOs, the Site requires a Site Management Plan (SMP) to ensure that any IC/ECs are maintained, and material removed from the Site (post remedial action) is managed properly.

### 3.1.3 Alternative 3 – Track 3

6NYCRR Part 375-3.8(e)(1) allows the site to be used for Restricted use with modified soil cleanup objectives. The remedial program for a site being addressed pursuant Alternative 3 shall satisfy the provisions for the Alternative 2 remedial program; provided, however, the Department may approve the modification of one or more of the contaminant-specific SCOs set forth in the 375-6.8(b) tables based upon site-specific data. Any such modification shall be performed in accordance with section Part 375-6.9.

Alternative 3 is not applicable to this Site because the contaminants present on this Site are common and listed in the SCOs in 375-6.8(b) tables. As such, the Alternative 3 will not be evaluated further.

### 3.1.4 Alternative 4 – Track 4

6NYCRR Part 375-3.8(e)(4) soil cleanups use site-specific information to identify site-specific SCOs (or site-specific action levels; SSALs) that are protective of public health and the environment under a restricted use scenario. Track 4 soil cleanups can also use the IUSCOs presented in the 375-6.8(b) tables. For Track 4 remedies, restrictions can be placed on the use of the property in the form of IC/ECs if they can be realistically implemented and maintained in a reliable and enforceable manner. For industrial use, the top one foot of all exposed surface soil that is not otherwise covered by the components of the development of the site (e.g. buildings, pavement) shall not exceed the IUSCOs and PGWSCOs. Areas that exceed the IUSCOs and PGWSCOs must be covered by material meeting the requirements of the generic soil cleanup table contained in 6NYCRR Part 375-6.7(d) for industrial future Site use.

Alternative 4 for industrial use does not need to meet specific SCOs, but requires source removal, in-situ groundwater remediation, and a Site-wide cover system. The Alternative 4 approach would include focused remedial efforts to address areas of elevated impact and/or source materials with cover to address areas of the Site where impacts remain above IUSCOs. Soil concentrations below the anticipated one (1) foot soil cover that meet the Part 375-6.8(b) IUSCOs and PGWSCOs may remain in-place without additional cover material and the soil is not grossly impacted.

The Alternative 4 approach will include the following components:

- 24 Anderson Road Parcel:
  - Asbestos containing material (ACM) abatement of interior and roof.
  - Prior to demolition, the SSDS beneath the Former Office/Showroom portion of the building will require modification to include removal of four (4) suction pits, relocation of one (1) suction point/manometer, and relocation of one (1) roof fan. Following demolition, testing and assessment of the remaining SSDS will be conducted to determine overall system health and performance followed by reactivation of the SSDS.
  - Demolition, removal, and off-site disposal of the Former Office/Showroom portion of the building, including slabs and foundations; estimated to be approximately 60 CYs.
  - Interior demolition and renovations as well as roof replacement.
- 1746 Dale Road Parcel:

- Demolition, removal, and off-site disposal of the remaining northeastern portion of the building (former Brake Area, Shear Area, and Machine Shop), the northwestern portion of the building (former Metal Prep Room), and concrete building foundations; estimated to be approximately 250 CYs.
- Following building and foundation demolition, excavation of an additional approximately 1,220 CYs of subsurface soil (1-foot depth) are anticipated to be removed during Site grading activities.
- Excavation of an approximately 23,000 SF of soil beneath the planned new Welding Building followed by off-site disposal of asphalt, concrete, and soil up to 4.0 ft bgs as non-hazardous waste under a Contained-In Determination (approximately 3,400 CYs).
- Dewatering of the excavation will be performed as necessary with collected water treated and discharged to the sanitary sewer under a temporary discharge permit (quantity is unknown).
- A vapor barrier with minimum thickness of 6-mil will be placed over building envelope gravel followed by one-foot-thick reinforced concrete pad.

- In-situ Groundwater Remediation: Direct injection of groundwater treatment amendments over an approximate 3,147 square-foot area. The amendments will be delivered over a treatment interval of approximately 3 to 13 fbgs at 60 injection point locations. An estimated 545 gallons of emulsified vegetable oil (EVO), 4,500 pounds (245 gallons) of sodium bicarbonate, 52 pounds (13 gallons) of sodium ascorbate, and 16 gallons of microbial culture will be injected. Approximately 12,321 gallons of potable water will be mixed with the amendments; therefore, the volume of water/amendments per injection point is approximately 217 gallons.
- SVI Mitigation: Installation of an active SSDS beneath the new Welding Shop Building. The SSDS design will consist of suction cavities, PVC risers, PVC overhead manifold lines, and exterior roof fans. The final design/specifications will be provided under separate cover for NYSDEC/NYSDOH review and approval.
- Final Cover: Construction of soil (landscape) and impervious (i.e., asphalt paved driveways and parking lots, and concrete pads, etc.) cover systems. The draft site layout and landscaping plan is presented in **Figure 5** and the planned final cover components are presented in **Figure15**.
- Implementation of an SMP. For any BCP Site not remediated to meet NYSDEC Part 375 unrestricted use SCOs, preparation of an SMP that describes site-specific IC/ECs is a required component of the final remedy. The SMP will include the following components: EC/IC Plan; Operations and Maintenance (O&M) Plan; Excavation Work Plan; Site Monitoring Plan; and Environmental Easement.
- Long-term monitoring of groundwater will continue under Alternative 4. An SSDS as an EC will operate to mitigate any vapor intrusion risk resulting from the cVOCs.

Under Alternative 4 for the Site, surface soil with concentrations above IUSCOs would require one (1) foot of compliant soil cover that achieves the lowest of the three applicable contaminant-specific SCOs (i.e., protection of public health, groundwater, or ecological resources) or an impervious cover (i.e., buildings, hardscape). Alternative 4 also must consider: 1) the less common exposure scenario of the construction or maintenance worker who may need to perform periodic groundskeeping or other subsurface work (e.g., utility repairs) involving work beneath the cover system, and 2) the need to remediate grossly impacted soil (such as those exhibiting strong

visual and olfactory impact impact) where feasible per NYSDEC cleanup policy. Alternative 4 activities would include: soil excavation, in situ groundwater remediation (as described in Section 3.1.1), ICs (e.g., groundwater and land use restrictions, SMP and Environmental Easement), and ECs (e.g., cover systems, SSDS) as components of the final remedy to reduce future potential exposure to impacted soil and groundwater.

Short- and long-term IC/ECs can achieve protection of public health and the environment. In the event a remedy under Alternative 4 were to be implemented for this Site, it must provide a cover system over exposed remaining soil contamination. Soils that are not otherwise covered by structures such as buildings, sidewalks, or asphalt must be covered with one (1) foot of soil that complies with the IUSCOs and PGWSCOs.

Alternative 4 would also include an SMP to ensure that any IC/ECs are maintained, and that material removed from the site (post remedial action) is managed properly. The SMP would include periodic (annual) monitoring and reporting of the cover system to ensure continued protection of the human health and the environment.

### *3.1.5 No Action Alternative*

The no action alternative would leave existing sources of contamination in soil, groundwater, and soil vapor. The no action alternative is thus unacceptable and has not been evaluated against the ten (10) criteria factors consistent with 6NYCRR Part 375-1.8(f) in the next section.

## ~~3.1~~3.2 Evaluation of remedial alternatives

NYSDEC's Brownfield Cleanup Program calls for remedy evaluation in accordance with DER-10 Technical Guidance for Site Investigation and Remediation (Ref. 13). In addition to achieving RAOs, the remedial alternatives are evaluated against the following criteria consistent with 6NYCRR Part 375-1.8(f):

- Protection of human health and the environment;
- Compliance with standards, criteria, and guidelines (SCGs);
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community Acceptance;
- Green and Sustainable Remediation (including climate resiliency); and
- Land use.

This section provides an analysis of the selected remedial approach by media using the Remedy Selection Evaluation Criteria identified in Section 4.2 of Guidance Document DER-10: Technical Guidance for Site Investigation and Remediation.

### 3.2.1 Protection of Human Health and the Environment

This criterion is an evaluation of the remedy's ability to protect public health and the environment, assessing how risks posed through each existing or potential pathway of exposure are eliminated, reduced, or controlled through removal, treatment, engineering controls, or institutional controls.

Although each Alternative will provide adequate protection of human health and the environment, Alternative 1 would be more protective than the other cleanup tracks because it would remove all soil contamination to achieve the State's most stringent SCOs. Alternative 1 would require short-term ongoing temporary IC/ECs to monitor the degradation of the remediated groundwater and manage the vapor contamination to effectively protect human health and the environment. Alternative 1 is higher in capital cost and is less implementable than Alternatives 2 and 4. Alternatives 1, 2, and 4 can be implemented through the complete removal of all the contaminated soil, and implementation of an in-situ groundwater treatment remedy. However, Alternatives 1 and 2 would permanently use and displace approximately 6,950 and 4,200 CYs, respectively, of valuable landfill airspace, causing ancillary environmental issues due to reduced landfill capacity, and would require excavating, transporting, and placing that same quantity of clean soil from an off-site borrow source to backfill the excavation, also contributing to detrimental off-site environmental issues.

Alternative 1 requires no long-term institutional or engineering controls, and it is still more costly than Alternatives 2 and 4 that rely on such controls for long-term effectiveness. Alternative 2 would also be protective of human health and the environment if the proper long-term engineering and institutional controls are put in place and managed in an SMP. Alternative 4 would also be protective of human health and the environment if the proper long-term engineering and institutional controls are put in place and managed in an SMP. Alternative 2 may be achievable, however excavation of soil contamination in the upper 15 feet is not planned as part of the Site redevelopment. Without removal, in-situ groundwater remediation alone may not be sufficient to reduce soil contamination below the PGWSCOs in the upper 15 feet. Alternative 4 may be more applicable and implementable as the redevelopment plan already includes building, asphalt, and/or minor landscape cover. Although soil, groundwater, and soil vapor contamination may persist, the in-situ groundwater remediation is expected to demonstrate a bulk reduction in groundwater contamination to asymptotic levels.

### 3.2.2 Compliance with Standards, Criteria, and Guidelines (SCGs)

Compliance with SCGs addresses whether a remedy will meet applicable environmental laws, regulations, standards, and guidance.

Each remedial Alternative will achieve applicable cleanup standards. Alternative 1 achieves a more stringent set of standards than Alternative 2. Alternative 4 is not driven by standards but rather by source removal, in-situ groundwater remediation, and soil vapor mitigation via SSDS. These activities require SMP ECs and ICs to manage the remaining contamination in place to enable the safe reuse of the site for industrial purposes.

### 3.2.3 Short-Term Effectiveness and Impacts

Short-term effectiveness is an evaluation of the potential short-term adverse impacts and risks of the remedy upon the community, the workers, and the environment during construction and/or implementation. This includes a discussion of how the identified adverse impacts and health risks to the community or workers at the Site will be controlled, and the effectiveness of the controls. This criterion also includes a discussion of engineering controls that will be used to mitigate short

term impacts (i.e., dust control measures), and an estimate of the length of time needed to achieve the remedial objectives.

Generally, Alternative 1 provides the best short-term effectiveness because it promptly removes the most contaminant mass from the Site. Alternative 2 also accomplishes this, but to a lesser extent. Alternative 4 is less effective in this regard. Alternatives 1 and 2 are somewhat less favorable in terms of short-term impacts primarily because mass removal of the contaminated soils generates more truck trips than Alternative 4's limited removal remedy. Alternative 4 also reduces the risk of construction worker exposure by reducing the volume of contaminated soil being managed and has less potential to cause dust and traffic issues. Excavation may result in a greater potential for migration of impacts from the open excavation (e.g. wind erosion, stormwater intrusion, etc.); however, implementation of the CAMP and erosion and sediment controls can be implemented to minimize and control any migration.

### *3.2.4 Long-Term Effectiveness and Permanence*

This criterion evaluates the long-term effectiveness of the remedy after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: (i) the magnitude of the remaining risks (i.e., will there be any significant threats, exposure pathways, or risks to the community and environment from the remaining wastes or treated residuals), (ii) the adequacy of the engineering and institutional controls intended to limit the risk, (iii) the reliability of these controls, and (iv) the ability of the remedy to continue to meet RAOs in the future.

Because Alternatives 1 and 2 would involve removal of the greatest amount of contaminated soil, they will provide the most long-term effectiveness. As already discussed above, Alternative 1 will allow the Site to be used for any purpose without restriction and without reliance on the long-term employment ICs or ECs (which can fail and require ongoing monitoring and maintenance to remain effective over the long-term). Alternative 2 allows the Site to be used for almost all possible industrial uses in an urban setting but requires ECs and ICs to ensure there is no exposure to residual contamination.

The long-term effectiveness of Alternative 4 will be ensured with adherence to the SMP and recording of an EE. Although contaminants are left on Site at reduced levels, a properly maintained cover system is effective at eliminating the risk of dermal exposure and the planned soil vapor mitigation measures (i.e., SSDS) will also help to ensure lack of exposure to any remaining on-site vapors.

### *3.2.5 Reduction of Toxicity, Mobility, or Volume of Contaminated Material*

This criterion evaluates the remedy's ability to reduce the toxicity, mobility, or volume of Site contamination. Preference is given to remedies that permanently and significantly reduce the toxicity, mobility, or volume of the wastes at the Site.

Alternatives 1, 2, and 4 will reduce toxicity and mobility. Alternative 1 or 2 would result in a greater reduction in the volume of contaminated soil than Alternative 4. While Alternative 4 provides a relatively smaller reduction in volume than the other tracks, it relies primarily on the decrease of contaminant mobility via in-situ groundwater remediation.

### *3.2.6 Implementability*

The Implementability criterion evaluates the technical and administrative feasibility of implementing the remedy. Technical feasibility includes the difficulties associated with the

construction and ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

Alternatives 1, 2, and 4 are implementable given the location and the planned use for the Site. While there are short-term potential impacts from each potential remedy, the Site is located in the middle of an urban area, and therefore disposal of the contaminated soil and truck access will not be an issue. Moreover, these short-term impacts will be avoided through implementation of the CAMP and HASP, which may employ truck washing and odor and dust control measures. Therefore, Alternatives 1, 2, and 4 are equally implementable for this Site.

