Former Rochester Metal Etching Company
State Superfund Project
Monroe County, New York

Site Management Plan

NYSDEC Site Number: 828100

Prepared for:
New York State Department of Environmental Conservation
Division of Environmental Remediation
Albany, New York 12233-7013

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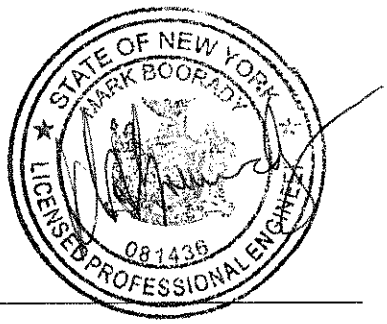
Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

December 2017

CERTIFICATIONS

I, Mark A. Boorady, am currently a registered professional engineer licensed by the State of New York, and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.



NYS Professional Engineer #	Date	Signature
	12/22/17	

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER ARTICLE 145 SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

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1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 Introduction

This document is required as an element of the remedial program at the Former Rochester Metal Etching Company (hereinafter referred to as the "Site") under the New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund program) administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with New York State Environmental Conservation Law (ECL) and Title 6 of the official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375, Site # 828100 Record of Decision, which was executed on March 29, 2011.

1.1.1 General

Groundwater & Environmental Services, Inc. (GES) entered into a Mitigation Services Contract with the NYSDEC to mitigate a 0.22 acre property located in Monroe County, Rochester, New York. This Mitigation Services Contract required, GES on behalf of the NYSDEC, to fulfill response actions, engineering controls and institutional controls listed in the Record of Decision (ROD). The work is documented in the Final Engineering Report (FER) dated September 2017. Figure 1 shows the site location and parcel boundaries. The boundaries of the site are more fully described in the site description that is part of the Environmental Notice provided in Appendix A.

After completion of the remedial work described in the Remedial Action Work Plan (RAWP), residual contamination was left in the subsurface at this site, which is hereafter referred to as 'remaining contamination." This Site Management Plan (SMP) was prepared to manage remaining contamination at the site until the Environmental Notice is extinguished in accordance with ECL Article 71, Title 36. All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by GES on behalf of NYSDEC, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and the guidelines provided by NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Environmental Notice for the site.

1.1.2 Purpose

The Site contains contamination left after completion of the remedial action. Engineering Controls have been incorporated into the site remedy to control exposure to remaining contamination during the use of the site to ensure protection of public health and the environment. An Environmental Notice granted to the NYSDEC, and recorded with the Monroe County Clerk, requires compliance with this SMP and all ECs and ICs placed on the site. The ICs place restrictions on site use, and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP specifies the methods necessary ensure compliance with all ECs and ICs required by the Environmental Notice for contamination that remains at the site. This plan has been approved by the NYSDEC, and compliance

with this plan is required by the grantor of the Environmental Notice and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) operation and maintenance of all systems; (3) performance of periodic inspections, certification of results; and (4) defining criteria for termination of treatment system operations.

To address these needs, this SMP includes three 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.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Notice. Failure to properly implement the SMP is a violation of the Environmental Notice,
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375, and thereby subject to enforcement by NYSDEC or other agencies and applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the Environmental Notice for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 Site Background

The NYSDEC, in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of hazardous wastes at this site, as more fully described in this document, has contaminated various environmental media. The remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This SMP identifies, summarizes, and discusses the selected remedies.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

The NYSDEC has also issued a ROD document in accordance with the requirements of New York State ECL and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports, documents, FER and this SMP.

1.2.1 Site Location and Description

The Site is located at 100 Lake Avenue in Rochester, Monroe County, New York and known and designated on the tax map of the County Clerk of Monroe as tax map parcel numbers: Section 105 Block 60 Lot 2-13. The main feature of the 0.22 acre site is a two story building surrounded by paved parking areas and walkways. The Site, located within the Community Center zoning district, is near the intersection of Lake Avenue (south-west border) and Spencer Street (north-west border). The Site is located on the side of a hill that slopes downward from Lake Avenue eastward. The surrounding properties include commercial and industrial parcels which are covered by buildings and pavement (paved parking or roads). The Site is bounded to the north by a mixed use building (commercial first floor/apartments upper floors) and a vehicle rental location across Spencer Street, to the west across Lake Avenue by parking lots, to the east by a frozen food facility, and to the south by a diner.

1.2.2 Site History

The Site manufactured etched and lithographed metal nameplates from 1967 until 1996 when manufacturing operations ceased. Ferric chloride was reportedly used to etch stainless steel and brass, and hydrofluoric acid and hydrochloric acid solutions were used to etch aluminum. Chlorinated VOCs consisting of tetrachloroethene (PCE), trichloroethylene (TCE), and 1,1,1-trichloroethane (1,1,1-TCA) were used for degreasing. Prior uses that appear to have led to site contamination include metal plating, machining and etching, along with the improper disposal of process wastewater into a series of sumps, drains and trenches.

From 1998 to 1999, the NYSDEC conducted a preliminary investigation. The investigation data led to the listing of the Site as a Class 2 Inactive Hazardous Waste Disposal Site in 2001 and the subsequent completion of the Site Remedial Investigation/Feasibility Study (RI/FS) in 2007.

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/FS. Although no IRMs were approved by the Department, The Brotherhood, MC Inc. (the current site property owner) conducted the following work prior to approval of the ROD:

- Concrete Filling of Basement Sumps and Collection Trenches

  The sumps and the trench associated with the Site provided the primary preferential pathways identified for the transport and migration of site constituents to subsurface soil and groundwater. In 2005, the owners of the Site filled in the sumps and the trench with concrete, eliminating these structures as potential pathways for the transport of materials from inside the facility to subsurface media. It is unknown if the trenches were properly cleaned prior to filling with concrete.

- Site Cover

  In 2009, the owners of the Site paved the entire site with asphalt, including the previously exposed surface soil area located in the southeast corner of the site. The boundaries of the Site are either covered by asphalt paving or the site building, thus eliminating the potential of direct contact with contaminated soils on site.

1.2.3 Geologic Conditions

The Site is underlain by unconsolidated glacial till deposits (consisting of fine sand and silt with varying amounts of fine to coarse gravel) which is underlain by the Lockport Group bedrock. The overburden is generally unsaturated with localized occurrence of groundwater at the overburden/bedrock interface. The thickness of overburden/depth to bedrock ranges from 3.5 feet beneath the site building to approximately 13 feet in the parking lot on the west side of the building.

Based on the monitoring well data and site topography, the Site drains primarily toward the Genesee River located approximately 500 feet east. The Genesee River flows north and discharges into Lake Ontario, approximately 6 miles downstream. The potential migration of contaminants from the overburden groundwater on the Site to the Genesee River is considered complete, but is limited due to the lack of contiguous groundwater in the overburden which restricts the affected groundwater to the vicinity of the site. The potential migration of contaminants from the bedrock groundwater to the Genesee River is also considered complete, but the potential affects from the Site constituents would not be expected to result in detectable increases in the levels of constituents in the river due to the fact that infiltration of water into the waste material is minimized by the cap over the site.

1.3 Summary of Remedial Investigation Findings

A Site Characterization was performed at the site in 1999-2000 and the results are described in the Site Investigation Report prepared by NYSDEC (September 2000). The investigation data led to the listing of the Site as a Class 2 Inactive Hazardous Waste Disposal Site in 2001 and the subsequent completion of the Site Remedial Investigation/Feasibility Study (RI/FS) in 2007. The Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the site. The results of the RI are described in detail in the Remedial Investigation/Feasibility Study report (September 2007), prepared by O'Brien & Gere Engineers, Inc.

Generally, the RI determined whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific Standards, Criteria and Guidance (SCG). The NYSDEC has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html.

The analytical data collected consisted of groundwater, soil, soil vapor and indoor air. The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in the ROD. A full discussion of the data is presented in the RI.

The contaminant(s) of concern identified at this site during the RI is/are:

- tetrachloroethylene (pce)
- trichloroethene (tce)
- 1,1,1-trichloroethane
- lead
- arsenic
- barium
- cadmium
- copper
- chromium
- mercury
- nickel
- silver
- zinc

As illustrated in the RI, the contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil
- soil vapor
- indoor air

Below is a summary of site conditions when the RI was performed from 1998 to 2006:
The primary contaminants of concern at the site include volatile organic compounds (VOCs) trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA) and tetrachloroethene (PCE), and inorganic compounds (metals) chromium and copper. VOCs are present in on-site groundwater and indoor air at concentrations exceeding the respective standards, criteria and guidance values (SCGs). Although VOCs exceeded the SCGs within the on-site overburden groundwater, no SCGs were exceeded in on-site soils (with the exception of acetone) or within the down gradient off-site deep bedrock monitoring wells. Metals contamination was detected within the on-site soils and overburden groundwater as well as within the down gradient off-site bedrock monitoring wells at concentrations exceeding the respective SCGs. Investigations did not reveal the presence of an on-site source area based on sampling conducted beneath the building foundation.

TCE was detected in 6 of 13 groundwater samples collected during the RI at concentrations exceeding the SCG for TCE and was the chlorinated volatile organic compound (CVOC) detected at the highest concentration in groundwater (460 ppb). The highest CVOC concentration was detected within monitoring well MW-2, located north of the Site building. TCE was not detected within off-site bedrock monitoring wells.

During the RI, vapor intrusion (VI) sampling was completed in 2004 at the on-site RME building and in 2006 at three (3) off-site properties located in the near vicinity of the site. Based on the VI sampling, TCE and methylene chloride were the only VOCs detected in indoor air samples at concentrations above their respective SCG of 5 µg/m3 and 60 µg/m3. Specifically, TCE was detected in 6 of 17 indoor air samples at concentrations above the SCG of 5 µg/m3 and methylene chloride was detected in 3 of 6 indoor air samples at concentrations above the SCG of 60 µg/m3. All of the indoor air exceedances occurred within the first floor and basement indoor air samples of the on Site building, no exceedances were detected within any of the off-site properties.

Copper and chromium were frequently detected above Part 375 SCGs for unrestricted uses and other metals were detected above the Part 375 SCGs less frequently. Copper exceeded the Part 375 SCG of 50 ppm in 28 of 43 subsurface soil samples collected and chromium exceeded the Part 375 SCG of 30 ppm in 26 of 47 surface soil samples collected. The highest concentration of copper, 13,400 ppm was detected in deeper soil (3 to 5 ft.) at SB-10 located next to the collection trench beneath the site building. At NR-2 located within 30 feet of SB-10, the highest concentration of chromium was detected in upper soil (0 to 2 feet interval) at 10,300 ppm. The analytical results suggest that metal etching wastes entered the ground under the Site building. The trench and sumps inside the Site building historically provided a likely pathway to the subsurface soil and groundwater.

Metals contamination was seen in the overburden, overburden/bedrock interface, and bedrock groundwater. The most frequent SCG exceedances were seen in the inorganic compounds copper and chromium. Copper exceeded the SCG in 7 of 12 samples and ranged in concentration from 50 ppb to 9,260 ppb in the overburden well MW-3. Chromium exceeded the SCG in 6 of 11 samples and ranged in concentration from non-detect to 2,310 ppb in the overburden well MW-2.

1.4 Summary of Remedial Actions

The site was remediated in accordance with the NYSDEC-approved Remedial Action Work Plan dated December 2012 and the ROD.

The following is a summary of the Remedial Actions performed at the site:

1. Construction and maintenance of a soil cover system consisting of concrete and asphalt to prevent human exposure to remaining contaminated soil/fill remaining at the site (completed prior to the ROD);
2. Execution and recording of an Environmental Notice to restrict land use and prevent future exposure to any contamination remaining at the site (completed March 1, 2017).
3. Installation of a sub-slab depressurization / soil vapor extraction (SSD/SVE) system within the Site building located at 100 Lake Avenue, completed in January, 2013, utilizing the NYSDOH's "Guidance for Evaluating Soil Vapor Intrusion in the State of New York."
4. Development and implementation of a SMP for long term management of remaining contamination as required by the Environmental Notice, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting (this document);

Remedial activities were completed at the site by February, 2013.

1.4.1 Removal of Contaminated Materials from the Site

- Sub-slab soil removed from each suction cavity and was compiled into three (3) steel drums removed from site;
- Remnants of the Site groundwater treatment system, shut down in 1996, were disassembled and disposed of as residential waste as an additional component of the remedial action in February, 2013.
- One steel drum (55 gallon) of granular activated carbon (GAC), that was assumed to have been used to treat groundwater collected from an outdoor collection sump, was removed from site under the instruction of the NYSDEC as an additional component of the remedial action.

1.4.2 Site-Related Mitigation Systems

The SSD/SVE system was installed as two systems, each utilizing a separate fan, in order to achieve total sub-slab coverage. The systems are outlined individually below:

- System 1 (North Room System, see Figure 2)
    - One (1) RADONAWAY RP145 in-line fan, mounted on the exterior sidewall at the east side of the Site, connected via 4" schedule 40 PVC pipe to roof exhaust.
    - Two (2) suction points, SP14 & SP13, connected via 3" Schedule 40 PVC pipe, surface mount at designated side wall.
    - Access hole to suction cavity created by 7"core drill, approximately 1 cu. ft. cavity excavated from sub-slab.
    - Suction piping to consist of approximately 36" of 4" 20 slot schedule 40 well screen placed vertically in the sub-slab cavity, sealed at grade with masonry cement.
    - One (1) U-tube vacuum indicator on vertical pipe run.

- System 2 (Main System, see Figure 2)
    - One (1) RADONAWAY RP265 in-line fan, mounted on the exterior sidewall at the east side of the former RME facility, connected via 4" schedule 40 PVC pipe to roof exhaust.
    - Two (12) suction points, SP1-SP12, connected via 4" and 3" Schedule 40 PVC pipe, surface mount at designated side walls, beams or floor joists.
    - Access hole to suction cavity created by 7"core drill, approximately 1 cu. ft. cavity excavated from sub-slab.
    - Suction piping to consist of approximately 36" of 4" 20 slot schedule 40 well screen placed vertically in the sub-slab cavity, sealed at grade with masonry cement.
    - One (1) U-tube vacuum indicator on vertical pipe run.

1.4.3 Remaining Contamination

Anyone performing future excavations at the Site and adjacent locations should anticipate encountering any and all contamination and environmental conditions described in the RI and ROD. The selected remedy to install the ssd/sve systems and maintain the cover within the Site will not, and is not intended to, remediate remaining contamination. The nature and extent of contamination is summarized by showing the range and frequency of detected concentrations and by comparison to screening values in Appendix B. Figure 3 through Figure 5 illustrate the subsurface and surface soil and groundwater contamination remaining at the site (it is noted that the surface soil and trenches have been covered/filled to reduce exposure). The remaining concentration is summarized below:

- Inorganic constituents have been found to be the primary contaminant affecting soil and ground water in the vicinity of the Site.

    - Visual observations of stains in soil and analytical data indicate that inorganic constituents are widespread underneath the Site and down gradient of the Site on the Off-Site Location 2 property (See Figure 1).
    - Facility structures (sumps and the trench) likely conveyed inorganic constituents to the soil and ground water underneath the Site building. Additional materials may have been discharged in some manner to the surface soils outside the basement door.
    - Dissolution of metals in acids during etching processes puts metals in a form that is readily transported in water. Changes in pH and dissolved oxygen that occur when process wastes contacted soil and ground water may have caused their precipitation.

- Chlorinated VOCs have also been found in the groundwater and air vicinity of the Site.

    - Groundwater indicates a source(s) of inorganic constituents, TCE, and TCA in the vicinity of MW-2 (See Figure 1).
    - A residual source of chlorinated VOCs to ground water was not specifically identified in soils although the levels of chlorinated VOCs detected at MW-2 suggest that one exists nearby (See Figure 1).
    - The chemical properties of VOCs tend to favor their volatilization into air. However, once trapped below the surface they are readily transported in ground water and, in contact with subsurface air pockets, will continue to emit VOC vapors.
    - VOCs detected in air inside the Site, and Off-Site Locations 1 and 2 appear to be related to VOCs detected in soil vapor beneath the basement slabs of these buildings (See Figure 1).

- SVOCs were found in localized areas of the Site. Based on their heavier molecular weight these compounds are expected to be less mobile than VOCs or inorganic constituents.

    - Phenol was detected in soil boring locations sampled as well as in former basement sump.
    - Phthalates were detected in the trench which provides a pathway to soil beneath the building.
    - PAHs were not detected above background levels in the sump and trench structures inside the Site or subsurface soil under the building. Therefore, the detection of PAHs in these structures may be associated with ubiquitous sources.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 Introduction

2.1.1 General

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

2.1.2 Purpose

This plan provides:

- A description of all EC/ICs on the site;
- The basic implementation and intended role of each EC/IC;
- A description of the key components of the ICs set forth in the Environmental Notice;
- A description of the features to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of EC/ICs and;
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the site remedy, as determined by the NYSDEC.
- Potential for enforcement action by NYSDEC or appropriate agency for failure to comply with the required controls and reporting.

2.2 Engineering Controls

2.2.1 Engineering Control Systems

2.2.1.1 Cover System

Exposure to remaining contamination in soil/fill at the site is prevented by a cover system placed over the site. This cover system is comprised of asphalt paving or the site building, thus eliminating the potential of direct contact with contaminated soils. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 3 of this SMP.

2.2.1.2 Sub-slab Depressurization / Soil Vapor Extraction Systems

Both SSD/SVE system fans are hard wired to the control panel located in the furnace room (see Figure 2). They are connected to a separate 15 amp breaker labeled SSD/SVE System Fans.

- System 1 (North Room System, see Figure 2)
    - One (1) RADONAWAY RP145 in-line fan, mounted on the exterior sidewall at the east side of the former RME facility, connected via 4" schedule 40 PVC pipe to roof exhaust.
    - Two (2) suction points, SP14 & SP13, connected via 3" Schedule 40 PVC pipe, surface mount at designated side wall.

- Access hole to suction cavity created by 7"core drill, approximately 1 cu. ft. cavity excavated from sub-slab.
- Suction piping to consist of approximately 36" of 4" 20 slot schedule 40 well screen placed vertically in the sub-slab cavity, sealed at grade with masonry cement.
- One (1) U-tube vacuum indicator on vertical pipe run.

- System 2 (Main System, see Figure 2)
  - One (1) RADONAWAY RP265 in-line fan, mounted on the exterior sidewall at the east side of the former RME facility, connected via 4" schedule 40 PVC pipe to roof exhaust.
  - Two (12) suction points, SP1-SP12, connected via 4" and 3" Schedule 40 PVC pipe, surface mount at designated side walls, beams or floor joists.
  - Access hole to suction cavity created by 7"core drill, approximately 1 cu. ft. cavity excavated from sub-slab.
  - Suction piping to consist of approximately 36" of 4" 20 slot schedule 40 well screen placed vertically in the sub-slab cavity, sealed at grade with masonry cement.
  - One (1) U-tube vacuum indicator on vertical pipe run.

Procedures for operating and maintaining the Sub-slab Depressurization / Soil Vapor Extraction Systems are documented in the Operation and Maintenance Plan (Section 4 of this SMP). Procedures for monitoring the system are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs.

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

2.2.2.1 Cover System

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

2.2.2.2 Sub-slab Depressurization / Soil Vapor Extraction System

The active SSD/SVE system will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SSD system is no longer required, a proposal to discontinue the SSD system will be submitted by the property owner to the NYSDEC and NYSDOH.

2.3 Institutional Controls

A series of Institutional Controls is required by the ROD to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; (3) limit the use and development of the site to commercial and/or industrial uses only; (4) restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the Department, NYSDOH or County DOH; (5) prohibit agriculture or vegetable gardens on the controlled property; (6) require the remedial party or

site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3). Adherence to these Institutional Controls on the site is required by the Environmental Notice and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the Environmental Notice and this SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be operated and maintained as specified in this SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in this SMP;

Institutional Controls identified in the Environmental Notice may not be discontinued without an amendment to or extinguishment of the Environmental Notice. Failure to adhere to institutional controls and applicable reporting may result in enforcement action by NYSDEC or appropriate agency.

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

- The property may only be used for commercial and/or industrial use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.
- The property may not be used for a higher level of use, such as unrestricted commercial or restricted residential use without additional remediation and amendment of the Environmental Notice, 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 the groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDEC, NYSDOH or County DOH.
- 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. 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 initially submitted one year from execution of the Environmental Notice, and then as stipulated by NYSDEC following review of an initial certification and periodic review report.

2.3.1 Excavation Work Plan

The Site is restricted to commercial and/or industrial use. Any future intrusive work that will penetrate the soil cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the Excavation Work Plan (EWP) that is attached as Appendix C to this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the site. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP

and CAMP will be updated and re-submitted with the notification provided in Section A-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

The site owner 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 intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of runoff from open excavations into remaining contamination, and for structures that may be affected by excavations (such as building foundations and bridge footings). The site owner will ensure that site development activities will not interfere with, or otherwise impair or compromise, the engineering controls described in this SMP.

2.3.2 Soil Vapor Intrusion Evaluation

Prior to the construction of any additional enclosed structures located over any areas of the Site, an additional soil vapor intrusion (SVI) evaluation will be performed. This is due to the remaining contamination and the potential for soil vapor intrusion that has been identified in the basement of the Site. An SVI evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed structure. Alternatively, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

Prior to conducting an SVI investigation or installing a mitigation system, a work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH "Guidance for Evaluating Vapor Intrusion in the State of New York". Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SVI evaluation, the NYSDOH guidance, and construction details of the proposed structure.

Preliminary (unvalidated) SVI sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation. Validated SVI data will be transmitted to the property owner within 30 days of validation. If any indoor air test results exceed NYSDOH guidelines, relevant NYSDOH fact sheets will be provided to all tenants and occupants of the property within 15 days of receipt of validated data.

SVI sampling results, evaluations, and follow-up actions will also be summarized in the next Periodic Review Report.

2.4 Inspections and Notifications

2.4.1 Inspections

Inspections of all remedial components installed at the site will be conducted at the frequency specified by the NYSDEC. A comprehensive site-wide inspection will be conducted periodically, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- Compliance with requirements of this SMP and the Environmental Notice;
- Achievement of remedial performance criteria;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5). Additionally, an inspection checklist will be completed and submitted to the NYSDEC (Appendix D)

2.4.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of 6NYCRR Part 375, and/or Environmental Conservation Law.
- 30-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.
- Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:
- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the Record of Decision, and all approved work plans and reports, including this SMP
- Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing.

2.5 Contingency Plan

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

2.5.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should

also be made to NYSDEC. These emergency contact lists must be maintained in an easily accessible location at the site.

Table 1: Emergency Contact Numbers	
Medical, Fire, and Police:	911
One Call Center	(800) 272-4480 (3 day notice required for utility mark out)
Poison Control Center	(800) 222-1222
Pollution Toxic Chemical Oil Spills	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

Table 2: Contact Numbers	
Groundwater & Environmental Services, Inc	Office: (800) 220 3069
NYSDEC Project Manager	Office: (518) 402-9814
NYSDEC Regional Representative (Region 8)	Office: (585) 226 2466
Mitigation Tech	Office: (585) 637 7430

* Note: Contact numbers subject to change and should be updated as necessary

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 100 Lake Avenue, Rochester, New York 14613

Nearest Hospital Name: Rochester General Hospital

Hospital Location: 1425 Portland Avenue, Rochester New York 14621

Hospital Telephone: (585) 922 4000

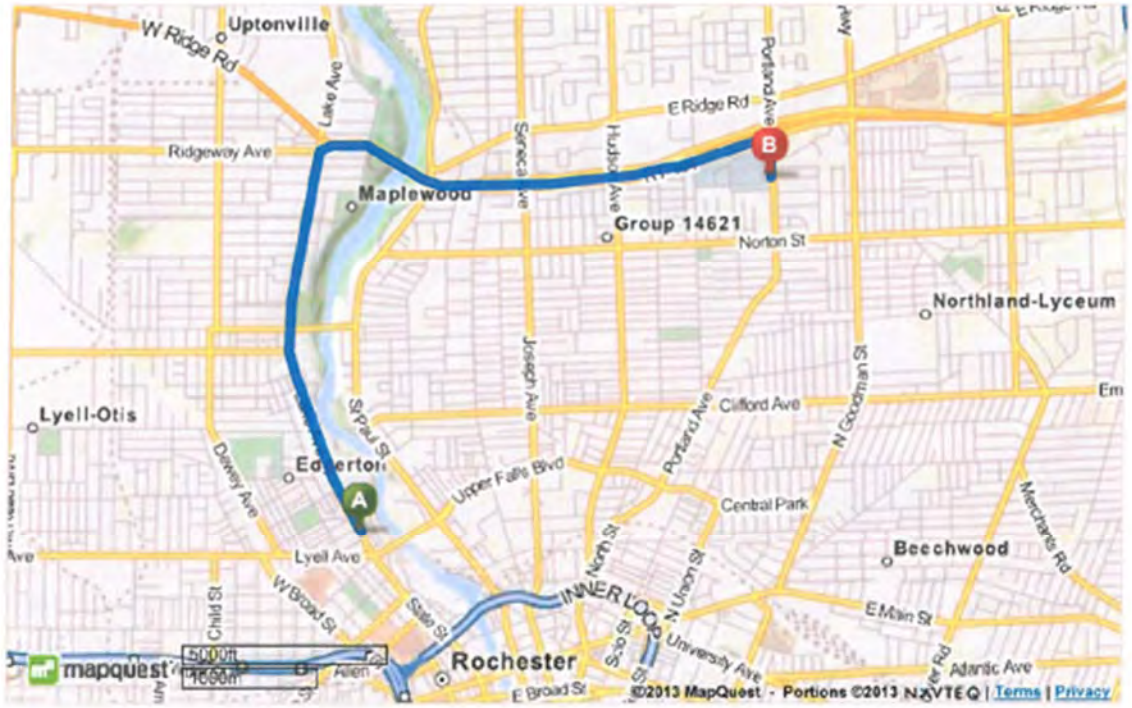
Directions to the Hospital:

1. Start out going northwest on Lake Avenue toward Spencer Street.
2. Turn right onto Ridgeway Avenue.
3. Turn slight right onto RT-104 E/W Ridge Road. Continue on RT-104 E.
4. Take the ramp toward Carter Street/Portland Avenue.
5. Turn slight left onto RT-104.
6. Turn right onto Portland Avenue.
7. 1425 Portland Avenue is on the right.

Total Distance: 4.52 miles

Total Estimated Time: 9 minutes

Map Showing Route From the Site to the Hospital:



2.5.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table 1). The list will also be posted prominently at the site and made readily available to all personnel at all times.

3.0 SITE MONITORING PLAN

3.1 Introduction

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site, the soil cover system, and all affected site media identified below. Monitoring of other Engineering Controls is described in Chapter 4, Operation, Monitoring and Maintenance Plan. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment;
- Preparing the necessary reports for the various monitoring activities;
- To adequately address these issues, this Monitoring Plan provides information on;
- Information on all designed monitoring systems;
- Reporting requirements;
- Periodic inspection and certification.

Monitoring of the performance of the remedy will be conducted for the first year. The frequency thereafter will be determined by NYSDEC during periodic review report evaluation. Monitoring programs are summarized in Table 3 and outlined in detail in Sections 3.2 and 3.3 below.

Table 3: Monitoring/Inspection Schedule

Monitoring Program	**Frequency***	**Matrix**	**Analysis**
3.2	Annual	Soil cover	Integrity via Inspection Form
3.3	Annual	Equipment/Piping	Integrity via Inspection Form
3.4	Annual	Air	Integrity via Inspection Form
* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH			

3.2 Soil Cover System Monitoring

Ensure a cover is maintained over the limits for the site property which includes asphalt paving, concrete paving, sidewalks and the building footprint.

3.3 Site-Wide Inspection

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering

Controls or monitoring devices. During these inspections, an inspection form will be completed (Appendix D). The form will compile sufficient information to assess the following:

Compliance with all ICs, including site usage;

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

3.4 Monitoring Quality Assurance/Quality Control

Monitoring is not anticipated as part of Site Management. In the event monitoring is performed, all sampling and analyses will be performed in accordance with the requirements of a Quality Assurance Project Plan (QAPP) prepared for the site prior to sampling being completed. The QAPP must be submitted and approved by NYSDEC.

3.4.1 Monitoring Well Repairs, Replacement and Decommissioning

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced (as per the Monitoring Plan), if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair or decommissioning of monitoring wells for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent periodic report. Well decommissioning without replacement will be done only with the prior approval of NYSDEC. Well abandonment will be performed in accordance with NYSDEC's "Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC.

3.5 Monitoring/Inspection Reporting Requirements

Forms and any other information generated during regular monitoring events and inspections will be kept on file on-site. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP. All monitoring/inspection results will be reported to NYSDEC on a periodic basis in the Periodic Review Report. The report (or letter) will include, at a minimum a copy of the inspection form.

4.0 OPERATION AND MAINTENANCE PLAN

4.1 Introduction

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

- Includes the steps necessary to allow individuals unfamiliar with the site to operate and maintain the Sub-Slab Depressurization/Soil Vapor Extraction systems;
- Includes an operation and maintenance contingency plan; and,
- Will be updated periodically to reflect changes in site conditions or the manner in which the Sub-Slab Depressurization/Soil Vapor Extraction systems are operated and maintained.

Information on non-mechanical Engineering Controls (i.e. soil cover system) is provided in Section 3 - Engineering and Institutional Control Plan. A copy of this Operation and Maintenance Plan, along with the complete SMP, will be kept at the site. This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of the SMP.

4.2 Engineering Control System Operation and Maintenance

- Two (2) Sub-slab Depressurization/Soil Vapor Extraction Systems; described in sections 1.4.2 & 2.2.;
- See Figure 2 for as-built drawings;
- Systems start date January 15, 2013.