### *3.2.7 Cost Effectiveness*

Capital, operation, maintenance, and monitoring costs are estimated for each remedial alternative and presented on a present worth basis in **Table 1** (Alternative 1), **Table** 2 (Alternative 2), and **Table 3** (Alternative 4). The estimated soil areas and volumes presented are estimates of the maximum in place extent of impacted soil. The cost estimates developed for the remedial alternatives include contingencies for excavation inefficiencies as well as volume to weight assumptions; therefore, the quantities in the cost tables may differ from those presented in the report text.

The preferred alternative should provide optimal suitability of the nine (9) accompanying evaluation factors with minimal remedial cost. The contaminated soil extends from the surface to a depth of 23 ft bgs. Removal of all soils containing cVOCs and metals with exceedances of the IUSCOs and PGWSCOs to achieve Alternatives 1 and 2 site-wide is more costly than Alternative 4. Alternative 4 is the most cost-effective. However, this mass removal results in long-term savings by eliminating (or, with Alternative 2, significantly reducing) the need for ICs/ECs and the associated ongoing monitoring and maintenance. In addition, Alternatives 1 and 2 should eliminate any on-Site soil source that may be contributing to groundwater and soil vapor contamination at the Site. Therefore, Alternatives 1, 2, and 4 for the Site are cost effective in their own ways.

Dewatering and then the implementation of an in-situ treatment remedy for groundwater will enhance the removal of dissolved cVOCs on the Site. Some cost savings may be derived if the duration of groundwater monitoring is reduced via soil source removal.

### *3.2.8 Community Acceptance*

This criterion evaluates the public's comments, concerns, and overall perception of the remedy. The Community Acceptance criterion incorporates public concerns into the evaluation of the remedial alternatives. Therefore, Community Acceptance of the remedy will be evaluated after the public review of the remedy selection process as part of the final NYSDEC remedy selection/approval.

A community outreach program has been and will continue to be incorporated into all remedial alternatives, per NYSDEC Brownfield Program regulations and through the Citizen Participation (CP) Plan. The community should accept any of the remedies; however, Alternatives 1 and 2 would be preferable to the community since they would remove the most soil contamination.

### *3.2.9 Green and Sustainable Remediation (plus Climate Resiliency)*

Green and Sustainable Remediation strategies are presented in Section 2.12. Climate Change Vulnerability strategies are presented in Section 2.13.

### *3.2.10 Land Use*

In addition to the above criteria, 6NYCRR Part 375-1 specifies that the criterion of Land Use (i.e., the current, intended, and reasonably anticipated future land uses of the Site and its surroundings) be considered in the selection of the remedy. The reasonably anticipated future use of the Site is in an industrial capacity.

Each cleanup Alternative would achieve RAOs for the planned industrial use of the Site, which is consistent with the Town of Cheektowaga's most recent Comprehensive Master Plan. Developing the Site will create short-term construction impacts, but the expansion of NPT by doubling their current output of industrial transformers will provide significant community benefits.

The following sections present the land use evaluation for the Site.

#### ~~3.1.1.1~~3.2.10.1 Zoning

Each of the proposed Alternatives will facilitate the Site to be utilized for a proposed industrial development, which is consistent with applicable zoning laws and anticipated future use of the site.

#### 3.2.10.2 Applicable Comprehensive Community Master Plans or Land Use Plans

Implementation of Alternative (with ICs) will facilitate the proposed industrial development, which is consistent with the Town of Cheektowaga's most recent Comprehensive Master Plan.~~Text here~~

#### 3.2.10.3 Surrounding Property Uses

Any cleanup approach is not expected to significantly impact land use of the surrounding properties as the truck traffic and access will be on public roads. ~~Text here.~~

#### 3.2.10.4 Citizen Participation

Citizen Participation during implementation of a remedial program will proceed in accordance with the Citizen Participation (CP) Plan for the Site, and as noted above, will have minimal community impact. Any short-term impacts will be addressed by the CAMP and the HASP. The CP Plan for the Site will be submitted to NYSDEC for review and approval within 20 days after the effective date of the Site's Brownfield Cleanup Agreement.~~Text here.~~

#### 3.2.10.5 Environmental Justice

According to NYSDEC mapping, the Site is not located within a Potential Environmental Justice Area (PEJA). Therefore, there are no known environmental justice concerns associated with this project.~~Text here.~~

#### 3.2.10.6 Proximity to Natural Resources

~~Text here.~~The closest surface water body to the Site is Cayuga Creek, which is located 1.7 miles southeast of the Site. Stormwater drainage patterns are generally consistent with the surrounding topography.

#### 3.2.10.7 Off-Site Groundwater Impacts

~~Text here~~Off-site groundwater impacts have been identified to the east of the Site and on the adjacent Upstate Farms property (1730 Dale Road).

#### 3.2.10.8 Proximity to Floodplains

~~Text here.~~The Federal Emergency Management Agency's (FEMAs) National Flood Hazard Layer (NFHL), a geospatial database that contains current effective flood hazard data, designates a

Zone X for the Site. A Zone X designation indicates an area outside the 0.2% annual chance of flooding.

### 3.2.10.9 Current Institutional Controls (ICs)

~~Text here.~~As presented in the February 2011 SMP, the ICs identified in the Site's deed restriction include:

- Compliance with the deed restriction and the SMP by the Grantor and the Grantor's successors and assigns;
- All ECs must be operated and maintained as specified in the SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP;
- Groundwater, soil vapor, and other environmental or public health monitoring must be performed as defined in the SMP; and
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP.

Institutional Controls identified in the deed restriction may not be discontinued without an amendment to or extinguishment of the deed restriction.

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the deed restriction. Site restrictions that apply to the Controlled Property are:

- The property may only be used for restricted industrial use provided that the long-term IC/ECs included in the SMP are employed.
- The property may not be used for a higher level of use, such as unrestricted or restricted residential, use without additional remediation and amendment of the deed restriction as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The potential for vapor intrusion must be evaluated for any buildings developed in the area and any potential impacts that are identified must be monitored or mitigated;
- Vegetable gardens and farming on the property are prohibited;
- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP.

## 3.23.3 Selection of the Preferred Remedy

Text here. The remedial alternatives analysis determined that Alternative 2 (if achievable) remedy will be the goal for the Site. If Alternative 2 cannot be achieved due to soil, groundwater, or soil vapor conditions, Alternative 4 will be achieved.

***3.2.11.1.1 Zoning;***

Note: add text to this and all following sub-sections.

***3.2.21.1.1 Applicable Comprehensive Community Master Plans or Land Use Plans***

Text here

***3.2.31.1.1 Surrounding Property Uses***

Text here.

***3.2.41.1.1 Citizen Participation***

Text here.

***3.2.51.1.1 Environmental Justice***

Text here.

***3.2.61.1.1 Proximity to Natural Resources***

Text here.

***3.2.71.1.1 Off-Site Groundwater Impacts***

Text here.

***3.2.81.1.1 Proximity to Floodplains***

Text here.

***3.2.91.1.1 Current Institutional Controls***

Text here.

## 3.33.4 Summary of selected Remedial Actions

A summary of the selected Alternative 2 or 4 remedial actions to address the impacts identified are presented below:

1) Site preparation, including asbestos and lead based paint abatement and demolition of a portion of the 24 Anderson existing building, demolition of the remaining 1746 structures and foundations (approximately 310 CYs of concrete and building debris).
2) Prior to demolition, the SSDS beneath the Former Office/Showroom portion of the building will require modification to include removal of four (4) suction pits, relocation of one (1) suction point/manometer, and relocation of one (1) roof fan. Following demolition, testing and assessment of the remaining SSDS will be conducted to determine overall system health and performance followed by reactivation of the SSDS.
3) Excavation of soil/fill ~~exceeding Track [4] SCOs listed in Table [x]~~beneath the demolished portion of the 24 Anderson Road building and the new Welding Shop footprint on 1746 Dale Road (approximately 1,500 CYs).~~;~~

4) Interior demolition and renovations as well as roof replacement (disposal quantities not yet determined).

1) Excavation of an approximately 23,000 SF of soil beneath the planned new Welding Building followed by off-site disposal of asphalt, concrete, and soil up to 4.0 ft bgs as non-hazardous waste under a Contained-In Determination (approximately 3,400 CYs).

2) Dewatering of the new Welding Shop Building excavation will be performed as necessary with collected water treated and discharged to the sanitary sewer under a temporary discharge permit (quantity is unknown).

3) A vapor barrier with minimum thickness of 6-mil will be placed over building envelope gravel followed by one-foot-thick reinforced concrete pad.

4) In-situ Groundwater Remediation: Direct injection of groundwater treatment amendments over an approximate 3,147 square-foot area. The amendments will be delivered over a treatment interval of approximately 3 to 13 fbgs at 60 injection point locations. An estimated 545 gallons of emulsified vegetable oil (EVO), 4,500 pounds (245 gallons) of sodium bicarbonate, 52 pounds (13 gallons) of sodium ascorbate, and 16 gallons of microbial culture will be injected. Approximately 12,321 gallons of potable water will be mixed with the amendments; therefore, the volume of water/amendments per injection point is approximately 217 gallons.

5) SVI Mitigation: Installation of an active SSDS beneath the new Welding Shop Building. The SSDS design will consist of suction cavities, PVC risers, PVC overhead manifold lines, and exterior roof fans. The final design/specifications will be provided under separate cover for NYSDEC/NYSDOH review and approval.

~~1)~~6) Long-term monitoring of groundwater will be performed under Alternative 4. An SSDS as an EC will operate to mitigate any vapor intrusion risk resulting from the cVOCs.

~~2)~~7) Screening for indications of contamination (by visual means, odor, and monitoring with PID) of all excavated soil during any intrusive Site work;

~~3)~~8) Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of Track ~~[4]~~2 SCOs;

~~4)~~9) Appropriate off-Site disposal of all material removed from the Site in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal;

~~5)~~10) Import of materials to be used for backfill and cover in compliance with: (1) chemical limits and other specifications included in NYCRR Sections 375-6.7(d) and 375-6.8 (b) and DER-10 ~~Table [x]~~, (2) all Federal, State and local rules and regulations for handling and transport of material;

~~6)~~11) Construction and maintenance of a site cover consisting of ~~[summary of cover types]~~minor soil landscaped areas and hardscape (i.e., asphalt parking/driveways, existing building, and newly constructed building) to prevent human exposure to residual contaminated soil/fill remaining under the Site (see **Figures 5 and 15**);

~~7)~~12) Recording of an Environmental Easement, including Institutional Controls, to prevent future exposure to any residual contamination remaining at the Site (a copy of the Environmental Easement ~~is provided in Appendix [x]~~ upon completion of the selected remedy);

~~8)~~13) Publication of a Site Management Plan for long term management of residual contamination as required by the Environmental Easement, including plans for: (1)

Institutional and Engineering Controls, (2) groundwater and SSDS monitoring, (3) operation and maintenance of each SSDS and (4) annual reporting;

~~9)~~14) All responsibilities associated with the Remedial Action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and local rules and regulations.

Remedial activities will be performed at the Site in accordance with this NYSDEC-approved RAWP and the NYSDEC-issued Decision Document ~~[add IRMs if appropriate]~~. All deviations from the RAWP and/or Decision Document will be promptly reported to NYSDEC for approval and fully explained in the FER.

# 4.0 Remedial Action Program

## 4.1 Governing Documents

The primary documents governing the remedial action are summarized in this section, including TRC's RIR.

### *4.1.1 Standards, Criteria and Guidance (SCGs)*

The following standards, criteria, and guidance are typically applicable to Remedial Action projects in New York State, and will be consulted and adhered to as applicable:

- 6 NYCRR Part 364 - NYS Waste Transporter Permits
- 6 NYCRR Part 360 - NYS Solid Waste Management Requirements
- 6 NYCRR Part 371 - Identification and Listing of Hazardous Wastes
- 6 NYCRR Part 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities
- 6 NYCRR Subpart 374-2 - Standards for the Management of Used Oil
- 6 NYCRR Part 375 - Environmental Remediation Programs
- 6 NYCRR Part 376 - Land Disposal Restrictions
- 6 NYCRR Part 613 - Petroleum Bulk Storage
- 6 NYCRR Part 661 - Tidal Wetlands - Land Use Regulations
- 6 NYCRR Part 663 - Freshwater Wetlands - Permit Requirements
- 6 NYCRR Parts 700-706 – Classes and Standards of Quality and Purity
- 6 NYCRR Part 750 - State Pollutant Discharge Elimination System (SPDES) Permits
- 29 CFR Part 1910.120 - Hazardous Waste Operations and Emergency Response
- 40 CFR Part 144 - Underground Injection Control Program
- CP-43 - Commissioner Policy on Groundwater Monitoring Well Decommissioning (December 2009)
- CP-49 – Climate Change and DEC Action (2022)
- CP-51- Soil Cleanup Guidance (2010)
- CP-60 – Screening and Assessment of Contaminated Sediment (2014)
- DER-2 - Making Changes to Selected Remedies (April 2008)
- DER-4 – Management of Coal Tar Waste & Coal Tar Contaminated Soils from Manufactured Gas Plants (2001)
- DER-10 – Technical Guidance for Site Investigation and Remediation (2010)
- DER-13 – Strategy for Evaluating Soil Vapor Intrusion at Remedial Sites in New York (2006)
- DER-23 – Citizen Participation Handbook for Remedial Programs (2010)
- DER-31 – Green Remediation (2010)

- DER-32 – Brownfield Cleanup Program Applications and Agreements (2017)
- DER-33 – Guide to Drafting and Recording Institutional Controls (2010)
- TRC Engineers, Inc. Remedial Investigation Report (RIR), July 2026.
- TAGM 3028 - "Contained In" Criteria for Environmental Media: Soil Action Levels (August 1997)
- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations (1998, Addenda 2000, 2004 and 2023)
- TOGS 1.3.8 - New Discharges to Publicly Owned Treatment Works (1994)
- TOGS 2.1.2 - Underground Injection/Recirculation (UIR) at Groundwater Remediation Sites (1990)
- New York State Standards and Specifications for Erosion and Sediment Control (2016)
- DAR-1 (formerly Air Guide 1) - Guidelines for the Control of Toxic Ambient Air Contaminants (1997)
- U.S. EPA OSWER Directive 9200.4-17 - Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites (December 1997)
- New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006)
- New York State Climate Act (2019)
- NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (2023)

### *4.1.2 Site Specific Health & Safety Plan (HASP)*

A copy of TRC's HASP is provided in **Appendix D**. All remedial work performed under this plan will be in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.