4.2.1 Scope - System Start-Up and Testing

- Verify all connections are tight and leak-free per Manufacturer's recommendations;
- Ensure the RP series fans and all ducting is secure and vibration-free;
- Verify system vacuum pressure with manometer. Insure vacuum pressure is less than maximum recommended operating pressure (see Appendix E);
- Verify each fan on/off switch correctly operates the system fan;
- Verify SSD/SVE system breaker correctly operates the system fans;
- The system testing described above will be conducted if, in the course of the Sub-Slab Depressurization/Soil Vapor Extraction system lifetime, significant changes are made to the system, and the system must be restarted.

4.2.2 System Operation: Routine Operation Procedures & Equipment Maintenance

- There are no user serviceable parts located inside fan unit;
- System is designed with "System On," indicator (U-Tube manometer) to monitor system vacuum, ensure indicator is working properly;
- Manometer should show vacuum pressure less than maximum recommended operating pressure provided in Appendix E;

4.2.3 System Operation: Non-Routine Equipment Maintenance

- U-Tube manometers should keep steady vacuum reading, if a manometer shows fluctuating vacuum maintenance is required on either the suction point or in the piping prior to the meter;
- The Site owner shall notify the NYSDEC of damage, reduction in effectiveness or component replacement.
- The Site owner shall take action to make appropriate repairs or replacements in accordance with O&M Manual.

4.3 Engineering Control System Performance Monitoring

4.3.1 Monitoring/Inspection Schedule

Sub-slab Depressurization/ Soil Vapor Extraction monitoring will be performed for one year by GES. Following the initial year of operation, the periodic inspection/monitoring will be the responsibility of the site owner in accordance with the schedule in the SMP as modified or approved by NYSDEC.

Inspection frequency is subject to change with the approval of the NYSDEC and the periodic review report. Unscheduled inspections and/or sampling may take place when a suspected failure of the sub-slab depressurization/soil vapor extraction system has been reported or an emergency occurs that is deemed likely to affect the operation of the system. Monitoring deliverables for the sub-slab depressurization/soil vapor extraction system are specified later in this Plan.

4.3.2 General Equipment Monitoring

A visual inspection of the complete system will be conducted during the monitoring event. The sub-slab depressurization/soil vapor extraction system components to be monitored include, but are not limited to, the following:

- For SSD/SVE system:
    - Fans;
    - Manometers;
    - General system piping.

A complete list of components to be checked is provided in the Inspection Checklist, presented in Appendix D. If any equipment readings are not within their typical range, any equipment is observed to be malfunctioning, or the system is not performing within specifications, maintenance and repair as per the Operation and Maintenance Plan are required immediately, and the sub-slab depressurization/soil vapor extraction system restarted.

4.3.3 System Monitoring Devices and Alarms

- Two (2) liquid filled U-Tube manometers

The sub-slab depressurization/soil vapor extraction system has a warning device to indicate that the system is not operating properly. In the event that the warning device is activated, applicable maintenance and repairs will be conducted, as specified in the Operation and Maintenance Plan, and the sub-slab depressurization/soil vapor extraction system restarted. Operational problems will be noted in the subsequent Periodic Review Report.

4.4 Maintenance and Performance Monitoring Reporting Requirements

Maintenance reports and any other information generated during regular operations at the site will be kept on-file on-site. All reports, forms, and other relevant information generated will be available upon request to the NYSDEC and submitted as part of the Periodic Review Report, as specified in the Section 5 of this SMP.

4.4.1 Routine Maintenance Reports

Checklists or forms (see Appendix D) will be completed during each routine maintenance event. Checklists/forms will include, but not be limited to the following information:

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

4.4.2 Non-Routine Maintenance Reports

During each non-routine maintenance event, a form will be completed which will include, but not be limited to, the following information:

- Date;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Presence of leaks;
- Date of leak repair;
- Other repairs or adjustments made to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and,
- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

5.0 INSPECTIONS, REPORTING AND CERTIFICATIONS

5.1 Site Inspections

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in Section 3 Monitoring Plan and Section 4 Operation and Maintenance Plan of this SMP. At a minimum, a site-wide inspection will be conducted annually. Inspections of remedial components will also be conducted when a breakdown of any treatment system component has occurred or whenever a severe condition has taken place, such as an erosion or flooding event that may affect the ECs.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate forms for their respective system which are contained in Appendix D. Additionally; a general site-wide inspection form will be completed during the site-wide inspection can be found in Appendix D. These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including all system maintenance reports, generated for the site during the reporting period will be provided in electronic format in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- Operation and maintenance activities are being conducted properly; and, based on the above items,

5.2 Certification of Engineering and Institutional Controls

After one year following approval of the FER and SMP, a Professional Engineer licensed to practice in New York State will prepare the following certification:

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

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;

- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- Use of the site is compliant with the Environmental Notice;
- The engineering control systems are performing as designed and are effective;
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices; and
- The information presented in this report is accurate and complete.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Designated Site Representative] [I have been authorized and designated to sign this certification] for the site.

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

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

- The institutional control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- Use of the site is compliant with the Environmental Notice.
- The information presented in this report is accurate and complete.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Designated Site Representative] [and I have been authorized and designated to sign this certification] for the site.

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

5.3 Periodic Review Report

A Periodic Review Report will be submitted to the Department periodically; beginning twelve months after the FER and SMP are approved. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the Site and all applicable engineering controls. The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of each certification period. Media sampling results will also incorporated into the Periodic Review Report, if sampling is requested. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site;
- Results of the required annual site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the site during the reporting period in electronic format;

- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions;
- If media sampling is requested, data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- If media sampling is requested, results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific RAWP, ROD or Decision Document;
    - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
    - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
    - The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted to the NYSDEC Project Manager in electronic format. The review and approval of each periodic review report will establish the date for submittal of the next periodic review report.

5.4 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC. Failure to comply with the site management plan and provide required certifications may be subject to appropriate enforcement actions.

FIGURE 1 – SITE MAP

Former Rochester Metal Etching (Site No. 828100)

State Superfund
Site No.: 828076

ENVIRONMENTAL NOTICE

Figure 1

100 Lake Avenue
City of Rochester
Monroe County

Legend

Property subject to this Environmental Notice (site)

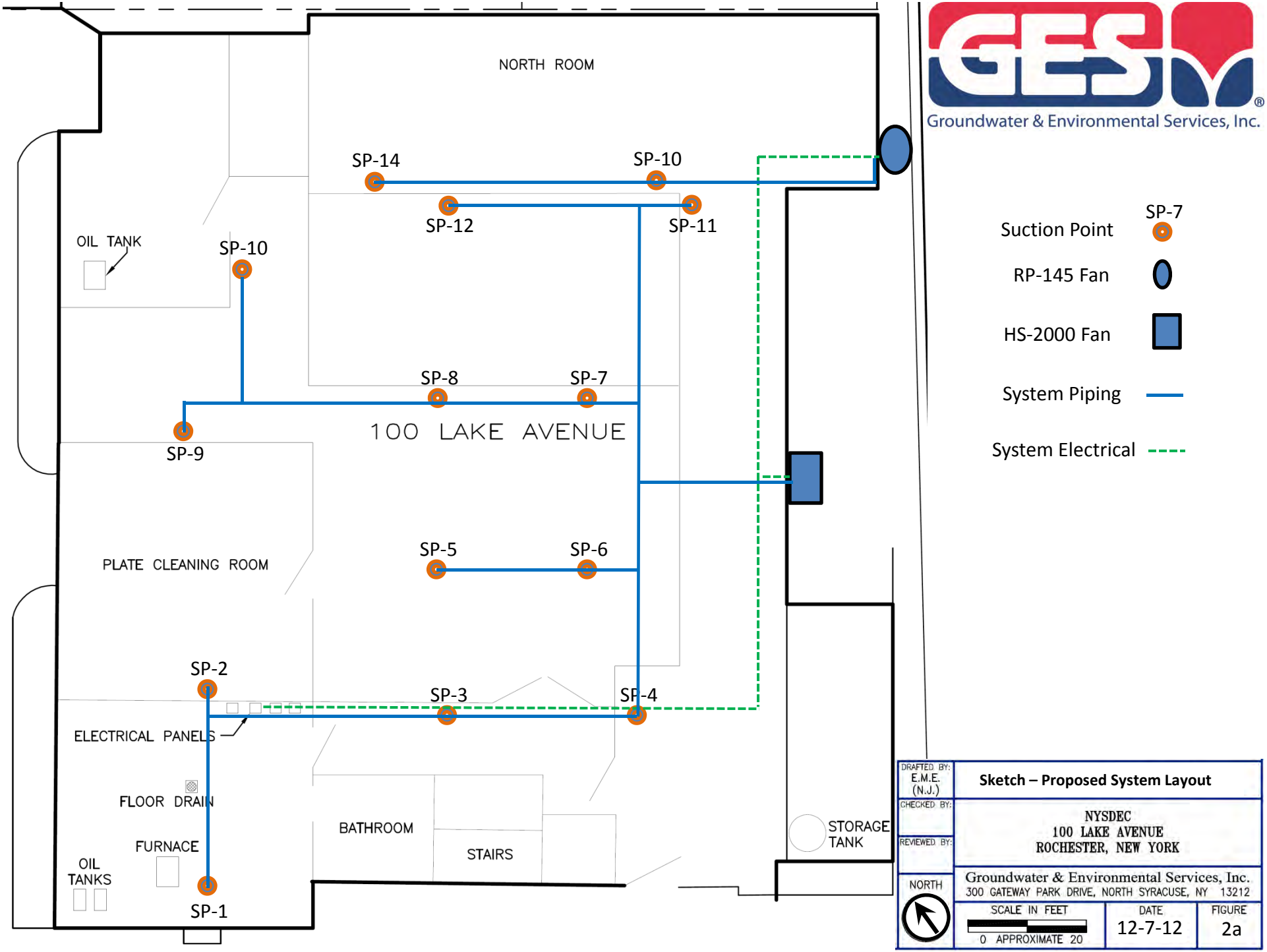
Tax Parcel and SBL Number

Notes:
2012 Orthoimagery and 2013 Tax Parcel Data for Monroe County

1 inch = 50 feet

NORTH

FIGURE 2- SSD/SVE SYSTEM LAYOUT & EXTRACTION POINT DETAILS


NORTH ROOM
SP-14
SP-10
SP-12
SP-11
OIL TANK
SP-10
SP-8
SP-7
SP-9
100 LAKE AVENUE
PLATE CLEANING ROOM
SP-5
SP-6
SP-2
SP-3
SP-4
ELECTRICAL PANELS
FLOOR DRAIN
BATHROOM
STAIRS
FURNACE
OIL TANKS
SP-1
STORAGE TANK
Groundwater & Environmental Services, Inc.
Suction Point
SP-7
RP-145 Fan
HS-2000 Fan
System Piping
System Electrical
DRAFTED BY: E.M.E. (N.J.)
CHECKED BY:
REVIEWED BY:
NORTH
Sketch – Proposed System Layout
NYSDEC
100 LAKE AVENUE
ROCHESTER, NEW YORK
Groundwater & Environmental Services, Inc.
300 GATEWAY PARK DRIVE, NORTH SYRACUSE, NY 13212
SCALE IN FEET
0 APPROXIMATE 20
DATE
12-7-12
FIGURE
2a

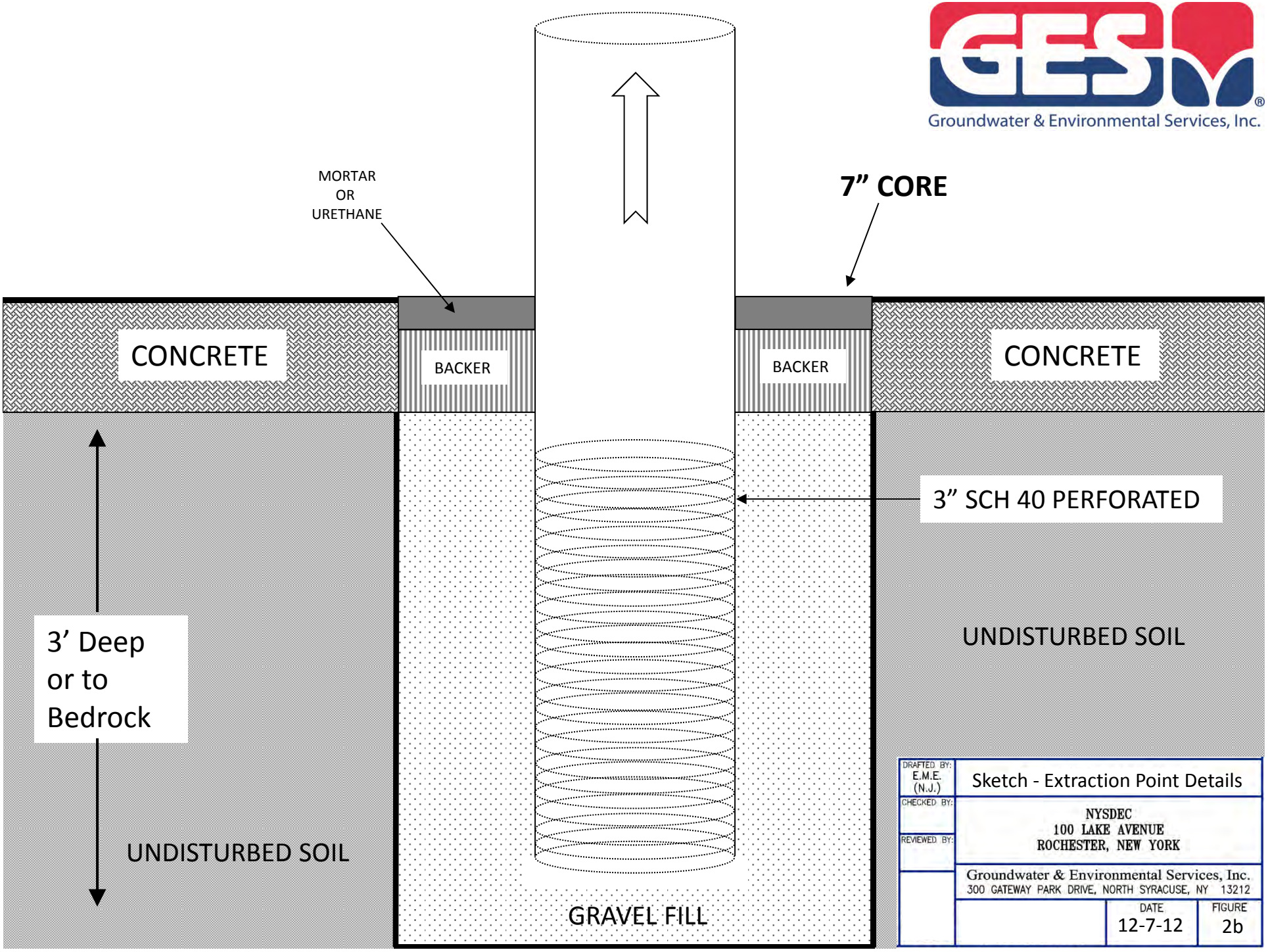

MORTAR
OR
URETHANE
7” CORE
CONCRETE
BACKER
BACKER
CONCRETE
3” SCH 40 PERFORATED
3’ Deep
or to
Bedrock
UNDISTURBED SOIL
UNDISTURBED SOIL
GRAVEL FILL
DRAFTED BY: E.M.E. (N.J.)
CHECKED BY:
REVIEWED BY:
Sketch - Extraction Point Details
NYSDEC
100 LAKE AVENUE
ROCHESTER, NEW YORK
Groundwater & Environmental Services, Inc.
300 GATEWAY PARK DRIVE, NORTH SYRACUSE, NY 13212
DATE
12-7-12
FIGURE
2b

FIGURE 3 – GROUNDWATER AND AQUEOUS SAMPLE EXCEEDANCES

T:\10653_NYSDEC\Rochester_Metals\MXD\33909\GW_DATA_SUMMARYrev8-07.mxd

FIGURE 3

MW-2			
Parameter	1999	2004	2006
Inorganics			
Sb	**13**	**9.0 J**	---
Cr	12.3	**2310**	---
Cu	**1290**	**8730**	---
Ni	**238**	**286**	---
Tl	---	**7.6 J**	---
Zn	147	**2170**	---
VOCs			
1,1,1-TCA	**970**	**170**	**64**
1,1-DCA	**15**	2.0 J	2 J
1,1-DCE	**21**	2.0 J	2 J
1,2-DCA	**87**	10 U	10 U
PCE	**21**	**12**	**17**
TCE	**1900**	**460**	**300**

MW-1	
Parameter	1999
Inorganics	
Sb	**17**

No 2004 sample due to dry well. In 2006, no inorganic analyses except cyanide. No VOC exceedances in 1999 or 2006.