The ~~[~~Volunteer~~/Participant]~~ and associated parties preparing the remedial documents submitted to the State and those performing the construction work, are completely responsible for the preparation of an appropriate Health and Safety Plan and for the appropriate performance of work according to that plan and applicable laws.

The ~~Health and Safety Plan (~~HASP~~)~~ and requirements defined in this Remedial Action Work Plan pertain to all remedial and invasive work performed at the Site until the issuance of a Certificate of Completion.

~~The Site Safety Coordinator will be [identify by name]. A resume will be provided to NYSDEC prior to the start of remedial construction.~~

~~Confined space entry will comply with all OSHA requirements to address the potential risk posed by combustible and toxic gasses~~

### 4.1.3 Quality Assurance Project Plan (QAPP)

A copy of TRC's QAPP is included as **Appendix E**. All field sampling procedures and analytical methods will be implemented in accordance with this QAPP.

### 4.1.4 Construction Quality Assurance Plan (CQAP)

A copy of TRC's CQAP is included as **Appendix F**.

### 4.1.5 Soil/Materials Management Plan (SoMP)

The SoMP is included as Section 5.4 and includes detailed plans for managing all soils/materials that are disturbed at the Site, including excavation, handling, storage, transport and disposal. It also includes the necessary controls that will be applied to these efforts to ensure effective, nuisance free performance in compliance with all applicable Federal, State and local laws and regulations.

### 4.1.6 Stormw-Water Pollution Prevention Plan (SWPPP) ~~[OR Erosion and Sediment Control Plan (ESCP)]~~

Since the project will exceed one (1) acre in disturbed area, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared prior to start of remediation and/or construction work. The SWPPP will address requirements of the New York State Stormwater Management Regulations including physical methods to control and/or divert surface water flows and to limit the potential for erosion and migration of Site soils, via wind or water.

The erosion and sediment controls will be in conformance with requirements presented in the New York State Standards and Specifications for Erosion and Sediment Control.

### 4.1.7 Community Air Monitoring Plan (CAMP)

A copy of the CAMP for the Site is included with the HASP in **Appendix D**. CAMP monitoring is discussed in Section 5.4.12.

### 4.1.8 Contractors Site Operations Plan (SOP);

The Remedial Engineer (RE) will ~~has~~ reviewed ~~all~~ plans and submittals for this remedial project, ~~(including those listed above and~~ contractor and sub-contractor document submittals~~)~~, and will confirm~~s~~ that plans and submittals ~~they~~ are in compliance ~~comply~~ with this RAWP. ~~The Remedial Engineer is responsible to ensure that all later document submittals for this remedial project, including contractor and sub-contractor document submittals, comply with this RAWP.~~ All Remedial ~~remedial~~ documents, including Contractor and subcontractor document submittals, will be submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work associated with the remedial document.

~~A detailed remedial construction design document will be submitted to NYSDEC for approval in [date].~~

### 4.1.9 Citizen Participation Plan

A certification of mailing will be sent by the ~~[~~Volunteer~~/Participant]~~ to the NYSDEC project manager following the distribution of all Fact Sheets and notices that includes: (1) certification that the Fact Sheets were mailed, (2) the date they were mailed; (3) a copy of the Fact Sheet, (4) a list of recipients (contact list); and (5) a statement that the repository was inspected on (date to be determined) ~~[specific date]~~ and that it contained all of applicable project documents.

No changes will be made to approved Fact Sheets authorized for release by NYSDEC without written consent of the NYSDEC. No other information, such as brochures and flyers, will be included with the Fact Sheet mailing.

~~The approved Citizen Participation Plan for this project is attached in Appendix [x].~~

The d~~D~~ocument repository has ~~repositories have~~ been established at the following location~~s~~ and contain all applicable project documents:

- Julia Boyer Reinstein Library~~[repository name]~~
- 1030 Losson Road, Cheektowaga, NY 14227~~[repository address]~~
- 716.668.4991~~[repository phone number]~~
- Repository hours: Monday through Thursday 9am to 8pm, Friday/Saturday 9am to 5pm, and Sunday 12 noon to 5pm~~[repository hours]~~

In addition, an electronic repository can be accessed via DECInfo Locator at the following link: (link to be established by NYSDEC)~~[add direct link to document folder]~~.

## 4.2 General Remedial construction information

### *4.2.1 Project Organization*

A project team for the Site was created based on qualifications and experience with personnel suited for the successful completion of the project.

~~An organization chart is included in Figure [x].~~

The following project personnel are anticipated for oversight of the RAWP implementation. Resumes of key personnel involved with~~in~~ the Remedial Action are included in **Appendix G**~~[x]~~.

NYSDEC Case Manager ..... Veronica Kreutzer, EIT
NYSDOH Case Manager ..... Jim Sullivan
Remedial Engineer ..... Allen J. Zgaljardic, P.E.
Principal/Qualified Environmental Professional (QEP) ..... Kevin D. Sullivan, P.E.
Senior Project Manager (QEP) ..... Bryan C. Hann, P.G.
TRC National Safety Director ..... Mike Glenn
TRC EHS Operations Specialist ..... Joy Wong
TRC Field Support and Coordination ..... Bryan C. Hann, P.G.
TRC Field Team Leader/Quality Assurance Officer ..... TBD

TRC personnel, under the direct supervision of our Qualified Environmental Professional (QEP) and RE, will be on the Site during the implementation of the RAWP to monitor particulates and organic vapor in accordance with the CAMP. CAMP results that exceed specified action levels will be reported to NYSDEC and NYSDOH.

TRC personnel will meet with the Construction Superintendent daily to discuss the plans for that day and schedule upcoming activities. Field personnel will document remedial activities. Field activities will be forwarded to the Field Team Leader and Senior Project Manager/QEP daily and to the Principal QEP and the RE on a weekly basis. Daily reports will also be submitted to NYSDEC and NYSDOH Case Managers by noon the following business day.

Field personnel will screen excavations with a handheld field PID during ground-intrusive work. PID readings, including specifically elevated readings, will be recorded in the project field book (or on separate logs) and reported to NYSDEC and NYSDOH. Field personnel under the direct supervision of the RE and Senior Project Manager/QEP, will collect endpoint samples from the base and sidewalls of the excavation in accordance with this RAWP.

Field observations and laboratory tests will be recorded in the project field book or on separate logs. Recorded field observations may take the form of notes, charts, sketches, and/or photographs. A photographic log will be kept to document construction activities during remediation.

The Field Team Leader will maintain original field paperwork during performance of the remedy. Remedial activities will be documented in monthly BCP progress reports. The Project Manager will maintain the field paperwork after completion and will maintain submittal document files.

### 4.2.2 Remedial Engineer

The Remedial Engineer for this project will be Allen ~~P~~J. Zgaljardic, P.E.[~~insert name here~~]. The Remedial Engineer is a registered professional engineer licensed by the State of New York. The Remedial Engineer will have primary direct responsibility for implementation of the remedial program for the 1746 Dale Road BCP[~~Site name~~] Site (NYSDEC BCA Index No. to be determined~~Xx-xxxx-xx-xx~~, Site No. to be determined~~Cxxxxxx~~). The Remedial Engineer will certify in the Final Engineering Report that the remedial activities were observed by qualified environmental professionals under [his/her] supervision and that the remediation requirements set forth in the Remedial Action Work Plan and any other relevant provisions of ECL 27-1419 have been achieved in full conformance with that Plan. Other Remedial Engineer certification requirements are listed later in this RAWP.

The Remedial Engineer or Senior Project Manager/QEP will coordinate the work of other contractors and subcontractors involved in all aspects of remedial construction, including soil excavation, stockpiling, characterization, removal and disposal, air monitoring, emergency spill response services, import of back fill material, and management of waste transport and disposal. The Remedial Engineer or Senior Project Manager/QEP will be responsible for all appropriate communication with NYSDEC and NYSDOH.

The Remedial Engineer will review all pre-remedial plans submitted by contractors for compliance with this RAWP and will certify compliance in the Final Engineering Report.

The Remedial Engineer will provide the certifications listed in Section 11.0~~10.1~~ in the FER.

### 4.2.3 Remedial Action Construction Schedule

The remedial action construction schedule is discussed in Section 12.0 and is currently being finalized. The NYSDEC will be provided a copy of the schedule upon completion, and will be promptly notified of proposed changes, delays, and/or deviations to the schedule going forward.

### 4.2.4 Work Hours

The hours for operation of remedial construction will conform to the Town of Cheektowaga Building Department (TCBD) [~~municipality name~~] ~~Department of Buildings (DOB)~~ construction code requirements or according to specific variances issued by that agency. Construction, excavation, demolition, or repair activities that create noise disturbance is legally permitted

between 7am and 11 pm in the Town. NYSDEC will be notified by the ~~[Applicant / Volunteer / Participant]~~ of any variances issued by TCBD~~DOB~~. NYSDEC reserves the right to deny alternate remedial construction hours.

### 4.2.5 Site Security

~~Text here.~~Site access will be controlled by gate entrances to the property. The Site perimeter will be secured with temporary chain link fence with access gates and signed with restricted points of entry in accordance with the Town of Cheektowaga permits and requirements. The purpose of the fencing is to limit Site access to unauthorized personnel, protect pedestrians from Site activities, and maintain Site security.

### 4.2.6 Traffic Control

~~Text here.~~Site traffic will be controlled through designated points of access along Dale or Anderson Roads. Access points will be continuously monitored and if necessary, a flagging system will be used to protect workers, pedestrians, and authorized guests. Traffic will also be required to adhere to applicable local, state, and federal laws.

### 4.2.7 Contingency Plan

~~Text here.~~Contingency plans, as described in Section 5.4.11, have been developed to effectively deal with the potential unexpected discovery of additional contaminated media and/or underground storage tanks (USTs).

### 4.2.8 Worker Training and Monitoring

Worker training and monitoring will be conducted in accordance with the Site-specific HASP provided in **Appendix D**.

### 4.2.9 Agency Approvals

The ~~[Applicant / Volunteer / Participant]~~ has addressed all SEQRA requirements for this Site. All permits or government approvals required for remedial construction have been, or will be, obtained prior to the start of remedial construction.

The planned end use for the Site is in conformance with the current zoning for the property as determined by ~~[local zoning or planning agency, i.e., New York City Department of City Planning] [or: Evidence to show that the planned use conforms to zoning designations will be provided to the NYSDEC prior to issuance of a COC.]~~the Town of Cheektowaga A Certificate of Completion will not be issued for the project unless conformance with zoning designation is demonstrated.

A complete list of all federal, state and local governmental permits, certificates or other approvals or authorizations required to perform the remedial and development work can be provided upon request~~is attached in Table [x]. This list includes a citation of the law, statute or code to be complied with, the originating agency, and a contact name and phone number in that agency.~~ This list will be provided ~~updated~~ in the Final Engineering Report.

All planned remedial or construction work in regulated wetlands and adjacent areas will be specifically approved by the NYSDEC Division of Natural Resources to ensure that it meets the requirements for substantive compliance with those regulations prior to the start of construction. Nothing in the approved RAWP or its approval by NYSDEC should be construed as an approval for this purpose.

### ~~4.2.9~~4.2.10 NYSDEC BCP Signage

Signs are optional for BCP sites and ~~should~~ will be discussed with the NYSDEC Project Manager. If a sign is to be displayed, it ~~must~~ will follow NYSDEC specifications for design and content. The NYSDEC Project Manager ~~can~~ will provide details on signage protocol.

~~A project sign will be erected at the main entrance to the Site prior to the start of any remedial activities. The sign will indicate that the project is being performed under the New York State Brownfield Cleanup Program. The sign will meet the detailed specifications provided by the NYSDEC Project Manager and contained in Appendix [x].~~

### ~~4.2.10~~4.2.11 Pre-Construction Meeting with NYSDEC

Prior to the start of remedial construction, a meeting will be held with NYSDEC, RE, the Volunteer, the Construction Manager, and the Remediation Contractor to discuss project roles, responsibilities, and expectations associated with this RAWP.~~This meeting must take place prior to the start of major construction activities.~~

### ~~4.2.11~~4.2.12 Emergency Contact Information

An emergency contact sheet with names and phone numbers is included in the site-specific HASP (**Appendix D**)~~Table [x]~~. That document will define the specific project contacts for use by NYSDEC and NYSDOH in ~~the~~ case of a day or night emergency.

### ~~4.2.12~~4.2.13 Remedial Action Costs

~~The total estimated cost of the Remedial Action is [insert value]. An itemized and detailed summary of estimated costs for all remedial activity is attached as Appendix [x]. This will be revised based on actual costs and submitted as an Appendix to the Final Engineering Report.~~A detailed summary of the total estimated costs of Alternatives 1, 2, and 4 are included in **Tables 5, 6, and 7**, respectively.

## 4.3 Site Preparation

### 4.3.1 Mobilization

~~Text here.~~Prior to commencing remedial construction, the Remedial Contractor will mobilize to the Site and prepare for remedial activities. Mobilization and Site preparation activities may include the following:

- Identifying the location of aboveground and underground utilities (e.g., power, gas, water, sewer, and telephone), equipment, and structures as necessary to implement remediation;
- Mobilizing necessary remediation personnel, equipment, and materials to the Site;
- Constructing one or more stabilized construction entrance(s) consisting of non-hazardous material at or near the Site exit, which takes into consideration the Site setting and Site perimeter;
- Constructing an equipment decontamination pad for trucks, equipment, and personnel that come into contact with impacted materials during remediation; and/or,
- Mark-out hot spot areas (if identified during the RI or preliminary waste characterization sampling event).

### 4.3.2 Monitoring Well ~~/ Vapor Probe~~ Decommissioning

Existing groundwater monitoring wells will either be protected during remediation and development for use in post-remedial monitoring or will be properly decommissioned in accordance with NYSDEC Commissioners Policy CP-43. The only exception to this is if the full length of the well is to be excavated during remediation. Decommissioning documentation will be provided in the FER.