SMP-4			
Parameter	1998	2004	2006
Inorganics			
Cr	**79**	34	---
Cu	**3760**	**676**	---
Ni	**743**	88	---
Tl	**16**	3.7 U	---
Zn	**2020**	422	---
VOCs			
1,1,1-TCA	**380**	**62**	**21**
1,1-DCE	**18**	3	10 U
1,2-DCE	**23**	**18**	**12**
PCE	**8**	3	1
TCE	**410**	**160**	**61**

MW-3B				
Parameter	1992	1999	2004	2006
Inorganics				
Sb	---	---	**6.7 J**	**12 J**
Cd	**14**	**17**	**9.8**	**17.7**
Cu	144	**5200**	**623**	**2300**
Pb	24	35	**92**	**239**
Ni	**367**	**8400**	**710**	**1170**
Ag	61	70	**356**	**2340**
Tl	---	---	3.7 U	**3 J**
Zn	97	1100	1210	**4140 E**
VOCs				
1,1,1-TCA	**12**	**12**	100 U	2
TCE	**19**	**9**	100 U	4
Acetone	---	---	**110**	10 U
1,2-DCE	---	ND	100 U	**19**
1,1-DCA	ND	2	100 U	**8 J**
2-Butanone	---	---	**120**	10 U

MW-2B			
Parameter	1992	1999	2006
Inorganics			
Sb	---	---	**5.7 J**
Cd	**6**	**13**	0.2 U
Ni	**584**	80	25 J
Ag	**113**	---	1.6 J
Tl	---	---	**4 J**

No 2004 sample due to dry well. No VOC exceedances in 1992, 1999, or 2006.

MW-3			
Parameter	1998/99	2004	2006
Inorganics			
As	---	**98**	**14.6**
Ba	160	**1760**	720 E
Be	0.83	**4.6 J**	2.7 J
Cr	5.5	**139**	**81**
Cu	**349**	**9260**	**5180**
Pb	24	**653**	**367**
Ni	81	**673**	**372**
Tl	**33**	**22**	2 U
VOCs			
TCE	**270**	**19**	**28**
1,2-DCA	**6**	10 U	10 U
Chloroform	ND	**12**	**8 J**

MW-1B				
Parameter	1992	1999	2004	2006
Inorganics				
Sb	---	---	**4.0 J**	2 U
As	---	---	**563**	6.5 J
Ba	---	---	**3120**	180 JE
Be	---	---	**3.3**	0.2 U
Cd	**13**	---	**12**	0.2 U
Cr	14	---	**190**	13
Cu	84	90	**1580**	196
Pb	22	---	**695**	**26**
Ni	**476**	50	**746**	25 J
Se	---	---	**150**	4 UN
Ag	**83**	---	17	0.7 U
Ti	---	---	**58**	**6.2 J**
Zn	69	20	**2100**	169 E

No VOC exceedances for 1992, 1999, 2004, or 2006.

Description		
Abbreviation	Parameter	Screening value
Inorganics		
Sb	Antimony	3
As	Arsenic	25
Ba	Barium	1000
Be	Beryllium	3
Cd	Cadmium	5
Cr	Chromium	50
Cu	Copper	200
Pb	Lead	25
Ni	Nickel	100
Se	Selenium	10
Ag	Silver	50
Tl	Thalium	0.5
Zn	Zinc	2000
Volatile Organic Compounds (VOCs)		
1,1,1-TCA	1,1,1-Trichloroethane	5
1,1-DCA	1,1-Dichloroethane	5
1,1-DCE	1,1-Dichloroethene	5
1,2-DCA	1,2-Dichloroethane	0.6
1,2-DCE	1,2-Dichloroethene	5
2-Butanone	2-Butanone	50
Acetone	Acetone	50
Chloroform	Chloroform	7
PCE	Tetrachloroethene	5
TCE	Trichloroethene	5

Notes:
Concentrations presented in ug/L. Concentrations above screening values are presented in bold. Concentrations below TOGS screening values are presented when additional sampling events included data above TOGS screening values.
ND - Not detected, detection limit not known.
--- No information for given constituent
Screening values obtained from Technical Operation Guidance Series (TOGS) 1.1.1 (NYSDEC 1998).
2004 and 2006 data were collected for the Remedial Investigation (RI). Data collected by others prior to the RI is also presented.
MW-4 was dry and not sampled in 1999, 2004, and 2006.
2006 Temporary Well SSB-1 was dry and not sampled.
2004 and 2006 data have been validated. Data validator qualifiers are presented: J = estimated, E = exceeded linear range, U = not detected.
Results of iron, magnesium, manganese and sodium analyses were considered to be generally indicative of local geology and are not presented.

SPENCER STREET
LAKE AVENUE
CLIFF STREET
WHITE STREET
OFF-SITE LOCATION 1
OFF-SITE LOCATION 2
OFF-SITE LOCATION 3
100 LAKE AVE
SSB-1
MW-1
SMP-4
MW-2
MW-2B
MW-3
MW-4
MW-3B
MW-1B

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PLOT DATE: 08/17/07 DIV. 71 LSR

LEGEND

- MONITORING WELL
- Temporary Monitoring Well
- Sump 4 Sample Location

ROCHESTER METAL ETCHING
SITE #8-28-100

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY, NEW YORK

GROUNDWATER & AQUEOUS SAMPLE EXCEEDANCES

0 20 40 80
Feet

AUGUST 2007
10653.33909

O'BRIEN & GERE ENGINEERS, INC.

FIGURE 4- SUBSURFACE SOIL SAMPLE EXCEEDANCES

T:\10653_NYSDEC\Rochester_Metals\MXD\33909\SUBSURFACE_DATA_SUMMARYrev8-07.mxd

FIGURE 4

SPENCER STREET

110 LAKE AVE

100 LAKE AVE

10 WHITE STREET

SSB-1

SSB-1
Parameter 2004
0-4
Hex Cr 2.3 J
Hg 0.20
4-8'
Hex Cr 2.3
8-12'
Acetone 0.38 D

MW-1
Parameter 1998
0-4'
Pb 116
8-9.5
None

MW-1

SB-3
Parameter 1998
4-8'
Cr 1030
Cu (324)
Pb 188
8-9.5
Cr (1670)
Cu (296)
Pb 528

NR-2
Parameter 2004
0-2'
Cr [(10300)]
Hex Cr [(1700 J)]
Cu (532)
Pb 99
Ag 0.87 J
Acetone 0.21
2-4'
Cr 81
Hex Cr 5.5 J
Cu (1140)
Acetone 0.22

MW-2
Parameter 1998
8-10'
Cr 270
Cu (1290)
Ni 48
Zn 126

SB-1
Parameter 1998
4-8'
Cr 35

SB-2
Parameter 1998
4-8'
Cu (2220)
Zn 142

P-1
Parameter 2004
0-2'
Cr 227
Hex Cr 5.3
Cu (303)
Pb 326
2-4'
Cr 516
Hex Cr 5.1
Cu 142
Pb 285

MW-2 SB-1 SB-2 SB-3

SB-10
Parameter 1998
0-3'
Cu (2600)
Ni 133
Zn 271
3-5'
Cr [(6810)]
Cu (13400)
Ni 40
Ag 2.8

SB-4
Parameter 1998
4-8'
Ag 0.95
12-12.5'
Cr 120
Cu (352)
Ni 43

SB-4

NR-2 NR-3 P-1

SB-11
Parameter 1998
0-3.5'
As 16
Cr 1060
Cu (272)
Phenol 12

SB-15
Parameter 2004
0-2'
Hex Cr < 2.3 U
Acetone 0.16
4-6'
Hex Cr < 2.3 U
Cu (358)
Ni 126
Zn 241 J
Acetone 0.67 D

NR-3
Parameter 2004
0-2'
Cr 735
Hex Cr 180
Cu (546)
Pb 238
Ni 31
Zn 384 J
Acetone 0.79

SB-11

MW-4
Parameter 1998
4-6'
Cr 45
Cu (914)
Zn 326

SB-15 SB-10 MW-4

RR-1
Parameter 2004
0-2'
Cr 204
Hex Cr 6.3
Cu 237
2-4'
Cr 331
Hex Cr 2.6
Cu 134
Pb 141
Acetone 0.17

MW-3

MW-3
Parameter 1998
8-12'
None

PCR-1
Parameter 2004
0-2'
Hex Cr < 2.3 U
4-6'
Cu (403)
Ni 52
Zn 133 J

PCR-1 SB-9 SB-12 RR-1

SB-9
Parameter 1998
0-4'
Cr 237
Cu (7230)
Ni 76
Zn 168

SB-12
Parameter 1998
0-4'
Cr 390
Cu 104
Pb 65

SB-8 RR-2

SB-8
Parameter 1998
0-3'
Cr (3700)
Cu (504)

RR-2
Parameter 2004
0-2'
Cr 202
Hex Cr 4.5
Cu 126
2-4'
As 14
Cr 147
Hex Cr 5.9
Cu 106
Pb 349
Acetone 0.06

PCR-2
Parameter 2004
2-4'
Cu 270
4-6'
Cu 252
Ni 43
Acetone 0.096

SB-14 SB-7 PCR-2

SB-16 SB-17 SB-18 SB-13

SB-5

SB-5
Parameter 1998
0-4'
Pb 78
Hg 0.56

SB-14
Parameter 2004
0-2'
Hex Cr 2.3
Acetone 1.0 D
2-4'
Hex Cr 2.4
Cu (447)

SB-6
Parameter 1998
0-4'
Hg 0.60
Ag 2.6
4-8'
None

SB-6

SB-16
Parameter 2006
0-4'
Hex Cr < 24 UJ
Cu 62 R
Pb 431 J
Hg 0.42
Zn 299

SB-17
Parameter 2006
0-4'
Hex Cr < 24 UJ
Cu 66 R
Pb [(4120 J)]
Zn 287

SB-18
Parameter 2006
0-4'
As [(19)]
Ba 387 J
Cr 257 J
Hex Cr < 26 UJ
Cu (4210 R)
Pb (2870 J)
Hg 0.52
Ni 89 J
Ag 2.8
Zn 737

SB-13
Parameter 1998
0-4'
As 15
Ba (451)
Cd 3.7
Cr 368
Cu (10300)
Pb [(4270)]
Hg 0.52
Ni 259
Ag 4.1
Zn 475

SB-7
Parameter 1998
0-4'
Cr 259
Cu 93
4-5'
Cr (1950)
Cu (447)

Abbreviation	Parameter	Part 375-6 Screening Values Unrestricted	Commercial	Industrial
Inorganics				
As	Arsenic	13	16	16
Ba	Barium	350	400	10000
Cd	Cadmium	2.5	9.3	60
Cr	Chromium	30	1500	6800
Hex Cr	Hexavalent Chromium	1	400	800
Cu	Copper	50	270	10000
Pb	Lead	63	1000	3900
Hg	Mercury	0.18	2.8	5.7
Ni	Nickel	30	310	10000
Se	Selenium	3.9	1500	6800
Ag	Silver	2	1500	6800
Zn	Zinc	109	10000	10000
Volatile Organic Compounds (VOCs)				
Phenol	Phenol	0.33	500	1000
Acetone	Acetone	0.05	500	1000

Notes:
-Concentrations presented in mg/Kg.
-Concentrations exceeding Part 375-6 screening values for unrestricted uses (2006) are presented; --- = concentrations below screening values.
-Comparison of site data to NYSDEC Part 375-6 (2006) commercial and industrial screening values was evaluated for the Feasibility Study (FS). Values exceeding commercial and industrial site use soil clean up objectives are presented within parenthesis, "( )" and/or brackets, "[ ]", respectively.
-Data of the Remedial Investigation (RI) were collected in 2004 and 2006. RI data have been validated. Validation qualifiers presented are as follows: J = estimate, R = technically rejected, D = result of a dilution analysis, U = detection limit or UJ estimated detection limit are presented for hexavalent chromium results when undetected results (<U or < UJ) exceeded the screening value. Data collected by others prior to the RI are also presented; those data were not validated.

LEGEND

- RI SAMPLE LOCATIONS (2004)

PREVIOUS INVESTIGATION (1998)

- SOIL BORING
- MONITORING WELL

ROCHESTER METAL ETCHING
SITE #8-28-100

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY, NEW YORK

SUBSURFACE SOIL SAMPLE EXCEEDANCES

0 10 20 40
Feet

AUGUST 2007
10653.33909

O'BRIEN & GERE

PLOT DATE: 8/17/07 DIV 71 LSR

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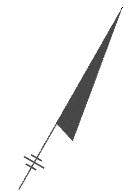
FIGURE 5- SURFACE SOIL SAMPLE EXCEEDANCES

T:\10653_NYSDEC\Rochester_Metals\MXD\33909\SURFACESOIL_DATA_SUMMARYrev8-07.mxd

FIGURE 5



LEGEND

LOCATION TYPE

- MONITORING WELL
- SOIL BORING
- SURFACE SOIL
- TRENCH
- SUMP & CATCH BASIN

ROCHESTER METAL ETCHING
SITE #8-28-100

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY, NEW YORK

SURFACE SOIL SAMPLE EXCEEDANCES

0 10 20 40
Feet

AUGUST 2007
10653.33909

O'BRIEN & GERE ENGINEERS, INC.