~~Similarly, existing soil vapor probes will be properly decommissioned unless they are to be fully removed during remediation or used for post-remedial monitoring.~~

### 4.3.3 Erosion and Sedimentation Controls

Since the project will exceed one (1) acre in disturbed area, a SWPPP will be prepared prior to start of remediation and/or construction work as described in Section 4.1.5.~~Text here.~~

### 4.3.4 Stabilized Construction Entrance(s)

Temporary stabilized construction entrances will be installed at along Dale and/or Anderson Roads. The entrances will be covered with NYSDEC-approved gravel and graded so that runoff water will be directed on the Site. Vehicles exiting construction areas will be cleaned using clean water or dry brushing, as needed, to remove Site soil from the tires and undercarriages. The Contractor will protect and maintain the existing sidewalks and roadways at both Site access points.

### 4.3.5 Utility Marker and Easements Layout

The ~~[Applicant / ~~Volunteer~~ / Participant]~~ and its contractors are solely responsible for the identification of utilities that might be affected by work under the RAWP and implementation of all required, appropriate, or necessary health and safety measures during performance of work under this RAWP. The ~~[Applicant / ~~Volunteer~~ / Participant]~~ and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP. The ~~[Applicant / ~~Volunteer~~ / Participant]~~ and its contractors must obtain any local, State or Federal permits or approvals pertinent to such work that may be required to perform work under this RAWP. Approval of this RAWP by NYSDEC does not constitute satisfaction with~~of~~ these requirements.

The presence of utilities and easements on the Site has been investigated by the Remedial Engineer. It has been determined that no risk or impediment to the planned work under this Remedial Action Work Plan is posed by utilities or easements on the Site.

## 4.4 Excavation Support

### ~~4.3.6 Sheeting and Shoring~~

Appropriate management of structural stability of on-Site or off-Site structures during on-Site activities include excavation is the sole responsibility of the ~~[Applicant / ~~Volunteer~~ / Participant]~~ and its contractors. The ~~[Applicant / ~~Volunteer~~ / Participant]~~ and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP. The ~~[Applicant / ~~Volunteer~~ / Participant]~~ and its contractors must obtain any local, State or Federal permits or approvals that may be required to perform work under this RAWP. Further, the ~~[Applicant / ~~Volunteer~~ / Participant]~~ and its contractors are solely responsible for the implementation of all required, appropriate, or necessary health and safety measures during performance of work under the approved RAWP.

### ~~4.3.7~~4.4.1 Equipment and Material Staging

The Contractor will notify the RE and Niagara Power Transform, LLC in writing with receipt confirmed at least 30 calendar days in advance of pending Site work mobilization. During mobilization, construction equipment will be delivered to the Site, temporary facilities constructed, and temporary utilities installed. The Contractor will place and maintain temporary toilet facilities within the work areas for usage by Site personnel.~~Text here.~~

### ~~4.3.8~~4.4.2 Decontamination Area

~~Text here.~~An outbound-truck inspection station will be set up at or near the Site exit. Before exiting the Site, trucks will be required to stop at the truck inspection station and will be examined for evidence of contaminated soil on the undercarriage, body, and wheels. If observed, soil and debris will be removed. Brooms, shovels, and potable water will be utilized for the removal of soil from vehicles and equipment, as necessary. The Contractor is responsible for collecting soil that is tracked immediately off the Site and returning the soil to the Site.

### ~~4.3.9~~4.4.3 Site Fencing

~~Text here.~~The Site will be secured with a temporary gated fence with appropriate signage maintained by the Contractor. The fence will limit access to authorized personnel and protect pedestrians from Site activities.

### ~~4.3.10~~4.4.4 Demobilization

After remediation and construction are completed, the Contractor will be responsible for demobilizing equipment and materials not designated for off-Site disposal. The RE's representative will document that the Contractor performs follow-up coordination and maintenance for the following activities:

- Restoration of areas that may have been disturbed to accommodate support areas (e.g., staging areas, decontamination areas, storage areas, temporary water management area[s], and access area);
- Removal of temporary access areas (whether on-Site or off-Site) and restoration of disturbed access areas to pre-remediation conditions;
- Removal of sediment and erosion control measures and disposal of materials in accordance with acceptable rules and regulations;
- Equipment decontamination;
- General refuse disposal.
- Removal of remaining contaminated spoils or waste.

## ~~4.4~~4.5 Reporting

Periodic reports and an FER will be required to document the remedial action. The RE, will be responsible for certifying the FER and is licensed to practice engineering in the State of New York. Should the RE become unable to fulfill this responsibility, another suitably qualified New York State Professional Engineer will take his place. Field reports will be included as appendices to the FER. In addition to the periodic reports and the FER, copies of the relevant Contractor documents will be submitted to the NYSDEC.

All daily and monthly Reports will be included in the FER~~Final Engineering Report~~.

### ~~4.4.1~~4.5.1 Daily Reports

Daily reports will be submitted to NYSDEC and NYSDOH Project Managers by noon of each day following the reporting period and will include:

- TRC's project number, statement of activities, a~~A~~n update of progress made ~~during the reporting day~~, excavation location(s), and other remedial work performed;
- ~~—~~
- Locations of work and quantities of material imported and exported from the Site;
- Status of on-site soil stockpiles;
- ~~References to alpha-numeric map for Site activities;~~
- A summary of citizen ~~any and all~~ complaints including ~~with~~ relevant details (i.e., name~~s~~, phone number~~s~~, basis of complaint, actions taken);
- A summary of CAMP results ~~finding~~, including excursions; and
- ~~—~~Photographs of ~~site activities;~~
- ~~An explanation of~~ notable Site conditions and activities.

Daily reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the RAWP or other sensitive or time critical information. However, such conditions must also be included in the daily reports. Emergency conditions and changes to the RAWP will be addressed directly to NYSDEC Project Manager via personal communication.

Daily Reports will include a description of daily activities with a Site ~~keyed to an alpha-numeric~~ map for the Site that identifies work areas. These reports will include a summary of CAMP results, odor and dust excursions and corrective actions, and all complaints received from the public.

~~A Site map that shows a predefined alpha-numeric grid for use in identifying locations described in reports submitted to NYSDEC is attached in Figure [x].~~

The NYSDEC assigned project number will appear on all reports.

### ~~4.4.2~~4.5.2 Monthly Reports

Monthly reports will be submitted to NYSDEC and NYSDOH Project Managers by the 10th day of each month following the reporting period and will include:

- Activities relative to the Site during the previous reporting period and those anticipated for the next reporting period, including a quantitative presentation of work performed (e.g., tons~~/cubic yards~~ of material exported and imported, etc.);
- Description of approved activity modifications, including changes of work scope and/or schedule;
- Sampling results received following internal data review and validation, as applicable; and,
- An update of the remedial schedule including the percentage of project completion, unresolved delays encountered or anticipated that may affect the future schedule, and efforts made to mitigate such delays.

- ~~Tracking of GSR metrics determined during the design process should be included in monthly reports.~~

### ~~4.4.3~~4.5.3 Other Reporting

Photographs of remedial activities will be taken and included in the Daily Reports and FER with descriptions provided of representative photographs~~of all remedial activities and submitted to NYSDEC in digital (JPEG) format~~. Photos will illustrate all remedial program elements and will be of acceptable quality. Representative photos of the Site prior to any Remedial Actions will be provided. Representative photos will be provided of each contaminant source, source area and Site structures before, during and after remediation. ~~Photos will be included in the daily reports as needed, and a comprehensive collection of photos will be included in the FER.~~

Progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the FER, including a comparison to the analyses provided in this RAWP~~goals established during the remedial program~~. ~~Regular updates to the metrics used (SEFA, SiteWise™ or otherwise approved method) should be included.~~

The Climate Screening process and results will be documented in the form of a completed checklist and brief letter report. ~~If the Climate Screening results indicate that a CVA is necessary, a complete CVA Report will be developed. The CVA Report will be included as an Appendix or Attachment in relevant documents and/or submitted as a standalone report.~~A completed climate screening checklist for the remediation phase is provided in the RIR under separate cover. An updated checklist will be included in the FER to document the post-remediation status of the Site.

~~Job-site record keeping for all remedial work will be appropriately documented. These records will be maintained on-Site at all times during the project and be available for inspection by NYSDEC and NYSDOH staff.~~

### ~~4.4.4~~4.5.4 Complaint Management Plan

Complaints from the public regarding nuisance or other Site conditions will be addressed by notifying the NYSDEC of the complaint and investigating the cause/source of the issue. Records will be kept regarding the date and time of the complaint, the nature of the complaint, the type of communication (i.e., telephone, email, letter, etc.), and the name and contact information of the complaint provider. Corrective measures will then be formulated and put into place to address the complaint as soon as possible. The resolution will be documented and submitted to NYSDEC. A representative of the Volunteer will reply within two weeks of receipt to the complaint provider to ensure resolution.

### ~~4.4.5~~4.5.5 Deviations from the Remedial Action Work Plan

Deviations from the RAWP will be communicated to and coordinated with NYSDEC in advance. Notification will be provided to NYSDEC by telephone and email for conditions requiring immediate action (e.g., conditions judged to be a danger to the surrounding community). Based on the significance of the deviation, an addendum to this RAWP may be necessary and will include:

- Reasons for deviating from the approved RAWP;
- Approval process to be followed for changes/editions to the RAWP;
- Effect of the deviations on overall remedy.

# 5.0 Remedial Action: Material Removal from Site

Remediation will include the removal of the following material:

- 24 Anderson Road Parcel:
  - Asbestos containing material (ACM) abatement of interior and roof.
  - Prior to demolition, the SSDS beneath the Former Office/Showroom portion of the building will require modification to include removal of four (4) suction pits, relocation of one (1) suction point/manometer, and relocation of one (1) roof fan. Following demolition, testing and assessment of the remaining SSDS will be conducted to determine overall system effectiveness and performance followed by reactivation of the SSDS.
  - Demolition, removal, and off-site disposal of the Former Office/Showroom portion of the building, including slabs and foundations; estimated to be approximately 60 CYs.
  - Interior demolition and renovations as well as roof replacement.
- 1746 Dale Road Parcel:
  - Demolition, removal, and off-site disposal of the remaining northeastern portion of the building (former Brake Area, Shear Area, and Machine Shop), the northwestern portion of the building (former Metal Prep Room), and concrete building foundations; estimated to be approximately 250 CYs.
  - Following building and foundation demolition, excavation of an additional approximately 1,220 CYs of subsurface soil (1-foot depth) are anticipated to be removed during Site grading activities.
  - Excavation of an approximately 23,000 SF of soil beneath the planned new Welding Building followed by off-site disposal of asphalt, concrete, and soil up to 4.0 ft bgs as non-hazardous waste under a Contained-In Determination (approximately 3,400 CYs).
  - Dewatering of the excavation will be performed as necessary with collected water treated and discharged to the sanitary sewer under a temporary discharge permit. A vapor barrier with minimum thickness of 6-mil will be placed over building envelope gravel followed by one-foot-thick reinforced concrete pad.

Excavated and removed spoils will be screened for visual, olfactory, and PID evidence of environmental impacts.

## 5.1 Soil Cleanup Objectives

SCOs ~~The Soil Cleanup Objectives~~ for this Site will be the Track 4 IUSCOs and PGWSCOs ~~are~~ listed in **Table 8**[~~x~~].

Soil and materials management on-Site and off-Site will be conducted in accordance with the Soil/Materials Management Plan (SMMP) as described in Section 5.4 below.

~~Table [x] summarizes all soil samples that exceed the SCOs proposed for this Remedial Action.~~ A spider map that shows all soil samples that exceed the SCOs proposed for this Remedial Action is shown in **Figure 6**[~~x~~].

UST closures, if required, will~~,~~ at a ~~minimum,~~minimum conform to criteria defined in DER-10.

## 5.2 Remedial Performance Evaluation (Post Excavation End-Point Sampling)

### *5.2.1 End-Point Sampling Frequency*

Endpoint soil samples will be collected in accordance with DER-10 5.4(b)(5) to confirm that IUSCOs and/or PGWSCOs have been achieved. The perimeter of the planned Welding Shop Building footprint measures approximately ±677 linear feet (LF) with an area of approximately ±23,000 SF. Based on these values and in accordance with DER-10 5.4(b)(5), 23 sidewall and 26 bottom endpoint samples would be required. TRC considers this to be overly excessive based on current and historical subsurface soil analytical data. Therefore, in accordance with DER-10 5.4(b)(5)(iii)(2), TRC requests NYSDEC approve a reduction of endpoint sample collection frequency to 10 bottom and 14 sidewall endpoint samples. Bottom endpoint samples will be collected from ±4.0 ft bgs and sidewall endpoint samples will be collected from each side of the building excavation (equidistantly spaced and biased toward the bottom of the excavation) from the ±3.5 to ±4.0 ft bgs interval. *The proposed endpoint samples will represent the Department-required samples of subsurface soil that will remain following new Winding Building excavation.*

Proposed endpoint sample locations are shown in **Figure 14**.

### *5.2.2 Methodology*

Confirmation soil samples will be collected from the base of the remedial excavations in accordance with NYSDEC DER-10 to document remedial performance and will be analyzed for Part 375 VOCs (Method 8260) and 1,4-dioxane (Method 8270 SIM). Samples will be collected into laboratory provided bottles. In general, soil samples will be collected using a dedicated stainless steel sampling spoon. A Terra Core® soil sampler will be used to collect VOC soil samples via Method 5035. Collected endpoint soil samples will be placed in pre-cleaned, pre-preserved laboratory provided sample containers, cooled to 4°C in the field, and transported under chain-of-custody to a NYSDOH ELAP-certified analytical laboratory for analysis.

Should additional soil samples be deemed necessary (e.g., additional tank closure, an unknown environmental condition through visual evidence of a remaining source, or over-excavation of failed confirmation sample), confirmation sampling will be conducted in accordance with NYSDEC DER-10.

### *5.2.3 Reporting of Results*

~~Text here.~~Analytical laboratories that analyze endpoint soil samples, prepare results, and perform contingency sampling will be NYSDOH ELAP-certified.

### *5.2.4 QA/QC*

~~Text here.~~Quality control procedures for confirmation soil sampling are included in the QAPP (see **Appendix E**). Endpoint soil sample analytical results will be provided in the NYSDEC's electronic data deliverable (EDD) format for EQuIS™. Guidance on the sampling frequency is presented in NYSDEC DER-10 Section 5.4.

The QA/QC procedures required by the NYSDEC Analytical Services Protocol (ASP) and SW-846 methods will be followed. This will include instrument calibration, standard compound spikes, surrogate compound spikes, and analysis of quality control samples. The laboratory will provide sample bottles, which will be pre-cleaned and preserved. Where there are differences in the SW-846 and NYSDEC ASP requirements, the NYSDEC ASP will take precedence.

### 5.2.5 DUSR and EDDs

~~Text here.~~ASP Category B deliverables will be prepared for remedial performance samples collected during the implementation of this RAWP. DUSRs will be prepared by a qualified data validator, and the findings will be reported in the FER.

### 5.2.6 Reporting of End-Point Data in FER

~~Chemical~~ Analytical laboratories~~labs~~ used for ~~all~~ end-point sample results and contingency sampling will be NYSDOH ELAP certified.

End-point sampling, including bottom and side-wall sampling, will be performed in accordance with DER-10 sample frequency requirements. As previously stated, and in accordance with DER-10 5.4(b)(5)(iii)(2), TRC requests NYSDEC to approve a reduction of endpoint sample collection frequency to 10 bottom and 14 sidewall endpoint samples. ~~Side-wall samples will be collected a minimum of every [insert number] linear feet. Bottom samples will be collected at a rate of one for every [insert number] square feet from the base of the remedial excavation.~~ The FER will provide a tabular and map summary of all end-point sample results and exceedances of SCOs.

## 5.3 Estimated Material Removal Quantities

The estimated quantity of ~~soil/fill~~material to be removed from the Site ~~is [X] tons/cubic yards~~includes:~~.~~

- 24 Anderson Road Parcel:
  - Asbestos containing material (ACM) abatement of interior and roof (quantity unknown currently).
  - Demolition, removal, and off-site disposal of the Former Office/Showroom portion of the building, including slabs and foundations; estimated to be approximately 60 CYs.
  - Interior demolition and renovations as well as roof replacement (quantity unknown currently).
- 1746 Dale Road Parcel:
  - Demolition, removal, and off-site disposal of the remaining northeastern portion of the building (former Brake Area, Shear Area, and Machine Shop), the northwestern portion of the building (former Metal Prep Room), and concrete building foundations; estimated to be approximately 250 CYs.
  - Following building and foundation demolition, excavation of an additional approximately 1,220 CYs of subsurface soil (1-foot depth) are anticipated to be removed during Site grading activities.
  - Excavation of an approximately 23,000 SF of soil beneath the planned new Welding Building followed by off-site disposal of asphalt, concrete, and soil up to 4.0 ft bgs as non-hazardous waste under a Contained-In Determination (approximately 3,400 CYs).
  - Dewatering of the excavation will be performed as necessary with collected water treated and discharged to the sanitary sewer under a temporary discharge permit (quantity unknown currently). A vapor barrier with minimum thickness of 6-mil will be placed over building envelope gravel followed by one-foot-thick reinforced concrete pad.

~~-~~The estimated quantity of soil and/or gravel to be imported into the Site for backfill and/or cover soil is ~~[X] tons/cubic yards~~currently unknown. The reuse of excavation spoils is not

anticipated.~~The estimated quantity of soil/fill expected to be reused/relocated on Site is [X] tons/cubic yards.~~

## 5.4 Soil/Materials Management Plan (SMMP)

This section presents the approach to management, disposal, and reuse of soil, fill, and materials excavated from the Site. The Soil/Materials Management Plan (SMMP) is based on the current knowledge of Site conditions and will be altered, if necessary. Field personnel, under the direction of the RE and/or Senior Project Manager/QEP, will monitor and document the handling and transport of material removed from the Site for disposal as a regulated solid waste. Field personnel, under the direction of the RE and/or Senior Project Manager/QEP, will assist the Remediation Contractor in identifying impacted materials during remediation, determining materials suitable for direct load out versus temporary on-site stockpiling, selection of samples for WC, if necessary, and determining the proper off-Site disposal facility. Separate stockpile areas will be constructed as needed for the various materials to be excavated or generated to avoid commingling impacted with non-impacted soil.

### *5.4.1 Soil Screening Methods*

Visual, olfactory, and PID soil screening and assessment will be performed during remediation and redevelopment by a qualified environmental professional or experienced field geologist under the direction of the RE and/or Senior Project Manager/QEP ~~Remedial Engineer~~ during ~~all~~ remedial and development excavations into known or potentially contaminated material. Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during the remedy and during development phase, such as excavations for foundations and utility work, prior to issuance of the COC.

All primary contaminant sources (including but not limited to tanks and hotspots) identified during Site Characterization, RI, and RA ~~Remedial Investigation, and Remedial Action~~ will be surveyed by a surveyor licensed to practice in the State of New York. This information will be provided on maps in the FER.

Screening will be performed by qualified environmental professionals. Resumes will be provided for all personnel responsible for field screening (e.g., those representing the RE and/or Senior Project Manager/QEP~~Remedial Engineer~~) of invasive work for unknown contaminant sources during remediation and development work.

### *5.4.2 Stockpile Methods*

Stockpiles will be used as necessary to separate and stage excavated material pending loading or characterization sampling. Separate stockpile areas will be constructed to avoid commingling materials from different areas of the Site. Stockpile areas will meet the following minimum requirements:

- Excavated soil will be placed onto a minimum thickness of 6-mil low-permeability liner of sufficient strength and thickness to prevent puncture during use; separate stockpiles will be created where material types are different. The use of multiple layers of thinner liners is permissible.
- Efforts will be made to place and remove the soil to minimize the potential to jeopardize the integrity of the liner.

- Stockpiles will be covered at the designated times (see below) with minimum 6-mil plastic sheeting or tarps which will be securely anchored to the ground with ballast. Stockpiles will be routinely inspected, and broken sheeting covers will be promptly replaced by the Remedial Contractor.
- Stockpiles will be covered upon reaching their capacity (approximately 1,000 cu yd) until ready for loading. Stockpiles that have not reached their capacity will be covered at the end of each workday.
- Each stockpile will be encircled with silt sock and/or hay bales to contain and filter particulates from rainwater that has drained off the soils and to mitigate the potential for surface water run-off.
- Stockpiles will be inspected at a at least once daily and after every storm event.
- If hazardous material is encountered, stockpiling on the Site will be avoided to the extent possible, in favor of direct-loading into trucks permitted to transport hazardous waste.

~~Stockpiles will be inspected at a minimum once each week and after every storm event.~~ Results of stockpile inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. At a minimum, a storm event should be considered a rainfall of three inches or greater in 12 hours. Judgement should be used to evaluate water infiltration, nearby waterbodies where runoff is likely, and engineering controls that may be affected.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Soil stockpiles will be continuously encircled with silt ~~fences~~socks. Hay bales will be used as needed near catch basins, surface waters and other discharge points in accordance with the SWPPP.

A dedicated water truck equipped with a water cannon will be available on-Site for dust control. ~~[Alternate language: Water will be available on-site at suitable supply and pressure for use in dust control.]~~

### *5.4.3 Materials Excavation and Load Out*

The RE, Senior Project Manager/QEP, ~~Remedial Engineer~~ or a qualified environmental professional under his/her supervision will ~~oversee~~ monitor all ~~invasive~~ ground-intrusive work and the excavation and load-out of ~~all~~ excavated material.

Loaded vehicles leaving the Site will be appropriately lined, securely covered, manifested, and placarded in accordance with the appropriate federal, state, and local requirements, including applicable transportation requirements (i.e., New York State Department of Transportation, or NYSDOT). Trucks hauling historical fill material will not be lined unless free liquids are present, or the material is grossly impacted. Hazardous wastes derived from the Site will be stored, transported, and disposed off-site in compliance with applicable local, state, and federal regulations. Vehicles leaving the Site will not be overloaded. ~~—~~The ~~Remedial Engineer~~RE's representative will make reasonable efforts to ensure that vehicles are not loaded beyond their NYSDOT weight rating and that all material is secured beneath the truck bed cover. The RE and/or Senior Project Manager/QEP will be responsible for ensuring that all egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during Site remediation and development. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site -derived materials.

An outbound-truck inspection and wash station is planned to be operated on the Site. Trucks will be washed, as necessary, before leaving the Site, and Site ingress and egress points will be cleaned of dirt and other materials to prevent material generated during remediation and development from being tracked off the Site. The RE will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the remedial construction is complete. Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site sediment tracking.

The ~~[Applicant / ~~Volunteer~~ / Participant]~~ and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan and for the structural integrity of excavation and existing structures that may be affected by excavation (i.e., building foundations).

The presence of utilities and easements on the Site has been investigated by the Remedial Engineer. It has been determined that no risk or impediment to the planned work under this Remedial Action Work Plan is posed by utilities or easements on the Site.

The Volunteers and associated parties will ensure that Site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this RAWP. Development related grading cuts and fills will not be performed without NYSDEC approval and will not interfere with, or otherwise impair or compromise, the performance of remediation required by this RAWP. Mechanical processing of historical fill and contaminated soil on the Site is prohibited unless otherwise approved by NYSDEC.

~~Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).~~

~~Vehicles leaving the Site will not be overloaded. The Remedial Engineer's representative will make reasonable efforts to ensure that vehicles are not loaded beyond their NYSDOT weight rating and that all material is secured beneath the truck bed cover.~~

~~A truck wash will be operated on-Site. The Remedial Engineer will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the remedial construction is complete.~~

~~Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site sediment tracking.~~

~~The Remedial Engineer will be responsible for ensuring that all egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during Site remediation and development. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site- derived materials.~~

The ~~[Applicant / ~~Volunteer~~ / Participant]~~ and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and bridge footings).

~~The Remedial Engineer will ensure that Site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this Remedial Action Work Plan.~~

Each hotspot and structure to be remediated ~~(USTs, vaults and associated piping, transformers, etc.)~~ will be removed and end-point remedial performance sampling completed before excavations related to Site development commence proximal to the hotspot or structure.

~~Development-related grading cuts and fills will not be performed without NYSDEC approval and will not interfere with, or otherwise impair or compromise, the performance of remediation required by this plan.~~

~~Mechanical processing of historical fill and contaminated soil on-Site is prohibited.~~

All primary contaminant sources (including but not limited to tanks and hotspots) identified during Site Characterization, Remedial Investigation, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York. The survey information will be shown on maps to be reported in the FER.

### *5.4.4 Materials Transport Off-Site*

Transport ~~All transport~~ of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Truck transport routes were not developed at the time of this RAWP~~are as follows [describe route and provide map~~]. All trucks loaded with Site materials will exit the vicinity of the Site using only these approved truck routes.

Proposed in-bound and out-bound truck routes to the Site will be provided to NYSDEC when completed~~are shown in Figure [x~~]. The ~~This is the~~ most appropriate routes will be determined and will take ~~takes~~ into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off- Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport; ~~[~~(g) community input ~~[~~(where necessary).~~]]~~

Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development.

Queuing of trucks will be performed on-Site ~~in order~~ to minimize off-Site disturbance. Off-Site queuing will be prohibited.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas or mesh truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks will be washed prior to leaving the Site. Truck wash waters will be collected and disposed of off-Site in an appropriate manner.

### 5.4.5 Materials Disposal Off-Site

The disposal locations will be determined at a later date ~~are [list disposal locations]. Disposal location established at a later date~~ will be reported to the NYSDEC Project Manager.

The total quantity of material expected to be disposed off-Site is approximately 4,930 CYs~~[insert quantity; breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc.]~~.

All soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be disposed of in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to NYSDEC's Project Manager. Unregulated off-Site management of materials from this Site is prohibited without formal NYSDEC approval.

Excavated material ~~Material~~ that does not meet ~~Track 1 unrestricted SCOs~~UUSCOs, such as non-hazardous historical fill material, contaminated soil, and hazardous lead-impacted material, is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360.15 Registration Facility).

If hazardous soil is identified, it will be managed in accordance with applicable federal, state, and local regulations. As such, the handling, transport, and disposal of hazardous fill material is subject to USEPA and OSHA HAZWOPER regulations. The presence of hazardous waste requires compliance with both federal and state regulations and the following requirements:

- Hazardous waste disposal requires obtaining a USEPA RCRA generator ID number;
- Hazardous waste must be transported to a facility permitted by the RCRA to accept hazardous waste;
- Hazardous waste must be segregated and cannot be commingled with other Site material; and,
- Hazardous waste must be transported and disposed of by properly permitted (Part 364) transporters and facilities.

The following documentation will be obtained and reported by the RE~~Remedial Engineer~~ for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms with all applicable laws:

- ~~(1)~~ a letter from the RE~~Remedial Engineer~~ or BCP ~~[Applicant /~~ Volunteer~~ / Participant]~~ to the receiving facility describing the material to be disposed and requesting formal written acceptance of the material. This letter will state that material to be disposed is contaminated material generated at an environmental remediation Site in New York State. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported (including Site Characterization data); and
- ~~(2)~~ a letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material.

These documents will be included in the FER.

Non-hazardous historic fill and contaminated soils taken off-Site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360.2. The Remedial Engineer is responsible for assuring material is properly characterized and determining the appropriate disposal methods based on the characterization results.

Historical fill and contaminated soils from the Site are prohibited from being disposed at Part 360.15 Registration Facilities (also known as Soil Recycling Facilities).

Soils that are contaminated but non-hazardous and are being removed from the Site are considered by the NYSDEC Division of Materials Management (DMM) to be Construction and Demolition (C/D) materials with contamination not typical of virgin soils. These soils may be sent to a permitted Part 360 landfill. They may be sent to a permitted C/D processing facility without permit modifications only upon prior notification of NYSDEC DMM. This material is prohibited from being sent or redirected to a Part 360-15 Registration Facility. In this case, as dictated by DMM, special procedures will include, at a minimum, a letter to the C/D facility that provides a detailed explanation that the material is derived from a DER remediation Site, that the soil material is contaminated and that it must not be redirected to on-Site or off-Site Soil Recycling Facilities. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported.

The FER will include an accounting of the destination of all material removed from the Site during this Remedial Action, including excavated soil, contaminated soil, historic fill, solid waste, and hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. This information will also be presented in a tabular form in the FER.

Bill of Lading system or equivalent will be used for off-Site movement of non-hazardous wastes and contaminated soils. This information will be reported in the FER.