Trench Residual Samples (2004)					
Parameter	TR-1	TR-2	TR-3	TR-4L	TR-5
As	---	---	---	---	[(24 D)]
Ba	---	---	---	---	(1360 D)
Cd	---	---	---	---	5.1 JD
Cr	1360	(6650)	(1620)	168	(5880 D)
Hex Cr	56	170	20	7.2 J	2.5
Pb	---	---	114	---	735 D
Cu	118	243	253	217	(4760 D)
Hg	---	---	0.49	0.19	0.99
Ni	---	---	---	47	90
Se	4.1	12	10	---	13 D
Ag	---	---	---	---	4.5
Zn	---	---	125	---	505 D
Acetone	0.13	0.56 D	0.96 J	0.065 J	---
TCE	---	---	---	---	0.86 D

		Part 375 Screening Values		
Abbreviation	**Parameter**	**Unrestricted**	**Commercial**	**Industrial**
Inorganics				
As	Arsenic	13	16	16
Ba	Barium	350	400	10000
Cd	Cadmium	2.5	9.3	60
Cr	Chromium	30	1500	6800
Hex Cr	Hexavalent Chromium	1	400	800
Cu	Copper	50	270	10000
Pb	Lead	63	1000	3900
Hg	Mercury	0.18	2.8	5.7
Ni	Nickel	30	310	10000
Se	Selenium	3.9	1500	6800
Ag	Silver	2	1500	6800
Zn	Zinc	109	10000	10000
Volatile Organic Compounds (VOCs)				
TCE	Trichloroethene	0.47	200	400
Acetone	Acetone	0.05	500	1000

Notes:
-Concentrations presented in mg/Kg.
-Data boxes for surface soil are presented with yellow borders.
-Data boxes for facility structures are presented with blue borders.
-Based on the RI data, in 2005, the trench and sumps 2 and 3 (SMP-2 and SMP-3) were covered with concrete. Residuals from sump 1(SMP-1) and the catch basin (CB-1) were also removed. No data were collected after removal of residuals from these structures to characterize the current conditions.
-Concentrations exceeding Part 375 screening values (2006) are presented; --- = concentrations below screening values.
-Comparison of site data to NYSDEC Part 375-6 (2006) commercial and industrial screening values was evaluated for the Feasibility Study (FS). Values exceeding commercial and industrial site use soil clean up objectives are presented within parenthesis, "( )" and/or brackets, "[ ]", respectively.
-Data of the Remedial Investigation (RI) were collected in 2004 and 2006 (blue boxes). RI data were validated. Validation qualifiers presented are as follows: J = estimate, R = technically rejected, D = result of a dilution analysis, UJ = estimated detection limit is presented for hexavalent chromium results when undetected results (< UJ) exceeded the screening value. Data collected by others (1998, 1999) prior to the RI are also presented; those data were not validated.

OFF-SITE LOCATION 1

LAKE AVENUE

TR-1 TR-2 TR-3 TR-4L TR-5 SMP-1 SMP-2 SMP-3 CB-1 SB-16 SB-17 SB-18 SB-13 SS-1 SS-2 SS-3 SS-4 SS-5 SS-6 SS-7 SS-8 SS-9 SS-10

SMP-3	
Parameter	2004
As	[(18)]
Cr	(4840)
Hex Cr	7.2
Cu	(1640)
Pb	678
Ni	40
Se	7.7
Ag	4.9
Zn	169
TCE	0.51

SMP-2	
Parameter	2004
Cr	(2030)
Hex Cr	20
Cu	(553)
Pb	112
Ni	52
Zn	145
Acetone	0.071 D

SB-16	
Parameter	2006
0-2"	
Ba	(495 J)
Cr	42 J
Hex Cr	< 24 UJ
Cu	160
Pb	(1100 J)
Hg	0.44
Ag	2.8
Zn	665

SS-1	
Parameter	1998
No Inorganic Analysis	
No VOC exceedances	

SB-17	
Parameter	2006
0-2"	
As	15
Cr	92 J
Hex Cr	< 25 UJ
Cu	297 R
Pb	[(12200 J)]
Hg	0.31
Ag	2.3
Zn	758

SS-9	
Parameter	2006
0-2"	
As	[(26)]
Ba	(1150 J)
Cd	3.9 J
Cr	192 J
Hex Cr	< 23 UJ
Cu	(284 R)
Pb	[(12500 J)]
Hg	0.25
Zn	703

SS-3	
Parameter	1998
No Inorganic Analysis	
No VOC exceedances	

SS-10	
Parameter	2006
0-2"	
Cr	97 J
Hex Cr	< 23 UJ
Cu	209 R
Pb	399 J
Zn	1010

SS-8	
Parameter	2006
0-2"	
Ba	(424 J)
Cd	3.6 J
Cr	55 J
Hex Cr	< 21 UJ
Cu	(336 R)
Pb	(1880 J)
Hg	0.29 J
Ag	10 J
Zn	704

SS-5	
Parameter	2006
0-2"	
Cr	33 J
Hex Cr	< 24 UJ
Cu	133 R
Pb	718 J
Hg	0.21
Zn	697

SS-2	
Parameter	1998
Cd	3.2
Cr	165
Cu	(572)
Pb	(1210)
Hg	0.31
Ni	38
Ag	2.8
Zn	696
No VOC Exceedances	

SS-6	
Parameter	2006
0-2"	
Cr	76 J
Hex Cr	< 23 UJ
Cu	(647 R)
Pb	(1350 J)
Zn	391

SB-18	
Parameter	2006
0-2"	
Cr	(1890 J)
Hex Cr	23 J
Cu	(5140 R)
Pb	419 J
Hg	0.27
Ni	190 J
Ag	2.5
Zn	309

SS-7	
Parameter	2006
0-2"	
Cr	62 J
Hex Cr	< 21 UJ
Cu	262 R
Pb	290 J
Hg	0.90
Zn	445

SS-4 and SS-4A		
Parameter	1998	1999
Cr	860	(1640)
Cu	(6110)	(3680)
Pb	(1850)	576
Hg	0.27	---
Ni	46	66
Zn	247	523
No VOC Analysis		

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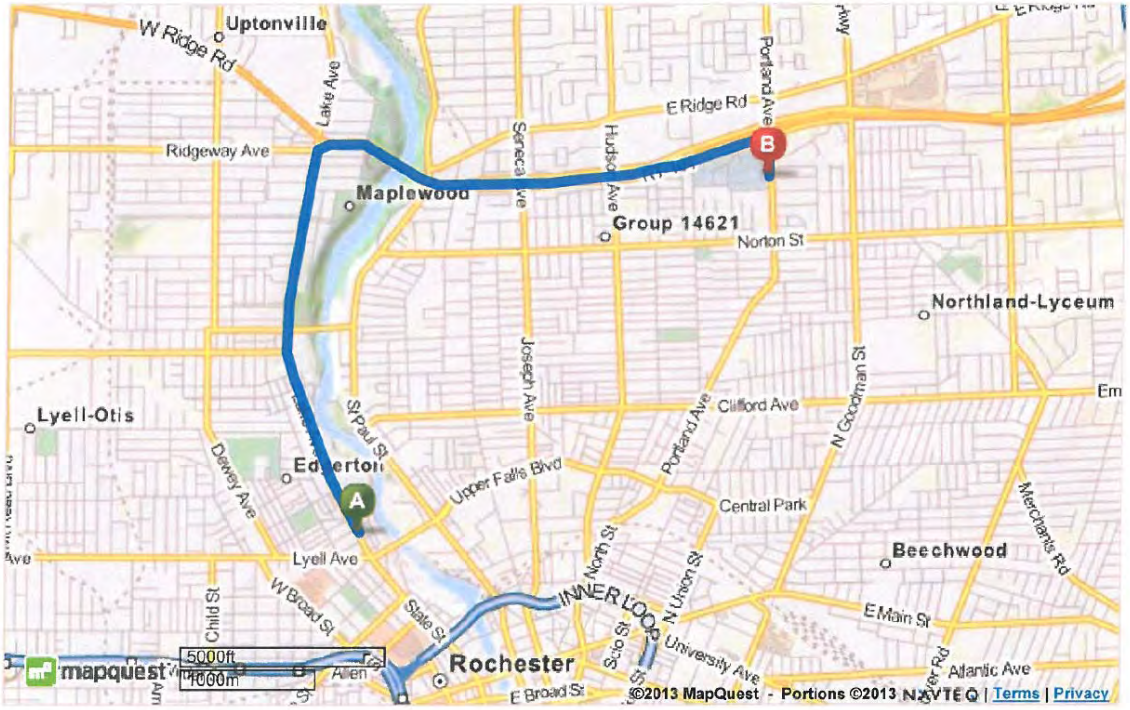
PLOT DATE: 08/17/07 DIV 71 LSR

FIGURE 6- MAP ROUTE FROM SITE TO HOS[ITAL

Figure 6 – Map Showing Route From the Site to the Hospital



APPENDICES

APPENDIX A- ENVIRONMENTAL NOTICE

MONROE COUNTY CLERK'S OFFICE

THIS IS NOT A BILL. THIS IS YOUR RECEIPT

ROCHESTER, NY

Receipt # 1558830

Index DEEDS

Book 11827 Page 390

No. Pages : 5

Return To:
AECOM
ATTN TAMARA RABY
257 WEST GENESEE STREET SUITE 400
BUFFALO,NY 14202-

Instrument NOTICE

Date : 03/01/2017

Time : 02:41:19PM

NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Control # 201703010634

Ref 1 #

Employee : RebeccaZ

COUNTY FEE NUMBER PAGES	$	20.00
RECORDING FEE	$	45.00

Total $ 65.00

State of New York

MONROE COUNTY CLERK'S OFFICE

WARNING - THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

ADAM J BELLO

MONROE COUNTY CLERK

PI182-201703010634-5

County: Monroe Site Name: the Former Rochester Metal Etching Company
Site No.: 828100

ENVIRONMENTAL NOTICE

To be issued in lieu of Environmental Easement/Deed Restriction as referenced in DER-33

THIS ENVIRONMENTAL NOTICE is made the 10th day of February 2017 by the New York State Department of Environmental Conservation (Department), having an office for the transaction of business at 625 Broadway, Albany, New York 12233.

WHEREAS, a parcel of real property identified as the Former Rochester Metal Etching Company (Site 828100), located on 100 Lake Avenue and 67 Spencer Street in the City of Rochester, County of Monroe, State of New York, which is part of lands conveyed by Joseph Kuntz to The Brotherhood MCInc. by deed dated July 16, 2003 and recorded in the Monroe County Clerk's Office on July 16, 2003 in Book 09815 of Deeds at Page 0339 and being more particularly described in Appendix "A", attached to this noticed and made a part hereof, and hereinafter referred to as "the Property" is the subject of a remedial program under the Department's State Superfund Program.

WHEREAS, the Department approved a cleanup to address contamination disposed at the Property and such cleanup was conditioned upon certain limitations.

2017 MAR -1 PM 12 41
COUNTY CLERK

RECORDED

NOW, THEREFORE, the Department provides notice that:

FIRST, the Property subject to this Environmental Notice is as shown on a map attached to this Notice as Appendix "B" and made a part hereof.

SECOND, unless prior written approval by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, where contamination remains at the Property subject to the provisions of the Site Management Plan ("SMP"), there shall be no disturbance or excavation of the Property which threatens the integrity of the engineering controls or which results or may result in a significantly increased threat of harm or damage at any site as a result of exposure to soils. A violation of this provision is a violation of 6 NYCRR 375-1.11(b)(2).

THIRD, no person shall disturb, remove, or otherwise interfere with the installation, use, operations, and maintenance of engineering controls required for the Remedy, including but not limited to those engineering controls described in the SMP and listed below, unless in each instance they first obtain a written waiver of such prohibition from the Department or Relevant Agency.

FOURTH, the remedy was designed to be protective for the following uses: **Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv).** Therefore, any use for purposes other than Commercial and Industrial without the express written waiver of such prohibition by the Relevant Agency may result in a significantly increased threat of harm or damage at any site.

FIFTH, no person shall use the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Department or Relevant Agency. Use of the groundwater without appropriate treatment may result in a significantly increased threat of harm or damage at any site.

SIXTH, it is a violation of 6 NYCRR 375-1.11(b) to use the Property in a manner inconsistent with this environmental notice.

IN WITNESS WHEREOF, the undersigned, acting by and though the Department of Environmental Conservation as Designee of the Commissioner, has executed this instrument the day written below.

By: _____
Robert W. Schick, P.E,
Acting Director, Division of
Remediation

STATE OF NEW YORK)
) ss:
COUNTY OF)

On the 10th day of February, in the year 2017, before me, the undersigned, personally appeared Robert Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his signature on the instrument, the individual, or the person upon behalf of which individual acted, executed the instrument.

_____
Notary Public – State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2018

Appendix A

Real Property Description

100 Lake Ave
(105.60-2-13)

ALL THAT TRACT OR PARCEL OF LAND situate in the City of Rochester, County of Monroe and State of New York, bounded and described as follows Being lot numbers six hundred twenty-one (621) and six hundred twenty-two (622) of the subdivision of Lot Numbers forty-six (46) and forty-seven (47) of the Jones Tract, as shown on a map filed in Monroe County Clerk's Office in Liber 3 of Maps at page 137, being the east side of Lake Avenue, each lot being forty-four (44) feet in width and running back of equal width one hundred ten (110) feet.

Together with all the right, title and interest of the party of the first part of, in and to the land lying in Lake Avenue in front of and adjacent to said premises to the center line thereof.

67 Spencer Street
(105.60-2-7.004) **ALSO ALL THAT TRACT OR PARCEL OF LAND** situated in part of Lot Q in the S D Porter Subdivision of the Jones Tract, in Lots 46 and 47 of the 20,000 acre tract, City of Rochester, County of Monroe and State of New York and being more particularly described as follows:

Beginning on the southerly right-of-way of Spencer Street (60' right of way) at the northeasterly property corner of lands now or formerly of Allen E Peters, thence (1) easterly, along said right-of-way, a distance of 10.57 feet to a point, thence, NOTE courses 2, 3 and 4 are along an existing building now or formerly of Robert Landry, (2) southerly, forming an angle to the left with course 1 of 91° 19' 03", a distance of 17.90 feet to a point, thence (3) westerly, forming an angle to the left with course 2 of 90°00' 00", a distance of 9.31 feet to a point, thence, (4) southerly, forming an angle to the left with course 3 of 269° 42' 28", a distance of 112.11 feet to a point, thence (5) westerly, forming an angle to the left with course 4 of 88° 04' 29", a distance of 5.72 feet to a point on the existing easterly property line now or formerly of Peter E and Ethelyn Phillippsen, thence, (6) northerly, forming an angle to the left with course 5 of 90° 00' 00", a distance of 130.12 feet to the point of beginning, encompassing 0.014 acres of land, more or less.