Hazardous wastes derived from on-Site will be stored, transported, and disposed of in full compliance with applicable local, State, and Federal regulations.

Appropriately licensed haulers will be used for material removed from this Site and will be in full compliance with all applicable local, State and Federal regulations.

~~Waste characterization~~WC sampling will be performed exclusively for the purposes of off-Site soil disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws rules and regulations and facility-specific permits. Sampling and analytical methods, sampling frequency, analytical results and QA/QC associated with waste characterization activities will be reported in the FER. All data available for soil/material to be disposed of at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt. Waste characterization data will be used solely for complying with requirements for off-site disposal. Waste Characterization sampling cannot be utilized for:

- Delineating the extent of contamination required for remediation at a Site.
- Replacing or substituting data collected as part of Site Characterization and/or Remedial Investigation.
- Replacing or substituting confirmation or documentation sampling as described in NYSDEC DER-10, Section 5.4.

- To modify remedial decisions as formalized in a NYSDEC approved Decision Document or Record of Decision.

### 5.4.6 Materials Reuse On-Site

Materials reuse is not anticipated at the Site. If on-Site material is proposed for reuse, the chemical criteria for on-Site reuse of material will be approved by NYSDEC. ~~Chemical criteria for on-Site reuse of material have been approved by NYSDEC. These criteria are listed in Table [x].~~ The RE~~Remedial Engineer~~ and/or the Senior Project Manage/QEP will ensure that procedures defined for materials reuse in this RAWP are followed and that unacceptable material will not remain on-Site.

A "Request to Import/Reuse Fill Material" form will be filed with the NYSDEC project manager for review and approval prior to material reuse on the site. A copy of the form is presented in **Appendix H**[x]. ~~Acceptable demolition material proposed for reuse on-Site, if any, will be sampled for asbestos.~~

Concrete crushing or processing on-Site is prohibited, unless NYSDEC has specifically approved on-site processing and reuse of acceptable demolition material.

Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site is prohibited for reuse on-Site.

Contaminated on-Site material, including historic fill and contaminated soil, removed for grading or other purposes will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines. This will be expressed in the Site Management Plan (SMP).

### 5.4.7 Fluids Management

Liquids ~~All liquids~~ to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Liquids discharged into the New York City sewer system will be addressed through approval by NYCDEP. Based on the depth to water, dewatering is not anticipated to facilitate the excavation of material that exceeds the IUSCOs or PGWSCOs and construction of foundation components. If necessary, a dewatering and treatment system will be designed by the Remediation Contractor's New York State-licensed Professional Engineer.

If generated, dewatered~~Dewatered~~ fluids will not be recharged back to the land surface or subsurface of the Site. Dewatering fluids will be managed off-Site.

Discharge of water generated during remedial construction to surface waters (i.e. a local pond, stream, river and/or storm sewer) is prohibited without a SPDES permit.

### 5.4.8 Demarcation

After the completion of soil removal and any other invasive remedial activities and prior to backfilling, a land survey will be performed by a New York State licensed surveyor. The survey will define the top elevation of residual contaminated soils. A physical demarcation layer, consisting of orange snow fencing material or equivalent material will be placed on this surface to provide a visual reference. This demarcation layer will constitute the top of the 'Residuals Management Zone', the zone that requires adherence to special conditions for disturbance of contaminated residual soils defined in the SMP. The survey will measure the grade covered by the demarcation layer before the placement of cover soils, pavement and sub-soils, structures, or other materials. This survey and the demarcation layer placed on this grade surface will constitute

the physical and written record of the upper surface of the 'Residuals Management Zone' in the SMP. A map showing the survey results will be included in the FER and the SMP.

### *5.4.9 Backfill from Off-Site Sources*

Materials ~~All materials~~ proposed for import onto the Site will be approved by the RE and/or Senior Project Manager/QEP~~Remedial Engineer~~ and will be in compliance with provisions in this RAWP prior to receipt at the Site. Imported soil for backfill must meet the requirements of 6 NYCRR Part 375-6.7(d) and NYSDEC DER-10 Section 5.4(e), Table 5.4(e)10.

Material from industrial sites, spill sites, other environmental remediation sites or other potentially contaminated sites will not be imported to the Site. Solid waste will not be imported onto the Site.

~~The FER will include the following certification by the Remedial Engineer: "I certify that all import of soils from off-Site, including source evaluation, approval and sampling, has been performed in a manner that is consistent with the methodology defined in the Remedial Action Work Plan".~~

All imported soils will meet NYSDEC approved backfill or cover soil quality objectives for this Site. These NYSDEC approved backfill or cover soil quality objectives are the lower of the protection of groundwater or the protection of public health soil cleanup objectives for industrial use[~~site specific use~~] as set forth in Table 375-6.8(b) of 6 NYCRR Part 375 and listed in **Table~~s~~ 8**[~~x~~]. Non-compliant soils will not be imported onto the Site without prior approval by NYSDEC. Nothing in the approved RAWP or its approval by NYSDEC should be construed as an approval for this purpose.

Soils that meet 'general fill' requirements under 6 NYCRR Part 360.13, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Nothing in this RAWP should be construed as an approval for this purpose.

A "Request to Import/Reuse Fill Material" form will be filed with the NYSDEC project manager for review and approval prior to import to the site. A copy of the form is presented in **Appendix H**[~~x~~].

The FER will include the following certification by the RE: "I certify that all import of soils from off-Site, including source evaluation, approval and sampling, has been performed in a manner that is consistent with the methodology defined in the Remedial Action Work Plan".

### *5.4.10 Stormwater Pollution Prevention*

A silt fence or hay bales will be installed around the perimeter of the remedial construction area, as required. Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

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

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

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

Erosion and sediment control measures identified in the RAWP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

~~Silt fencing or hay bales will be installed around the entire perimeter of the remedial construction area.~~

### *5.4.11 Contingency Plan*

As discussed above in Section 4.2.7, ~~I~~if USTs~~underground tanks~~ or other previously unidentified contaminant sources are found during on-Site remedial excavation or development related construction, sampling will be performed on product, sediment, and surrounding subsurface materials~~soils~~ (e.g., soil, stone)~~, etc.~~ in accordance with DER-10. Chemical analysis will include Part 375 VOCs, SVOCs, PCBs, pesticides, metals, and PFAS. ~~analytical work will be for full scan parameters (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides, PCBs and PFAS).~~ Analyses will not be otherwise limited without NYSDEC approval.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. These findings will ~~be also~~also be detailed ~~included~~ in daily and monthly BCP progress reports~~periodic electronic media reports~~.

Extreme Storm Preparedness and Response Contingency Plan

Damage from flooding or storm surge can include dislocation of soil and stockpiled materials, dislocation of site structures and construction materials and equipment, and dislocation of support of excavation structures. Damage from wind during an extreme storm event can create unsafe or unstable structures, damage safety structures and cause downed power lines creating dangerous site conditions and loss of power. In the event of emergency conditions caused by an extreme storm event, the ~~[Applicant /~~ Volunteer~~ / Participant]~~ will undertake the following steps for site preparedness prior to the event and response after the event.

Storm Preparedness

Preparations in advance of an extreme storm event will include the following: containerized hazardous materials and fuels will be removed from the property; loose materials will be secured to prevent dislocation and blowing by wind or water; heavy equipment such as excavators and generators will be removed from excavated areas, trenches and depressions on the property to high ground or removed from the property; an inventory of the property with photographs will be performed to establish conditions for the site and equipment prior to the event; stockpile covers for soil and fill will be secured by adding weights such as sandbags for added security and worn or ripped stockpile covers will be replaced with competent covers; stockpiled hazardous wastes will be removed from the property; stormwater management systems will be inspected and fortified, including, as necessary: clean and reposition silt fences, hay bales; clean storm sewer filters and traps; and secure and protect pumps and hosing.

Storm Response

At the conclusion of an extreme storm event, as soon as it is safe to access the property, a complete inspection of the property will be performed. A site inspection report will be submitted to NYSDEC at the completion of site inspection and after the site security is assessed. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. Damage from storm conditions that result in acute public safety threats, such as downed power lines or imminent collapse of buildings,

structures or equipment will be reported to public safety authorities via appropriate means such as calling 911.

Petroleum spills will be reported to NYSDEC within 2 hours of identification and consistent with State regulations. Public safety structures, such as construction security fences will be repaired promptly to eliminate public safety threats. Debris will be collected and removed.

Dewatering will be performed in compliance with existing laws and regulations and consistent with emergency notifications, if any, from proper authorities. Eroded areas of soil including unsafe slopes will be stabilized and fortified. Dislocated materials will be collected and appropriately managed. Support of excavation structure will be inspected and fortified as necessary. Impacted stockpiles will be contained and damaged stockpile covers will be replaced. Stormwater control systems and structures will be inspected and maintained as necessary.

If soil or fill materials are discharged off site to adjacent properties, property owners and NYSDEC will be notified, and corrective measure plan designed to remove and clean dislocated material will be submitted to NYSDEC and implemented following approval by NYSDEC and granting of site access by the property owner. Impacted offsite areas may require characterization based on site conditions, at the discretion of NYSDEC.

If onsite petroleum spills are identified, a qualified environmental professional will determine the nature and extent of the spill and report to NYSDEC's spill hotline at (800) 457-7362 within statutory defined timelines. If the source of the spill is ongoing and can be identified, it should be stopped if this can be done safely. Potential hazards will be addressed immediately, consistent with guidance issued by NYSDEC.

Storm Response Reporting

A site inspection report will be submitted to NYSDEC at the completion of site inspection. An inspection report will be used for this purpose. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. The site inspection report will be sent to the NYSDEC project manager and will include the site name, address, tax block and lot, site primary and alternate contact name and phone number.

Damage and soil release assessment will include: whether the project had stockpiles; whether stockpiles were damaged; photographs of damage and notice of plan for repair; report of whether soil from the site was dislocated and whether any of the soil left the site; estimates of the volume of soil that left the site, nature of impact, and photographs; description of erosion damage; description of equipment damage; description of damage to the remedial program or the construction program, such as damage to the support of excavation; presence of onsite or offsite exposure pathways caused by the storm; presence of petroleum or other spills and status of spill reporting to NYSDEC; description of corrective actions; schedule for corrective actions.

This report should be completed and submitted to NYSDEC project manager with photographs within 24 hours of the time of safe entry to the property after the storm event.

### *5.4.12 Community Air Monitoring Plan*

The CAMP will require real-time monitoring for particulates (i.e., dust) and VOCs at the upwind and downwind perimeters when ground-intrusive activities, including soil/waste excavation, soil handling, test pit excavation and/or trenching, are in progress at the Site during remedial construction activities. The CAMP aims to provide protection for residents in the designated work

area and residents of the downwind community from potential airborne releases that directly result from the remedial construction activities conducted at the Site. Adherence to the monitoring action levels specified in the CAMP requires monitoring and, when necessary, corrective actions to abate emissions, and/or shutdown work. The CAMP also helps to confirm that work activities do not spread contamination off the Site through the air. In addition, visual and olfactory observations will be made to keep dust and odors at a minimum around the work areas. VOCs will be monitored using PIDs, and particulates will be monitored using DustTrak equipment. Readings will be recorded every 15 minutes at the Site by field personnel.

TRC's HASP presented in **Appendix D**, provides action levels for particulate and VOC CAMP monitoring.~~A map showing the location of fixed and mobile sampling stations is shown in Figure [x].~~

Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers within 24 hours of the exceedance and will include the reason(s) for the exceedance and steps taken to address the exceedance. CAMP exceedances will be~~and~~ included in the Daily Report.

### *5.4.13 Odor, Dust and Nuisance Control Plan*

Dust, odor, and nuisance controls will be accomplished by the Remediation Contractor as described in this section.

The FER will include the following certification by the RE~~Remedial Engineer~~: "I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology defined in the Remedial Action Work Plan."

### *5.4.14 Odor Control Plan*

This odor control plan is capable of controlling emissions of nuisance odors off-Site ~~[and on-Site, if there are residents or tenants on the property]~~. Specific odor control methods to be used, if needed, ~~on a routine basis~~ will include the application of foam suppressants or tarps over the odor or VOC source areas ~~[define elements]~~. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of all other complaints about the project. Implementation of all odor controls~~, including the halt of work, will be~~is the responsibility of the Remedial Contractor. Monitoring odor emission, including the halt of work, will be the responsibility of the RE, Senior Project Manager/QEP, or his/her designated representative ~~[Applicant / Volunteer / Participant]'s Remedial Engineer, who is responsible for certifying the FER~~.

Necessary ~~All necessary~~ means will be employed to prevent on- and off-Site nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils~~; [add other elements as appropriate]~~. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (~~d~~a) direct load-out of soils to trucks for off-Site disposal; (~~e~~b) use of chemical odorants in spray or misting systems; and, (~~f~~c) use of staff to monitor odors in surrounding neighborhoods ~~[add others as necessary]~~. If an odor control suppressant is made available on the Site during ground-intrusive work, the SDS will be provided to NYSDEC.

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-Site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

### *5.4.15 Dust Control Plan*

A dust suppression plan that addresses dust management during invasive on-Site work will include, at a minimum~~, the items listed below~~: (a) the use of a dedicated water distribution system, an on-Site water truck for road wetting, or an alternate water source with suitable supply and pressure for use in dust control; (b) the use of g

~~Dust suppression will be achieved though the use of a dedicated on-Site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles. [Alternate language: Water will be available on-site at suitable supply and pressure for use in dust control.]~~

~~Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.~~

~~G~~ravel ~~will be used~~for on-site ~~on~~ road~~way~~s to provide a clean and dust-free road surface~~.~~; and (c) the limiting of the total area of on-site roads

~~On-Site roads will be limited in total area~~ to minimize the area required for water spraying.

### *5.4.16 Other Nuisances*

A plan for rodent control will be developed and ~~utilized~~ used by the ~~contractor~~ Remedial Contractor prior to and during Site clearing and Site grubbing, and during all remedial work.

A plan for noise control will be developed and ~~utilized~~ used by the ~~contractor~~ Remedial Contractor during Site preparation and ~~for all~~ remedial work and will conform, at a minimum, to NYCDEP noise control standards.

## 6.0 Residual Contamination to Remain On-Site

Since residual contaminated soil, ~~[and~~ groundwater, and ~~/~~soil vapor~~]~~ will exist beneath the Site after the remedy is complete, Engineering and Institutional Controls (ECs and ICs) are required to protect human health and the environment. These ECs and ICs are described hereafter. Long-term management of EC/ICs and of residual contamination will be executed under a Site specific Site Management Plan (SMP) that will be developed and included in the FER.

ECs will be implemented to protect public health and the environment by appropriately managing residual contamination. The Controlled Property (the Site) will have ~~[number]~~four (4) primary EC systems. These ~~are~~include:

- ~~[list all, for instance: (1) a~~A composite cover system consisting of asphalt covered roads, concrete covered sidewalks, and concrete building slabs~~]~~. A demarcation layer will be installed beneath the topsoil/landscaped areas of the Site.
- An active SSDS beneath the 24 Anderson Road building.
- An active SSDS beneath the new Welding Shop Building on the 1746 Dale Road property.
- A groundwater monitoring network of nine (9) shallow monitoring wells.

The FER will report residual contamination on the Site in tabular and map form. This will include presentation of exceedances of both Track 1 and Track 4 sites.

# 7.0 Engineering Controls

## ~~6.1~~7.1 ~~:~~ Site Cover System

Exposure to residual contaminated soils will be prevented by an engineered site cover system that will be built on the Site. This site cover system will be comprised of one foot of topsoil in landscaped areas, asphalt covered roads, concrete covered sidewalks, and concrete building slabs ~~[add/delete components]~~.

Green remediation BMPs for designing and installing a conventional cover system include:

- Design in ways that mimic rather than alter the site's natural setting, to improve the cover's long-term performance and protect ecosystem services such as potable water, wildlife habitat, and carbon storage;
- Design a cover accounting for potential effects of climate change, which could involve changes in onsite soil development or increased vulnerability to flooding;
- Use uncontaminated soil or sediment from onsite excavation instead of imported soil/sediment for the cover's frost prevention and erosion control layers; similarly, uncontaminated sand, gravel, and rocks from onsite instead of offsite areas may be used for drainage;
- Apply low impact development strategies such as installing earthen berms to manage stormwater;
- Choose geotextile fabric or drainage tubing composed of 100% recycled materials rather than virgin materials for lining, erosion control, and drainage;
- Select materials with biobased content for daily activities during cover construction;
- Use clean fuel and emission control technologies for routine field vehicles and machinery such as backhoes and bulldozers to reduce fuel consumption and emission of air pollutants such as GHGs and particulate matter; and
- Investigate onsite solar and wind resources to power equipment such as leachate pumps and flare units.

For alternative cover designs

- Consider using asphalt rubber (containing recycled tires) where the cover system includes a layer of asphalt;
- Substitute concrete with high albedo pavement, which reflects sunlight and heat away from the cover surface and may aid growth of nearby vegetation; and
- Consider using concrete containing a high percentage of industrial waste by-products as a substitute for cement, if tests show no contaminant leaching.

In addition to BMPs that apply to conventional covers, BMPs for designing and installing an ET cover include:

- Choose recycled (crushed) concrete for bio-barriers or capillary breaks instead of natural rock;
- Select native drought-resistant plants for the upper vegetative layer to reduce maintenance needs;

- Preserve biodiversity and related ecosystem services by installing a suitable mix of native shrubs, grasses, and forbs; and
- Use non-synthetic amendments such as compost instead of chemical fertilizers if the soil or vegetation is found to need supplementation over time.

Diagrams ~~A diagram~~ showing the design detail for each cover type ~~is shown in **Figure**~~ will be provided upon completion~~[x]~~.

A map showing the aerial distribution of each of the cover types to be built at the Site is included in **Figure 15**~~[x]~~. The components of the site cover system will be documented in the FER. Maintenance of this site cover system will be described in the SMP.

An Excavation Plan will be included in the SMP~~Site Management Plan~~ and will outline the procedures to be followed if the site cover system and underlying residual contamination are disturbed after the Remedial Action is complete.

## 7.2 Active SSDS (Warehouse Building: 24 Anderson Road)

In March 2023, an active SSDS was installed within the 24 Anderson Road Warehouse Building. The SSDS consists of fourteen (14) suction pits and four (4) roof top mounted fans. At that time, system effectiveness was determined via eighteen (18) test points (4 permanent and 14 temporary); each were measured while the system was operational with a vacuum greater than -0.004 inches of water column (in. WC), ranging from -0.090 to -0.007 inches of water column (in. WC).

Prior to demolition, the SSDS beneath the Former Office/Showroom portion of the 24 Anderson Road Warehouse Building will require modification to include removal of four (4) suction pits, relocation of one (1) suction point/manometer, and relocation of one (1) roof fan.

Following demolition, testing and assessment of the remaining SSDS will be conducted to determine overall system effectiveness and performance followed by reactivation of the SSDS. The current SSDS layout is presented in **Figure 10**.

## 7.3 Active SSDS (Welding Shop Building: 1746 Dale Road)

Prior to construction of the new Welding Shop Building on the 1746 Dale Road property, an active SSDS will be designed and installed. Design documents are still pending and will be submitted to NYSDEC/NYSDOH upon completion.

The SSDS will include the following design elements:

- Venting layer: a layer of appropriate stone or gravel will be installed beneath the new building slab;
- Pipes: A network of perforated pipes embedded in the venting layer and connected to header pipes;
- Risers: the risers are solid pipes that are connected to the header pipes and vent to the outside of the building;
- Manometers: Strategically placed to visually monitor the vacuum applied by the SSDS; and
- Sampling ports to collect sub-slab soil vapor samples.

Subslab soil vapor samples, along with co-located indoor air samples, will be collected when the building is enclosed, and preferably during the heating season. The SSDS will be made active with a series of strategically located roof-mounted fans making the SSDS an engineering control.

## 7.4 Groundwater Monitoring Network

The on-site groundwater monitoring network consists of nine monitoring wells, including four existing wells GW-1, GW-2, GW-3, GW-5, and five newly installed RI wells MW-1 through MW-5 (see **Figure 2**). Network wells will be utilized to monitor the groundwater quality and to demonstrate the reduction in groundwater contamination to asymptotic levels following in-situ groundwater remediation. As the dissolved groundwater impacts detected during the RI were relatively low, a short-term monitoring program with associated institutional controls will be implemented to address these impacts. Short-term groundwater monitoring protocols and frequency will be described in the SMP.

If any of existing or newly installed network well becomes damaged or destroyed as a result of redevelopment activities, replacement monitoring wells will be installed in the approximate locations.

Groundwater monitoring activities to assess natural attenuation will continue, as determined by the NYSDEC, until remaining groundwater contaminant of concern concentrations are found to be consistently below NYSDEC standards or have become asymptotic at levels accepted by the NYSDEC. Monitoring will continue until permission to discontinue is granted in writing by NYSDEC. If groundwater contaminant levels become asymptotic at a level that is not acceptable to the NYSDEC, additional treatment and/or control measures will be evaluated. These monitoring activities will be outlined in the Monitoring Plan of the SMP.

~~The components of the site cover system will be documented in the FER. Maintenance of this site cover system will be described in the SMP.~~

## 7.0 Engineering Controls: Treatment System

Incorporation of broad BMPs during project planning can help minimize the environmental footprint of a treatment system throughout its life. Relevant BMPs include:

- Integrate one or more onsite photovoltaic (PV) or wind energy systems to supply electricity for groundwater extraction and treatment equipment or for offsetting grid-supplied electricity used for this purpose. The systems may be scaled up or configured in a modular fashion to additionally meet electricity demands of ongoing site activities or anticipated site reuse.
- Identify onsite or offsite non-potable uses for the treated water, such as building operations, dust and fire suppression, plant irrigation, wetlands restoration or recreational impoundments.
- Choose the nearest facilities at which to dispose of or recycle anticipated wastes.
- Use existing structures that are unused or underutilized to house remediation and monitoring equipment and supplies.
- Incorporate green requirements into applicable service and product procurements.

Other BMPs can be incorporated into detailed design of a treatment system, such as:

- Maximize automation of mechanical and electronic equipment to minimize in-person monitoring.
- Implement a telemetry system to reduce frequency of site visits and responses to non-critical alarms.
- Use multi-port sampling systems rather than well clusters to collect groundwater samples from multiple depths, which minimizes the number of monitoring wells needing to be installed.
- Rely on gravity flow where feasible to minimize the number of pumps required for groundwater transfer or effluent discharge.
- Use closed-loop rather than open-loop treatment processes to reduce the need for fresh water and raw materials and potentially improve treatment system efficiency.
- Reclaim uncontaminated byproducts for potential recycling, such as precipitated metals, solids and spent activated carbon.

Lifecycles and environmental tradeoffs within and among treatment projects may vary considerably. Considerations might include aspects such as:

- The natural resources used to manufacture or process chemicals and other treatment materials.
- Fuel usage and air emissions associated with transporting goods or wastes and commuting workers.
- Coinciding increases in energy efficiency and energy demand associated with pre-heating extracted groundwater prior to treatment.
- The potential for treatment chemicals or treatment byproducts to exist in the treatment system effluent.

~~Other approaches and/or considerations may be included with the approval of NYSDEC's Project Manager.~~

~~This section should present a detailed description of the methods for implementation for each of the remaining Engineering Controls to be utilized both on-Site and off-Site. One Section should be dedicated to each Engineering Control to be implemented in the remedy (for instance, (8.1) sub-slab depressurization and vapor barrier; (8.2) air sparging/soil vapor extraction; (8.3) application of bio-treatment technology). Each section should include a description of:~~

- ~~Conceptual remedial approach~~
- ~~General system design and installation plan~~
  - ~~Components, materials and layout~~
  - ~~Planned system location~~
    - ~~Maps~~
  - ~~Operating conditions~~
  - ~~Treatment systems to be installed~~
  - ~~Processes and materials employed~~
- ~~System OM&M requirements~~

~~If chemical oxidant/biological treatment is included in the Remedial Action, the following text should be included somewhere in this section:~~

~~Volume and density application rates for [chemical oxidant/biological nutrient] will be based on the manufacturer's recommendations. A letter from the manufacturer stating recommended dosage rates will be provided to NYSDEC and will be included in the Final Engineering Report.~~

~~[Chemical oxidant/biological nutrient] will be applied to the base of excavation areas to address potential recontamination from groundwater migration following completion of dewatering.~~

~~Design plans and a work schedule will be submitted to NYSDEC for injection and reinjection of [chemical oxidant/biological nutrient].~~

~~All as-built drawings, diagrams, calculation and manufacturer documentation for treatment systems will be presented in the FER.~~

# 8.0 Citeria for Completion of Remediation/Termination of Remedial Systems

## 8.1 Composite Cover System

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

## 8.2 Sub-slab Depressurization System (SSDS)

Both ~~The~~ active SSD system will not be discontinued without written approval by NYSDEC and NYSDOH. A proposal to discontinue ~~the~~ an active ~~SSD system~~SSDS may be submitted by the property owner based on confirmatory data that justifies such request. Systems will remain in place and operational until permission to discontinue use is granted in writing by NYSDEC and NYSDOH.

## ~~8.3 Air Sparging/Soil Vapor Extraction System [AS/SVE System]~~

~~The AS/SVE system will not be discontinued without written approval by NYSDEC and NYSDOH. A proposal to discontinue the system may be submitted by the property owner after residual contamination concentrations in groundwater: (1) are cleaned up to levels below NYSDEC standards, (2) have become asymptotic over an extended period of time as mandated by the NYSDEC and the NYSDOH, or (3) if NYSDEC has determined that the AS/SVE system has reached the limit of its effectiveness. This assessment will be based in part on post-remediation contaminant levels in groundwater collected from monitoring wells located throughout the Site. Systems will remain in place and operational until permission to discontinue their use is granted in writing by NYSDEC and NYSDOH. These sampling/monitoring activities will adhere to stipulations outlined in the Monitoring Plan section of the SMP.~~

## ~~8.4~~8.3 Groundwater Monitoring

Groundwater monitoring activities to assess the performance of the remedy, or natural attenuation following the removal of contaminant sources, will continue, as determined by NYSDOH and NYSDEC, until residual groundwater concentrations are found to be below NYSDEC standards or have become asymptotic over an extended period. Monitoring will continue until permission to discontinue is granted in writing by NYSDEC and NYSDOH. Monitoring activities will be outlined in the Monitoring Plan of the SMP. It is anticipated that, following remediation, a minimum of eight quarterly monitoring events will be performed.

## ~~8.5 Treatment systems~~

~~(Describe long-term active treatment systems ISCO, SVE etc.)~~

# 9.0 Institutional Controls

After the remedy is complete, the Site will have residual contamination remaining in place. Engineering Controls (ECs) for the residual contamination have been incorporated into the remedy to render the overall Site remedy protective of public health and the environment. Two elements have been designed to ensure continual and proper management of residual contamination in perpetuity: an Environmental Easement and a Site Management Plan (SMP).

All as-built drawings, diagrams, calculation and manufacturer documentation for treatment systems will be presented in the FER. A Site -specific Environmental Easement will be recorded with Erie County, New York ~~[County Name] County [County Name] County [for sites in New York City use NYC Office of the City Register]~~ to provide an enforceable means of ensuring the continual and proper management of residual contamination and protection of public health and the environment in perpetuity or until released in writing by NYSDEC. It requires that the grantor of the Environmental Easement and the grantor's successors and assigns adhere to all Engineering and Institutional Controls (ECs/ICs) placed on this Site by this NYSDEC-approved remedy. ICs provide restrictions on Site usage and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. The SMP describes appropriate methods and procedures to ensure compliance with all ECs and ICs that are required by the Environmental Easement. Once the SMP has been approved by the NYSDEC, compliance with the SMP is required by the grantor of the Environmental Easement and grantor's successors and assigns.

## 9.1 Environmental Easement

An Environmental Easement, as defined in Article 71 Title 36 of the Environmental Conservation Law, is required when residual contamination is left on-Site after the Remedial Action is complete. As part of this remedy, an Environmental Easement approved by NYSDEC will be filed and recorded with the Erie ~~[county]~~ County Office of the City Register. The Environmental Easement will be submitted as part of the Final Engineering Report.