Former Rochester Metal Etching (Site No. 828100)

State Superfund
Site No.: 828076

ENVIRONMENTAL NOTICE

Appendix B

100 Lake Avenue
City of Rochester
Monroe County

Legend

Property subject to this Environmental Notice (site)

Tax Parcel and SBL Number

Notes:
2012 Orthoimagery and 2013 Tax Parcel Data for Monroe County

1 inch = 50 feet

NORTH

APPENDIX B- SAMPLING RESULTS COMPARED TO SCREENING VALUES

New York State Department of Environmental Conservation
Rochester Metal Etching Site; Site # 8-28-100
Rochester, New York

Appendix B - Sampling Results Compared to Screening Values

Param.	CAS No.	Name	Screening Value	Result Range [1] (min)	to	(max)	Detect Freq.	Freq. > Screening	Sample ID of Highest Detection
	100-41-4	Ethylbenzene	1	0.002 JD	to	0.005 J	3/33	0	SB-15 102704 (4'-6')
	100-42-5	Styrene (monomer)	---	0.011 U	to	0.057 U	0/33	---	---
	10061-01-5	cis-1,3-Dichloropropene	---	0.011 U	to	0.045 U	0/33	---	---
	10061-02-6	trans-1,3-Dichloropropene	---	0.011 U	to	0.045 U	0/33	---	---
	106-46-7	1,4-Dichlorobenzene	1.8	0.011 J	to	0.034 J	4/33	0	TR-2 102804
	106-93-4	1,2-Dibromoethane	---	0.011 J	to	0.034 J	4/33	---	TR-2 102804
	107-06-2	1,2-Dichloroethane	0.02	0.001	to	0.045 U	1/33	0	NYSDEC_SB-9_(0-4ft)
	108-10-1	4-Methyl-2-pentanone	---	0.011 U	to	0.045 U	0/33	---	---
	108-87-2	Methylcyclohexane	---	0.001 J	to	0.045 U	3/33	---	SMP-1, SMP-2 and TR-1
	108-88-3	Toluene	0.7	0.011 U	to	0.045 U	0/33	0	---
	108-90-7	Chlorobenzene	1.1	0.011 J	to	0.045 J	5/33	0	SMP-2 102804
	110-82-7	Cyclohexane	---	0.002 J	to	0.045 U	1/33	---	SMP-1 102804
	120-82-1	1,2,4-Trichlorobenzene	---	0.011 J	to	0.045 UJ	5/33	---	SMP-2 102804
	124-48-1	Chlorodibromomethane	---	0.011 U	to	0.045 U	0/33	---	---
	127-18-4	Tetrachloroethene	1.3	0.011 J	to	0.16	11/33	0	SB-15 102704 (4'-6')
	1330-20-7	Xylenes	0.26	0.002 J	to	0.13	9/33	0	SB-15 102704 (4'-6')
	156-59-2	cis-1,2-Dichloroethene	0.25	0.001 J	to	0.03	6/33	0	SB-15 102704 (4'-6')
	156-60-5	trans-1,2-Dichloroethene	0.19	0.011 U	to	0.045 U	0/33	0	---
	1634-04-4	Methyl tert-butyl ether	0.93	0.011 U	to	0.045 U	0/33	0	---
	541-73-1	1,3-Dichlorobenzene	2.4	0.011 J	to	0.034 J	4/33	0	TR-2 102804
	56-23-5	Carbon Tetrachloride	0.76	0.011 U	to	0.045 U	0/33	---	---
	591-78-6	2-Hexanone	---	0.011 J	to	0.034 J	4/33	---	TR-2 102804
Volatiles in Soil (mg/Kg) inside/under former RME facility	67-64-1	Acetone	0.05	0.008	to	1.0 J	24/33	13	SB-14 102804 (0'-2')
	67-66-3	Chloroform	0.37	0.001 J	to	0.002 J	4/33	0	TR-5 and RR-2 (2'-4')
	71-43-2	Benzene	0.06	0.002 J	to	0.034	7/33	0	NR-2 102604 (0'-2')
	71-55-6	1,1,1-Trichloroethane	0.68	0.001 J	to	0.012 JD	7/17	0	TR-2 102804
	74-83-9	Bromomethane	---	0.0007 J	to	0.005 JD	4/33	---	SMP-2 102804
	74-87-3	Chloromethane	---	0.001 J	to	0.012 JD	4/33	---	SMP-1 102804
	75-00-3	Chloroethane	---	0.011 U	to	0.045 U	0/33	---	---
	75-01-04	Vinyl chloride	0.02	0.011 U	to	0.045 U	0/33	0	---
	75-09-02	Methylene Chloride	0.05	0.001 J	to	0.027 J	3/33	0	TR-4L 10-26-04
	75-15-0	Carbon Disulfide	---	0.001 J	to	0.005 J	3/33	---	SMP-3 102804
	75-25-2	Bromoform	---	0.011 U	to	0.045 U	0/33	---	---
	75-27-4	Bromodichloromethane	---	0.011 U	to	0.045 U	0/33	---	---
	75-34-3	1,1-Dichloroethane	0.27	0.011 U	to	0.045 U	0/33	0	1
	75-35-4	1,1-Dichloroethene	0.33	0.011 U	to	0.045 U	0/33	0	1
	75-69-4	Trichloroflouromethane	---	0.011 U	to	0.045 U	0/33	---	---
	75-71-8	Dichlorodiflouromethane	---	0.011 U	to	0.045 U	0/33	---	---
	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	---	0.011 U	to	0.045 U	0/33	---	---
	78-87-5	1,2-Dichloropropane	---	0.011 U	to	0.045 U	0/33	---	---
	78-93-3	2-Butanone	---	0.007	to	0.036	7/33	---	NYSDEC_SB-8_(0-3ft)
	79-00-5	1,1,2-Trichloroethane	---	0.011 U	to	0.045 U	0/33	---	---
	79-01-06	Trichloroethene	1.3	0.001 J	to	0.86 D	28/33	0	TR-5 102804
	79-20-9	Methyl acetate	---	0.011 U	to	0.045 U	0/33	---	---
	79-34-5	1,1,2,2-Tetrachloroethane	---	0.011 U	to	0.045 U	0/33	---	---
	95-50-1	1,2-Dichlorobenzene	1.1	0.011 U	to	0.002 J	1/33	0	SB-15 102704 (4'-6')
	96-12-08	1,2-Dibromo-3-chloropropane	---	0.011 U	to	0.045 U	0/33	---	---
	98-82-8	Isopropylbenzene	3.9	0.0009 J	to	0.061	2/33	0	SB-15 102704 (4'-6')

Notes:
1. For constituents that were not detected, the range of the reported detection limits are presented.
2. Screening values from NYSDEC Part 375 are presented for unrestricted uses, except inorganics which are for commercial uses.

Appendix B - Sampling Results Compared to Screening Values

Param.	CAS No.	Name	Screening Value	Result Range [1.] (min)	to	(max)	Detect Freq.	Freq. > Screening	Sample ID of Highest Detection
Volatiles in Soil (mg/Kg) outside former RME facility	100-41-4	Ethylbenzene	1	0.011 U	to	0.014 U	0/25	0	---
	100-42-5	Styrene (monomer)	---	0.011 U	to	0.014 U	0/25	---	---
	10061-01-5	cis-1,3-Dichloropropene	---	0.011 U	to	0.014 U	0/25	---	---
	10061-02-6	trans-1,3-Dichloropropene	---	0.011 U	to	0.014 U	0/25	---	---
	106-46-7	1,4-Dichlorobenzene	1.8	0.011 U	to	0.014 U	0/25	0	---
	106-93-4	1,2-Dibromoethane	---	0.011 U	to	0.014 U	0/25	---	---
	107-06-2	1,2-Dichloroethane	0.02	0.011 U	to	0.014 U	0/25	0	---
	108-10-1	4-Methyl-2-pentanone	---	0.011 U	to	0.014 U	0/25	---	---
	108-87-2	Methylcyclohexane	---	0.011 U	to	0.014 U	0/25	---	---
	108-88-3	Toluene	0.7	0.011 U	to	0.014 U	0/25	0	---
	108-90-7	Chlorobenzene	1.1	0.011 U	to	0.014 U	0/25	0	---
	110-82-7	Cyclohexane	---	0.011 U	to	0.014 U	0/25	---	---
	120-82-1	1,2,4-Trichlorobenzene	---	0.011 U	to	0.014 U	0/25	---	---
	124-48-1	Chlorodibromomethane	---	0.011 U	to	0.014 U	0/25	---	---
	127-18-4	Tetrachloroethene	1.3	0.001 J	to	0.004 J	9/25	0	SSB-1 102804 (0'-4')
	1330-20-7	Xylenes	0.26	0.001	to	0.014 U	1/25	0	NYSDEC_SB-5_(0-4ft)
	156-59-2	cis-1,2-Dichloroethene	0.25	0.011 U	to	0.014 U	0/25	0	---
	156-60-5	trans-1,2-Dichloroethene	0.19	0.011 U	to	0.014 U	0/25	0	---
	1634-04-4	Methyl tert-butyl ether	0.93	0.011 U	to	0.014 U	0/25	0	---
	541-73-1	1,3-Dichlorobenzene	2.4	0.011 U	to	0.014 U	0/25	0	---
	56-23-5	Carbon Tetrachloride	0.76	0.011 U	to	0.014 U	0/25	0	---
	591-78-6	2-Hexanone	---	0.011 U	to	0.014 U	0/25	---	---
	67-64-1	Acetone	0.05	0.008	to	0.031	5/25	0	NYSDEC_SB-2_(8-9ft)
	67-66-3	Chloroform	0.37	0.003	to	0.14 U	1/25	0	NYSDC_SS-1
	71-43-2	Benzene	0.06	0.011 U	to	0.014 U	0/25	0	---
	71-55-6	1,1,1-Trichloroethane	0.68	0.003 J	to	0.38 D	8/25	0	SSB-1 102804 (8'-12')
	74-83-9	Bromomethane	---	0.011 U	to	0.014 U	0/25	---	---
	74-87-3	Chloromethane	---	0.011 U	to	0.014 U	0/25	---	---
	75-00-3	Chloroethane	---	0.011 U	to	0.014 U	0/25	---	---
	75-01-04	Vinyl chloride	0.02	0.011 U	to	0.014 U	0/25	0	---
	75-09-02	Methylene Chloride	0.05	0.001 J	to	0.014 U	5/25	0	NYSDEC_MW-1_(4-8ft)
	75-15-0	Carbon Disulfide	---	0.011 U	to	0.014 U	0/25	---	---
	75-25-2	Bromoform	---	0.011 U	to	0.014 U	0/25	---	---
	75-27-4	Bromodichloromethane	---	0.011 U	to	0.014 U	0/25	---	---
	75-34-3	1,1-Dichloroethane	0.27	0.011 U	to	0.014 U	0/25	0	---
	75-35-4	1,1-Dichloroethene	0.33	0.011 U	to	0.014 U	0/25	0	---
	75-69-4	Trichloroflouromethane	---	0.011 U	to	0.014 U	0/25	---	---
	75-71-8	Dichlorodiflouromethane	---	0.011 U	to	0.014 U	0/25	---	---
	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	---	0.011 U	to	0.014 U	0/25	---	---
	78-87-5	1,2-Dichloropropane	---	0.011 U	to	0.014 U	0/25	---	---
	78-93-3	2-Butanone	---	0.015	to	0.023	5/25	---	NYSDEC_SB-2_(8-9ft)
	79-00-5	1,1,2-Trichloroethane	---	0.011 U	to	0.014 U	0/25	---	---
	79-01-06	Trichloroethene	1.3	0.002 J	to	0.027	5/25	0	NYSDEC_SB-1_(8-10ft)
	79-20-9	Methyl acetate	---	0.011 U	to	0.014 U	0/25	---	---
	79-34-5	1,1,2,2-Tetrachloroethane	---	0.011 U	to	0.014 U	0/25	---	---
	95-50-1	1,2-Dichlorobenzene	1.1	0.011 U	to	0.014 U	0/25	0	---
	96-12-08	1,2-Dibromo-3-chloropropane	---	0.011 U	to	0.014 U	0/25	---	---
	98-82-8	Isopropylbenzene	3.9	0.011 U	to	0.014 U	0/25	0	---

Notes:
1. For constituents that were not detected, the range of the reported detection limits are presented.
2. Screening values from NYSDEC Part 375 are presented for unrestricted uses, except inorganics which are for commercial uses.

New York State Department of Environmental Conservation
Rochester Metal Etching Site; Site # 8-28-100
Rochester, New York

Appendix B - Sampling Results Compared to Screening Values

Param.	CAS No.	Name	Screening Value	Result Range [1] (min)	to	(max)	Detect Freq.	Freq. > Screening	Sample ID of Highest Detection
Inorganics in Water (ug/L)	7429-90-5	Aluminum	---	99.8 J	to	137000	15/34	---	SMP-1 102804
	7440-36-0	Antimony	3	4 J	to	131	14/34	8	SMP-1 102804
	7440-38-2	Arsenic	25	10.6	to	563	7/34	4	MW-1B 122004
	7440-39-3	Barium	1000	23 BEJ	to	5000	15/34	3	SMP-1 102804
	7440-41-7	Beryllium	3	0.11 J	to	4.6 J	12/34	2	MW-3 122104
	7440-43-9	Cadmium	5	1.1	to	64.3	13/34	9	SMP-1 102804
	7440-47-3	Chromium	50	5.5	to	4940	18/34	7	SMP-1 102804
	18540-29-9	Hex. Chromium	50	4.6 J	to	42	3/34	0	SMP-4 122104
	7440-48-4	Cobalt	---	9	to	419 D	14/34	---	MW-1B 122004
	7440-50-8	Copper	200	33	to	23400 D	21/34	11	SMP-1 102804
	1957-12-05	Cyanide	200	10 U	to	20	2/22	0	MW-1B 122004
	7439-92-1	Lead	25	2.6 J	to	1120000	15/22	14	MW-1B 122004
	7439-97-6	Mercury	0.7	0.24	to	2.5	7/22	3	SMP-1 102804
	7440-02-0	Nickel	100	3.7	to	8400	20/22	12	NYSDEC_MW-3B
	7782-49-2	Selenium	10	2.9	to	150 D	14/22	3	MW-1B 122004
	7440-22-4	Silver	50	1.1	to	2340	13/22	7	MW-3B-031306
	7440-28-0	Thallium	0.5	7.6	to	58	10/22	10	MW-1B 122004
	7440-62-2	Vanadium	---	1.1 J	to	223	13/22	---	SMP-1 102804
	7440-66-6	Zinc	2000	28	to	49800 D	21/22	4	SMP-1 102804
Inorganics in Water (ug/L) (excludes SMP-1)	7429-90-5	Aluminum	---	99.8 J	to	137000	13/21	---	MW-1B 122004
	7440-36-0	Antimony	3	4 J	to	17	13/21	7	NYSDEC_MW-1
	7440-38-2	Arsenic	25	10.6	to	563	6/21	3	MW-1B 122004
	7440-39-3	Barium	1000	23 BEJ	to	3120	14/21	2	MW-1B 122004
	7440-41-7	Beryllium	3	0.11 J	to	4.6 J	12/21	2	MW-3 122104
	7440-43-9	Cadmium	5	1.1	to	17.7	12/21	8	MW-3B-031306
	7440-47-3	Chromium	50	5.5	to	4940	16/21	6	MW-2 122104
	18540-29-9	Hex. Chromium	50	4.6 J	to	42	3/21	0	SMP-4 122104
	7440-48-4	Cobalt	---	9	to	419 D	14/21	---	MW-1B 122004
	7440-50-8	Copper	200	33	to	9260	20/21	10	MW-3 122104
	1957-12-05	Cyanide	200	10 U	to	20	2/21	0	MW-1B 122004
	7439-92-1	Lead	25	2.6 J	to	1120000	15/21	14	MW-1B 122004
	7439-97-6	Mercury	0.7	0.24	to	1.4	6/21	2	MW-3B-031306
	7440-02-0	Nickel	100	3.7	to	8400	19/21	11	NYSDEC_MW-3B
	7782-49-2	Selenium	10	2.9	to	150 D	13/21	2	MW-1B 122004
	7440-22-4	Silver	50	1.1	to	2340	12/21	6	MW-3B-031306
	7440-28-0	Thallium	0.5	1.1 J	to	223	12/21	0	MW-3 122104
	7440-62-2	Vanadium	---	1.1 J	to	149	12/21	---	MW-3 122104
	7440-66-6	Zinc	2000	28	to	2170	20/21	3	MW-2 122104

Notes:
1. For constituents that were not detected, the range of the reported detection limits are presented.
2. Screening values presented are from NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1..

New York State Department of Environmental Conservation
Rochester Metal Etching Site; Site # 8-28-100
Rochester, New York

Appendix B - Sampling Results Compared to Screening Values

Param.	CAS No.	Name	Screening Value	Result Range [1] (min)	to	(max)	Detect Freq.	Freq. > Screening	Sample ID of Highest Detection
Inorganics in Soil (mg/Kg) inside former RME facility	7429-90-5	Aluminum	---	345	to	19800	34/34	---	NYSDEC_SB-9_(0-4ft)
	7440-36-0	Antimony	---	0.73 J	to	143	22/34	---	NYSDEC_SB-10_(3-5FT)
	7440-38-2	Arsenic	16	1.1 J	to	24 D	34/34	2	TR-5 102804
	7440-39-3	Barium	400	11	to	1360 D	34/34	1	TR-5 102804
	7440-41-7	Beryllium	590	0.02 J	to	0.46 J	34/34	0	---
	7440-43-9	Cadmium	9.3	0.07 J	to	5.1 JD	25/34	0	TR-5 102804
	7440-47-3	Chromium	1500	9.2	to	10300	34/34	9	NR-2 102604 (0'-2')
	18540-29-9	Hex. Chromium	400	0.32	to	1700 J	22/34	1	NR-2 102604 (0'-2')
	7440-48-4	Cobalt	---	1.1 J	to	8.4	32/34	---	NYSDEC_SB-4_(0-3FT)
	7440-50-8	Copper	270	13	to	13400	34/34	17	NYSDEC_SB-10_(3-5FT)
	1957-12-05	Cyanide	27	0.61	to	4.2	7/34	0	SMP-1 102804
	7439-92-1	Lead	1000	4.2	to	2480	34/34	1	SMP-1 102804
	7439-97-6	Mercury	2.8	0.01 J	to	0.99	27/34	0	TR-5 102804
	7440-02-0	Nickel	310	3.3 J	to	133	34/34	0	NYSDEC_SB-10_(3-5FT)
	7782-49-2	Selenium	1500	0.53	to	13.4 D	12/34	0	TR-5 102804
	7440-22-4	Silver	1500	0.4	to	4.9	19/34	0	SMP-3 102804
	7440-28-0	Thallium	---	1.7 J	to	15.3	9/34	---	NYSDEC_SB-10_(3-5FT)
	7440-62-2	Vanadium	---	5.7	to	49.7	31/34	---	TR-5 102804
	7440-66-6	Zinc	10000	16.9	to	1540 D	34/34	0	SMP-1 102804
Inorganics in Soil (mg/Kg) outside former RME facility	7429-90-5	Aluminum	---	1850	to	13300	40/40	---	BS-1 102804 (0-6")
	7440-36-0	Antimony	---	0.77	to	53	23/40	---	SB-18 (0-2 in)
	7440-38-2	Arsenic	16	2.1	to	26.6	29/40	3	CB-1 102706
	7440-39-3	Barium	400	3.7	to	1150	29/40	4	SS-9 (0-2 in)
	7440-41-7	Beryllium	590	0.07	to	0.7	39/40	0	BS-1 102804 (0-6")
	7440-43-9	Cadmium	9.3	0.1 J	to	3.9	37/40	0	SS-9 (0-2 in)
	7440-47-3	Chromium	1500	3	to	1890	39/40	3	SB-18 (0-2 in)
	18540-29-9	Hex. Chromium	400	0.4	to	23	7/40	0	SB-18 (0-2 in)
	7440-48-4	Cobalt	---	2.3 J	to	13.5	39/40	---	NYSDEC_SB-6_(0-4ft)
	7440-50-8	Copper	270	9.6	to	10300	39/40	16	NYSDEC_SB-13_(0-4ft)
	1957-12-05	Cyanide	27	0.72	to	6.3	3/27	0	BS-2 102804 (0-6")
	7439-92-1	Lead	1000	4.5	to	12500	39/40	11	SS-9 (0-2 in)
	7439-97-6	Mercury	2.8	0.03	to	0.90	34/40	0	SS-7 (0-2 in)
	7440-02-0	Nickel	310	4.2	to	259	39/40	0	NYSDEC_SB-13_(0-4ft)
	7782-49-2	Selenium	1500	0.34	to	1.8	13/40	0	NYSDEC_SS4A
	7440-22-4	Silver	1500	0.32	to	10	25/40	0	SS-8 (0-2 in)
	7440-28-0	Thallium	---	0.26 J	to	10.4	30/40	---	NYSDEC_SS-4
	7440-62-2	Vanadium	---	4.3	to	27.6	39/40	---	NYSDEC_SB-3_(4-8ft)
	7440-66-6	Zinc	10000	18.9	to	1010	39/40	0	SS-10 (0-2 in)

Notes:
1. For constituents that were not detected, the range of the reported detection limits are presented.
2. Screening values from NYSDEC Part 375 are presented for unrestricted uses, except inorganics which are for commercial uses.

APPENDIX C- EXCAVATION WORK PLAN

APPENDIX C – EXCAVATION WORK PLAN

A-1 Notification

At least 30 days prior to the start of any activity that is anticipated to encounter remaining contamination, the site owner or their representative will notify the Department and submit a work plan with details of proposed work. Currently, this notification will be made to:

The NYSDEC Project Manager assigned to the site and if not identified NYSDEC Region 8.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control,
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work,
- A summary of the applicable components of this EWP,
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120,
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in NYSDEC approved format,
- Identification of disposal facilities for potential waste streams,
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

A-2 Soil Screening Methods

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

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

A-3 Stockpile Methods

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

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

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC.

A-4 Materials Excavation and Load Out

If the Site is demolished an additional investigation of potential sources is required.

- Any actions taken to remediate or remove soil from under the Site or surrounding properties must adhere to any and all NYSDEC guidance on contaminated soils.
- Mechanical removal of contaminated Site soils would be to a minimum depth of ten feet. Excavated material would be subsequently disposed of off-site in a permitted facility. The excavated site area would be restored with clean fill.

The Site has not been remediated; therefore it will be for restricted to commercial and/or industrial use. Any future intrusive work that will penetrate the soil cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the a work plan for proposed excavation shall be submitted to NYSDEC for approval prior to completing excavation activities.

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

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

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

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

A truck wash will be operated on-site. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

A-5 Material Transport Off-Site

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

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

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.

Truck transport routes are to be proposed when disposal locations are identified and before work starts.

A-6 Materials Disposal Off-Site

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

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

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

A-7 Materials Reuse On-Site

If material is intended to be re-used on-site a plan will be proposed for approval in the excavation notification prior to the start of work.

A-8 Fluids Management

All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, but will be managed off-site.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

A-9 Cover System Restoration

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the SMP and FER. The demarcation layer, consisting of orange snow fencing material or equivalent material will be replaced to provide a visual reference to the top of

the ‘Remaining Contamination Zone’, the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the ‘Remaining Contamination. A figure showing the modified surface will be created and included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

A-10 Backfill from Off-Site Sources

Backfill source will be proposed with quality information provided for approval by NYSDEC.

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the site.

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

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality standards will be approved and specified by NYSDEC. Soils that meet ‘exempt’ fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

A-11 Stormwater Pollution Prevention

Stormwater will be treated with the best management practices and will be submitted for approval by NYSDEC.

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

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

A-12 Contingency Plan

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

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

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the periodic reports prepared pursuant to Section 5 of the SMP.

A-13 Community Air Monitoring Plan

A community air monitoring plan will be developed and submitted with notification to the NYSDEC for approval. It, at minimum must include;

- Details of the perimeter air monitoring program;
- Action levels to be used;
- Methods for air monitoring;
- Analytes measured and instrumentation to be used;
- A figure of the location(s) of all air monitoring instrumentation. A figure showing specific locations must be presented for monitoring stations based on generally prevailing wind conditions, with a note that the exact locations to be monitored on a given day will be established based on the daily wind direction.

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

A-14 Odor Control Plan

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

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding

open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

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

A-15 Dust Control Plan

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

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

A-16 Other Nuisances

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

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

APPENDIX D – INSPECTION CHECKLISTS

INSPECTION REPORT FORM
Former Rochester Metal Etching Company
100 Lake Ave, Rochester, New York

Reason for Inspection _____

Date/Time of Inspection _____

Inspector Name/Company _____

INSPECTION OF:	Condition		Action Required		Comments/Location
	Adequate/ Stable	Damaged/ Deteriorating	Yes	No	
1. Facility Access Control					
1. Facility securuty					
2. Final Cover System					
A. Vegetative Cover Prohibited (present?)					
B. Pavement Cover/Side Walk					
1. Cracks/Holes					
C. Settlement					
D. Erosion					
E. Drainage Controls					
F. Presence of Excavation or Surface					
Penetration (interior & exterior)					
1. Interior					

INSPECTION REPORT FORM
Former Rochester Metal Etching Company
100 Lake Ave, Rochester, New York

Reason for Inspection _____

Date/Time of Inspection _____

Inspector Name/Company _____

INSPECTION OF:	Condition		Action Required		Comments/Location
	Adequate/ Stable	Damaged/ Deteriorating	Yes	No	
3. SVE/SSD System					
A. Fans					
1. Running?					
Fan 1 Vacuum Reading "wc					
Fan 2 Vacuum Reading "wc					
2. Secured?					
B. Piping					
1.Integrity					
2. Building Penetration					
3. GES & NYSDEC signage					
C. Presence of new air intake near					
SVE/SSDS discharge points					

Periodic Operations Visit Form

☐ Check box if new sys info

System ID: _____ Date of Visit: _____

Owner Name: _____ Date Installed: _____

System Address: _____ Telephone: _____

City: _____ Zip: _____ Alt. Telephone: _____

Performed By: _____ Site No: _____

Company: _____ Site Name: _____

EXTERIOR

Fan Operation Confirmation

	Fan #1	Fan #2	Fan #3
Fan Model No(s).			
Is Fan Operating (arrival)?	◉ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Confirmation Method	Other		
Is Fan Operating (departure)?	◉ Yes ○ No	○ Yes ○ No	○ Yes ○ No

Requested to inspect interior system components? ○ Yes ◉ No

If yes, when and by whom? _____ Date: _____

INTERIOR

Structural Review

		Notes
Change in building footprint since last inspection?	○ Yes ◉ No	
Basement occupied (>4 hrs per day)?	○ Yes ◉ No	
Heating/ventilation system modifications?	○ Yes ◉ No	
Crawlspace inspected?	○ Yes ◉ No	
Large cracks in floor or near sumps?	○ Yes ◉ No	
Wall penetrations or cracks noted?	○ Yes ◉ No	

Piping, Slab & Wall

Are system suction points sealed?	◉ Yes ○ No	
Is piping system in need of repair?	○ Yes ◉ No	

Miscellaneous

Are manometer levels equal?	○ Yes ◉ No	
Are system labels accurate and applied correctly?	◉ Yes ○ No	

Maintenance completed (check all that apply): ☐ Replace fan ☐ Seal pipe ☐ Electrical ☒ Other

Describe repairs made and any proposed actions requiring a subsequent visit (if necessary):

APPENDIX E – MITIGATION SYSTEM OPERATION & MAINTENANCE

mitigation tech *soil vapor intrusion specialists*

VAPOR INTRUSION MITIGATION SYSTEM
(also referred to as Sub-Slab Depressurization System)

Installed at
100 Lake Ave., Rochester, NY 14608
Operating and Maintenance Instructions

1. INTRODUCTION

A Vapor Intrusion Mitigation System has been installed in this building to minimize the potential migration of soil vapors into the building interior. This system creates a negative pressure (vacuum) under the basement floor slab of the building and discharges the collected sub-slab soil vapor out pipe stacks above the roof. These systems are commonly referred to as Sub-Slab Depressurization Systems (SSDS). The design of a SSDS is similar to a radon mitigation system. The remainder of this document contains important information pertaining to the successful on-going operation of this system.

2. SYSTEM INSTALLATION

The SSDS has been designed and installed by:

MITIGATION TECH
55 Shumway Road
Brockport, New York 14420

Contact: Nicholas Mouganis, NEHA ID# 100722
Telephone No. 1-800-637-9228

3. SYSTEM DESCRIPTION

This SSDS consists of piping, a vacuum fan, indicator gauge, sealant and other components designed to create and maintain a vacuum beneath the concrete basement floor slab. Two independent sytems have been installed; one for the general basement area, and one for the north extension. Piping runs from the selected points up from the basement floor slab to an overhead pipe network and extends to the outside of the building at the east exterior. (Sealant was applied around the outside of the piping where it penetrates through the side wall where the piping exits.) The vacuum fans are located within the piping on the exterior. The fans are wired to the main breaker panel. A vacuum gauge (i.e., U-tube oil filled manometer) is located on the piping within the basement. The gauge oil in the gauge is at uneven levels as long as vacuum is present in the fan inlet piping.

4. SYSTEM OPERATION

The system is designed to operate continuously (i.e., 24 hrs per day/7 days per week). An "on/off" switch is located next to each fan. It is strongly recommended that the switches are always left in the "on" position so that the fans are in continuous operation, except for emergency conditions. The fans restart automatically in the event of power loss. The fans derive power from a labeled circuit breaker in the main breaker panel. The system does not require adjustments or changes by the building owner.

The SSDS has been designed specifically for this building as it currently exists. If any structural changes, additions or alterations are made after the SSDS has been installed, such changes or alterations may affect the operation of the system. Please report any changes made to the structure, HVAC systems, slab conditions, etc., so that possible effects of these changes can be evaluated with regard to the operation on the SSDS. Please report any changes to: MITIGATION TECH at 1-800-637-9228

5. SYSTEM MAINTENANCE AND INSPECTIONS

Regular inspections are useful to help confirm that the systems are continuing to operate satisfactorily. It is recommended that occupants of the building regularly inspect the fan gauges (U-tube oil filled manometer) to verify that the vacuum reading, indicated by a mark on the gauge, has not changed significantly from the position of the mark. The gauges are inspected by observing the level of colored fluid In addition, the piping should be inspected to verify that it has not been damaged, broken, disconnected, or altered in any way. Check the sealant around the piping through the floor slab to confirm that it is intact. If there are any changes to the piping or the system, call MITIGATION TECH at 1-800-637-9228.