The Environmental Easement renders the Site a Controlled Property. The Environmental Easement must be recorded with Erie~~[county]~~ County ~~[for New York City sites use NYC Office of the City Register]~~ before the Certificate of Completion can be issued by NYSDEC. A series of Institutional Controls are required under this remedy to implement, maintain and monitor these Engineering Control systems, prevent future exposure to residual contamination by controlling disturbances of the subsurface soil and restricting the use of the Site to industrial~~[usage type]~~ use(s) only. These Institutional Controls are requirements or restrictions placed on the Site that are listed in, and required by, the Environmental Easement. Institutional Controls can, generally, be subdivided between controls that support Engineering Controls, and those that place general restrictions on Site usage or other requirements. Institutional Controls in both of these groups are closely integrated with the SMP, which provides all of the methods and procedures to be followed to comply with this remedy.

The ~~Institutional Controls~~ICs that support ~~Engineering Controls~~ECs ~~are~~include:

- Compliance with the Environmental Easement by the Grantee and the Grantee's successors and adherence of all elements of the SMP is required;
- All Engineering Controls must be operated and maintained as specified in this SMP;
- A site cover system consisting of asphalt covered roads, concrete covered sidewalks, topsoil and seeded grass areas, a bioplanter, and concrete building slabs must be inspected, certified and maintained as required in the SMP;

- ~~A [soil vapor mitigation] system~~Two SSDSs, consisting of ~~[~~a sub-slab depressurization system under all building structures~~]~~ must be inspected, certified, operated and maintained as required by the SMP;
- All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP;
- ~~(Note: one bullet should be directed to each Engineering Control system);~~
- ~~[~~Groundwater~~, soil vapor,]~~ and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- On-Site environmental monitoring devices, including but not limited to, ~~[~~groundwater monitor wells and SSDS components (i.e., vertical risers, manometers, roof fans, etc.)~~soil vapor probes]~~, must be protected and replaced as necessary to ensure proper functioning in the manner specified in the SMP;
- Engineering Controls may not be discontinued without an amendment or extinguishment of the Environmental Easement.

Adherence to these Institutional Controls for the Site is mandated by the Environmental Easement and will be implemented under the SMP (discussed in the next section). The Controlled Property (Site) will also have a series of Institutional Controls in the form of Site restrictions and requirements. The Site restrictions that apply to the Controlled Property are:

- Vegetable gardens and farming on the Controlled Property are prohibited;
- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose;
- All future activities on the Controlled Property that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil management provisions in the SMP;
- The Controlled Property may be used for [usage type: industrial ~~e.g. restricted commercial]~~ use only, provided the long-term Engineering and Institutional Controls included in the SMP are employed;
- The Controlled Property may not be used for a higher level of use, such as commercial, restricted residential, or residential ~~[restricted residential]~~ use without an amendment or extinguishment of this Environmental Easement;
- Grantor agrees to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This annual~~[time period]~~ ~~[time period]~~ statement must be certified by an expert that the NYSDEC finds acceptable.

## 9.2 Site Management Plan

Site Management is the last phase of remediation and begins with the approval of the FER and issuance of the Certificate of Completion (COC) for the Remedial Action. The SMP is submitted as part of the FER but will be written in a manner that allows its removal and use as a complete and independent document. Site Management continues in perpetuity or until released in writing by NYSDEC. The property owner is responsible to ensure that all Site Management responsibilities defined in the Environmental Easement and the SMP are performed.

The SMP should include methods to incorporate and track GSR. Measures should be taken to maintain a cost-effective, protective remedy that remains conscientious of the Site's environmental footprint. At a minimum, the following should be assessed: waste generation, energy usage, emissions, and water usage.

The SMP is intended to provide a detailed description of the procedures required to manage residual contamination left in place at the Site following completion of the Remedial Action in accordance with the BCA with the NYSDEC. This includes: (1) development, implementation, and management of all Engineering and Institutional Controls; (2) development and implementation of monitoring systems and a Monitoring Plan; (3) development of a plan to operate and maintain any treatment, collection, containment, or recovery systems (including, where appropriate, preparation of an Operation and Maintenance Manual); (4) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC; and (5) defining criteria for termination of treatment system operation.

To address these needs, this SMP will include four plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems; and (4) a Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC. The SMP will be prepared in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation and the guidelines provided by NYSDEC.

Site management activities, reporting, and EC/IC certification will be scheduled on a certification period basis. The certification period will be ~~[~~annually.~~]~~. The SMP will be based on the certifying period relative to the date of issuance of the COC. The first submission will be due 16 months after the issuance of the COC, and annually (or at another frequency as approved by NYSDEC) thereafter.

The SMP in the FER will include a monitoring plan for groundwater at the down-gradient Site perimeter to evaluate Site-wide performance of the remedy. If determined necessary by NYSDEC, ~~[A~~appropriately placed groundwater monitor wells ~~will~~ may also be installed immediately down-gradient of ~~all~~ source remediation areas for the purpose of evaluation of the effectiveness of the remedy that ~~is~~ has been implemented.~~]~~

No exclusions for handling of residual contaminated soils will be provided in the SMP. ~~All h~~Handling of residual contaminated material will be subject to provisions contained in the SMP.

## 10.0 Final Engineering Report

A Final Engineering Report (FER) will be prepared in conformance with DER-10 and submitted to NYSDEC following implementation of the ~~Remedial Action~~selected remedy defined in this RAWP. The FER will be prepared in conformance with NYSDEC DER-10 and will include the following:

- ~~The FER provides the~~D ~~d~~ocumentation that the remedial work required under this RAWP has been completed and has been performed in compliance with this ~~plan~~Plan.
- ~~The FER will provide a comprehensive account~~A summary of the locations and characteristics of all material removed from the Site including the surveyed map(s) of all sources.
- ~~The Final Engineering Report will include~~A ~~as~~-built drawings for ~~all~~ constructed elements, ~~calculation and manufacturer documentation for treatment systems,~~ certifications, manifests, bills of lading as well as the complete SMP.
- ~~The FER will provide a~~D ~~d~~escription of the changes ~~in the Remedial Action~~to the selected remedy from the elements provided in the RAWP and associated design documents, if any.
- ~~The FER will provide a~~A tabular summary of ~~all~~ performance evaluation sampling results, ~~and all~~ material characterization results, and other sampling, and chemical analysis performed as part of the ~~Remedial Action~~selected remedy.
- ~~-~~The FER will provide test results demonstrating that all mitigation and remedial systems are functioning properly.
- A summary of endpoint sample results to show that remaining soil on the Site meets the Track 4 IUSCOs.
- If necessary, a summary of remaining contamination that exceeds the Track 4 IUSCOs and/or PWGSCOs, and an explanation for why the material was not removed as part of the remedy. A table and a map that shows the remaining contamination in excess of the Track 4 IUSCOs and PGWSCOs would also be included.
- Documentation of treatment and/or disposal of material removed from the Site, including excavated contaminated soil, historical fill, solid waste, hazardous waste, non-regulated material, concrete, asphalt, and fluids. Documentation associated with the disposal of material must also include records and approvals for receipt of the material.
- Documentation of the origin and chemical quality of each material type imported onto the Site. Imported material with less than 10% passing the No. 100 sieve does not require analytical testing, but the Import Request Form plus sieve analysis will be provided.

Discussion of the green remediation practices/technologies employed throughout the remedial program. A final footprint analysis using a DER-accepted model, and any tracking methods used through the construction, including restoration activities. ~~The FER will be prepared in conformance with DER-10.~~

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~~Where determined to be necessary by NYSDEC, a Financial Assurance Plan will be required to ensure the sufficiency of revenue to perform long-term operations, maintenance and monitoring tasks defined in the Site Management Plan and~~

Environmental Easement. This determination will be made by NYSDEC in the context of the FER review.

- The FER will include written and photographic documentation of all remedial work performed under this remedy.

The FER will include an itemized tabular description of actual costs incurred during all aspects of the Remedial Action.

The FER will provide a thorough summary of all residual contamination left on the Site after the remedy is complete. Residual contamination includes all contamination that exceeds the Track 1 Unrestricted Use SCO in 6NYCRR Part 375-6. A table that shows exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the Site after the Remedial Action and a map that shows the location and summarizes exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the Site after the Remedial Action will be included in the FER.

The FER will provide a thorough summary of all residual contamination that exceeds the SCOs defined for the Site in the RAWP and must provide an explanation for why the material was not removed as part of the Remedial Action. A table that shows residual contamination in excess of Site SCOs and a map that shows residual contamination in excess of Site SCOs will be included in the FER.

The FER will include an accounting of the destination of all material removed from the Site, including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. It will provide an accounting of the origin and chemical quality of all material imported onto the Site.

The FER must include a discussion of the green remediation practices/technologies employed throughout the remedial program. A final footprint analysis using a DER accepted model, and any tracking methods used through the construction including restoration activities. Before approval of a FER and issuance of a COC, the daily or weekly reports and monthly BCP progress reports all project reports must be submitted in digital form on electronic media (i.e., PDF).

A Final Engineering Report (FER) will be submitted to NYSDEC following implementation of the Remedial Action defined in this RAWP. The FER provides the documentation that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The FER will provide a comprehensive account of the locations and characteristics of all material removed from the Site including the surveyed map(s) of all sources. The Final Engineering Report will include as-built drawings for all constructed elements, calculation and manufacturer documentation for treatment systems, certifications, manifests, bills of lading as well as the complete SMP. The FER will provide a description of the changes in the Remedial Action from the elements provided in the RAWP and associated design documents. The FER will provide a tabular summary of all performance evaluation sampling results and all material characterization results and other sampling, and chemical analysis performed as part of the Remedial Action. The FER will provide test results demonstrating that all mitigation and remedial systems are functioning properly. The FER will be prepared in conformance with DER-10.

The following text should be included somewhere in this Section:

Where determined to be necessary by NYSDEC, a Financial Assurance Plan will be required to ensure the sufficiency of revenue to perform long-term operations, maintenance and monitoring

~~tasks defined in the Site Management Plan and Environmental Easement. This determination will be made by NYSDEC in the context of the FER review.~~

~~The FER will include written and photographic documentation of all remedial work performed under this remedy.~~

~~The FER will include an itemized tabular description of actual costs incurred during all aspects of the Remedial Action.~~

~~The FER will provide a thorough summary of all residual contamination left on the Site after the remedy is complete. Residual contamination includes all contamination that exceeds the Track 1 Unrestricted Use SCO in 6NYCRR Part 375-6. A table that shows exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the Site after the Remedial Action and a map that shows the location and summarizes exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the Site after the Remedial Action will be included in the FER.~~

~~The FER will provide a thorough summary of all residual contamination that exceeds the SCOs defined for the Site in the RAWP and must provide an explanation for why the material was not removed as part of the Remedial Action. A table that shows residual contamination in excess of Site SCOs and a map that shows residual contamination in excess of Site SCOs will be included in the FER.~~

~~The FER will include an accounting of the destination of all material removed from the Site, including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. It will provide an accounting of the origin and chemical quality of all material imported onto the Site.~~

~~The FER must include a discussion of the green remediation practices/technologies employed throughout the remedial program. A final footprint analysis using a DER accepted model, and any tracking methods used through the construction including restoration activities. Before approval of a FER and issuance of a COC, all project reports must be submitted in digital form on electronic media (PDF).~~

~~For projects with approved documents, such as a Remedial Investigation Work Plan and/or a Remedial Investigation Report, which were not originally submitted in digital format, the approved versions of such documents must be submitted in digital format to the NYSDEC project manager before FER approval will be provided.~~

~~Note: See template for the FER for details on required content.~~

## 10.1 Certifications

The following certification will appear in front of the Executive Summary of the Final Engineering Report. The FER will be prepared, stamped and the following certification signed by an individual licensed or otherwise authorized in accordance with article 145 of the education law to practice the profession of engineering. The certification will include the following statements:

*I, _____, am currently a registered professional ~~engineer licensed~~engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities for the 1746 Dale Road Site (NYSDEC BCA Index No. [to be determined]).*

*I certify that the Remedial Action Work Plan dated [month day year] was implemented and that all construction activities were completed in substantial conformance with the Department-approved Remedial Action Work Plan.*

*All use restrictions, institutional controls, engineering controls and/or any operation and maintenance requirements applicable to the site are contained in an environmental easement created and recorded pursuant to ECL 71-3605 and that any affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.*

*A Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of any engineering controls employed at the site including the proper maintenance of any remaining monitoring wells, and that such plan has been approved by DER.*

~~*I certify that the [Remedial Action Work Plan or Remedial Design] was implemented and that all construction activities were completed in substantial conformance with the Department-approved [Remedial Action Work Plan or Remedial Design].*~~

~~The following certification will appear in front of the Executive Summary of the Final Engineering Report. The FER will be prepared, stamped and the following certification signed by an individual licensed or otherwise authorized in accordance with article 145 of the education law to practice the profession of engineering. The certification will include the following statements:~~

~~I, _____, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the [Remedial Action Work Plan or Remedial Design] was implemented and that all construction activities were completed in substantial conformance with the Department-approved [Remedial Action Work Plan or Remedial Design].~~

~~If the RAWP or RD identifies time frames to be achieved by the remedial program:~~

~~I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the [Remedial Action Work Plan or Remedial Design] and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.~~

~~I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.~~

~~I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by Department.~~

~~If financial assurance is required:~~

~~I certify that any financial assurance mechanisms required by the Department pursuant to Environmental Conservation Law have been executed.~~

~~I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.~~

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

~~It is a violation of Article 145 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 145, New York State Education Law.~~

## 11.0 Schedule

Mobilization for implementation of the RAWP is expected to take place in about one month from receipt of a fully executed BCA and Decision Document. Once mobilization is complete, remediation of the Site will proceed. The remedy, which will be implemented in accordance with this RAWP, is anticipated to take several months to complete. After completion of the remedy, an FER will be drafted and subsequently submitted to the NYSDEC for review and approval. A proposed project schedule will be provided upon completion of the remedy.

# TABLES

# FIGURES

# Appendix A

# Boundary Map with Metes and Bounds

# Appendix B

# Sanborn Maps

# Appendix C

# Groundwater Remedial Alternatives Assessment & Selection

# Appendix D

# Health & Safety Plan (HASP)

# Appendix E

# Quality Assurance Project Plan (QAPP)

# Appendix F

# Construction Quality Assurance Plan (CQAP)

# Appendix G

# Project Personnel Resumes

# Appendix H

# NYSDEC Import Request Form