In addition to regular inspections conducted by the building occupants and/or owner, an annual inspection will also be conducted. If you have noticed any problems which had not yet been reported, or have any questions or concerns regarding the SSDS, please be sure to mention them to the service representative.

6. QUESTIONS, PROBLEMS OR ISSUES

In the event of that either fan or system is not operational, or is broken, disconnected or damaged in any way, or if there is unusual fan noise, failure to start, or repeated circuit breaker trip, turn fan off and call for service. For service, call MITIGATION TECH at 1-800-637-9228.

RadonAway™

The World's Leading
Radon Fan Manufaturer



RP Series
Installation Instructions

RadonAway
3 Saber Way | Ward Hill, MA 01835
www.radonaway.com

P/N IN020-REV K 4/11

Series Fan Installation Instructions

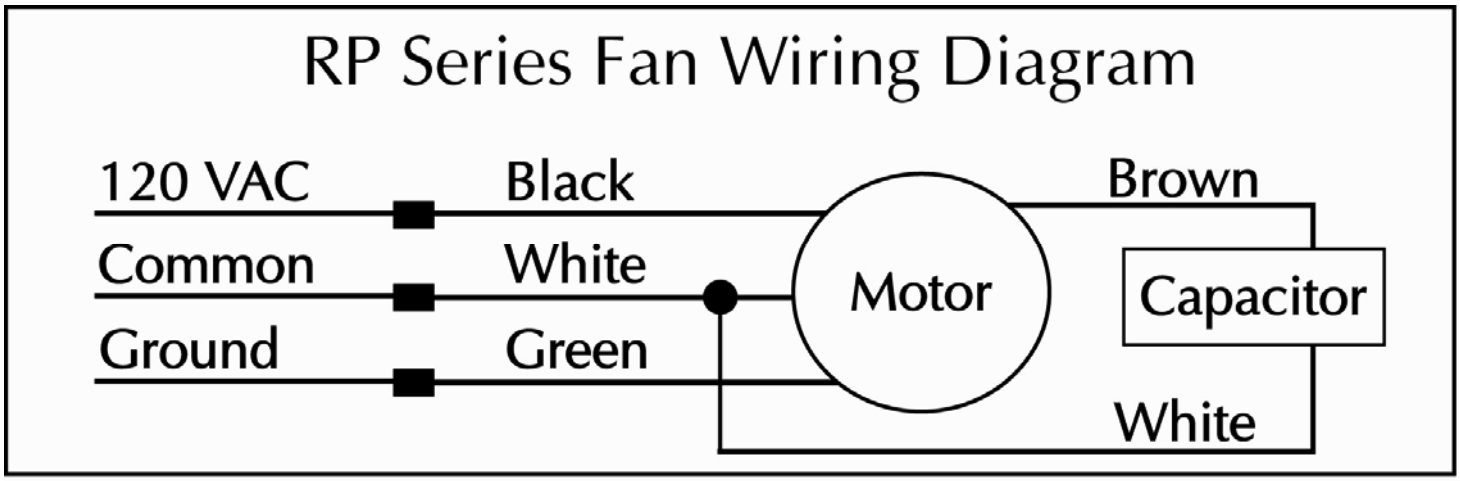
Please Read and Save These Instructions.

DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED.
MAKE SURE ELECTRICAL SERVICE TO FAN IS LOCKED IN "OFF" POSITION.
DISCONNECT POWER BEFORE SERVICING FAN.

1. **WARNING!** Do not use fan in hazardous environments where fan electrical system could provide ignition to combustible or flammable materials.
2. **WARNING!** Do not use fan to pump explosive or corrosive gases.
3. **WARNING!** Check voltage at the fan to insure it corresponds with nameplate.
4. **WARNING!** Normal operation of this device may affect the combustion airflow needed for safe operation of fuel burning equipment. Check for possible backdraft conditions on all combustion devices after installation.
5. **NOTICE!** There are no user serviceable parts located inside the fan unit.
   Do NOT attempt to open. Return unit to the factory for service.
6. All wiring must be performed in accordance with the National Fire Protection Association's (NFPA)"National Electrical Code, Standard #70"-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician
7. **WARNING!** Do not leave fan unit installed on system piping without electrical power for more than 48 hours. Fan failure could result from this non-operational storage.
8. **WARNING!** TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

   a) Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.

   b) Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.



1.0 SYSTEM DESIGN CONSIDERATIONS

1.1 INTRODUCTION

The RP Series Radon Fans are intended for use by trained, professional Radon mitigators. The purpose of this instruction is to provide additional guidance for the most effective use of an RP Series Fan. This instruction should be considered as a supplement to EPA standard practices, state and local building codes and state regulations. In the event of a conflict, those codes, practices and regulations take precedence over this instruction.

1.2 ENVIRONMENTALS

The RP Series Fans are designed to perform year-round in all but the harshest climates without additional concern for temperature or weather. For installations in an area of severe cold weather, please contact RadonAway for assistance. When not in operation, the fan should be stored in an area where the temperature is never less than 32 degrees F. or more than 100 degrees F.

1.3 ACOUSTICS

The RP Series Fan, when installed properly, operates with little or no noticeable noise to the building occupants. The velocity of the outgoing air should be considered in the overall system design. In some cases the "rushing" sound of the outlet air may be disturbing. In these instances, the use of a RadonAway Exhaust Muffler is recommended.

(To ensure quiet operation of ENERGY STAR qualified in-line and remote fans, each fan shall be installed using sound attenuation techniques appropriate for the installation. For bathroom and general ventilation applications, at least 8 feet of insulated flexible duct shall be installed between the exhaust or supply grille(s) and the fan).

1.4 GROUND WATER

In the event that a temporary high water table results in water at or above slab level, water may be drawn into the riser pipes thus blocking air flow to the RP Series Fan. The lack of cooling air may result in the fan cycling on and off as the internal temperature rises above the thermal cutoff and falls upon shutoff. Should this condition arise, it is recommended that the fan be turned off until the water recedes allowing for return to normal operation.

1.5 SLAB COVERAGE

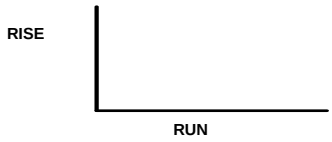
The RP Series Fan can provide coverage up to 2000+ sq. ft. per slab penetration. This will primarily depend on the sub-slab material in any particular installation. In general, the tighter the material, the smaller the area covered per penetration. Appropriate selection of the RP Series Fan best suited for the sub-slab material can improve the slab coverage. The RP140/145/155 are best suited for general purpose use. The RP260 can be used where additional airflow is required and the RP265/380 is best suited for large slab, high airflow applications. Additional suction points can be added as required. It is recommended that a small pit (5 to 10 gallons in size) be created below the slab at each suction hole.

1.6 CONDENSATION & DRAINAGE

Condensation is formed in the piping of a mitigation system when the air in the piping is chilled below its dew point. This can occur at points where the system piping goes through unheated space such as an attic, garage or outside. The system design must provide a means for water to drain back to a slab hole to remove the condensation. The RP Series Fan **MUST** be mounted vertically plumb and level, with the outlet pointing up for proper drainage through the fan. Avoid mounting the fan in any orientation that will allow water to accumulate inside the fan housing. The RP Series Fans are **NOT** suitable for underground burial.

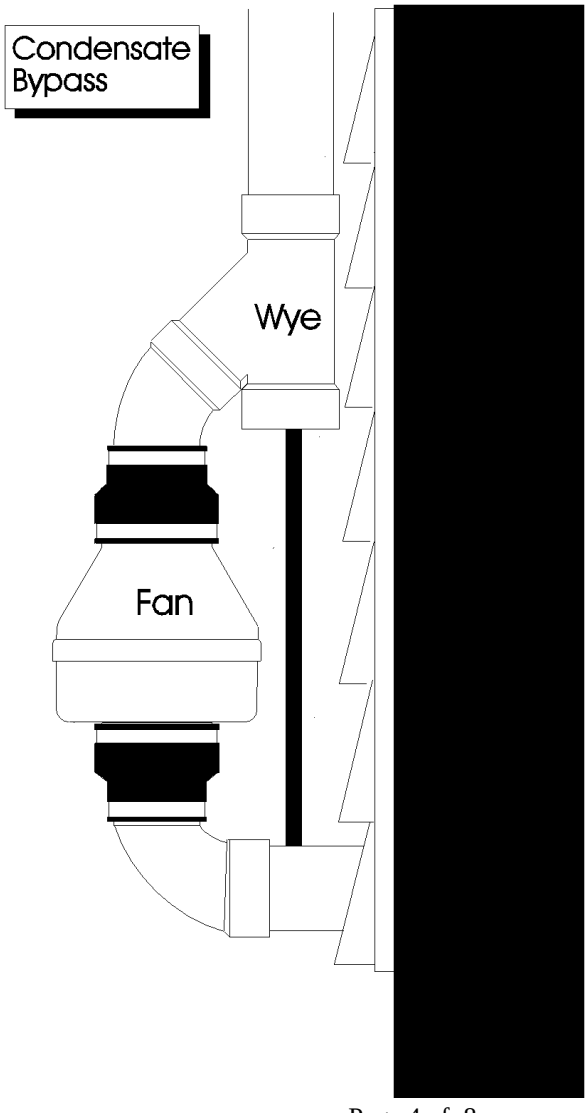
For RP Series Fan piping, the following table provides the minimum recommended pipe diameter and pitch under several system conditions.

Pipe Dia.	Minimum Rise per Ft of Run*				
	@25 CFM	@50 CFM	@100 CFM	@200 CFM	@300 CFM
6"	-	3/16	1/4	3/8	3/4
4"	1/8	1/4	3/8	2 3/8	-
3"	1/4	3/8	1 1/2	-	-



*Typical RP1xx/2xx Series Fan operational flow rate is 25 - 90 CFM 0n 3" and 4" pipe. (For more precision, determine flow rate by measuring Static Pressure, in WC, and correlate pressure to flow in the performance chart in the addendum.)

Under some circumstances in an outdoor installation a condensate bypass should be installed in the outlet ducting as shown. This may be particularly true in cold climate installations which require long lengths of outlet ducting or where the outlet ducting is likely to produce large amounts of condensation because of high soil moisture or outlet duct material. Schedule 20 piping and other thin-walled plastic ducting and Aluminum downspout will normally produce much more condensation than Schedule 40 piping.



The bypass is constructed with a 45 degree Wye fitting at the bottom of the outlet stack. The bottom of the Wye is capped and fitted with a tube that connects to the inlet piping or other drain. The condensation produced in the outlet stack is collected in the Wye fitting and drained through the bypass tube. The bypass tubing may be insulated to prevent freezing.

1.7 "SYSTEM ON" INDICATOR

A properly designed system should incorporate a "System On" Indicator for affirmation of system operation. A manometer, such as a U-Tube, or a vacuum alarm is recommended for this purpose.

1.8 ELECTRICAL WIRING

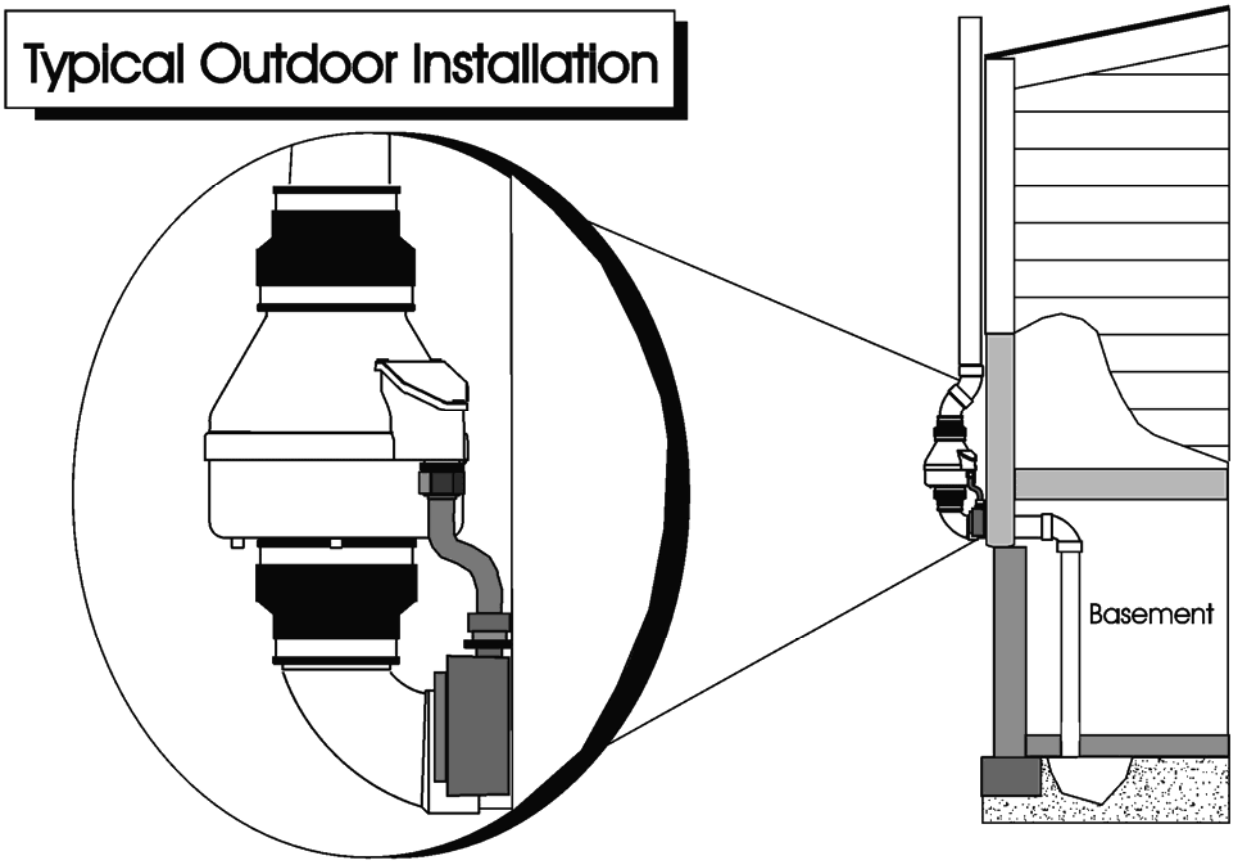
The RP Series Fans operate on standard 120V 60 Hz. AC. All wiring must be performed in accordance with the National Fire Protection Association's (NFPA)"National Electrical Code, Standard #70"-current edition for all commercial and industrial work, and state and local building codes. All wiring must be performed by a qualified and licensed electrician. Outdoor installations require the use of a U.L. listed watertight conduit. Ensure that all exterior electrical boxes are outdoor rated and properly sealed to prevent water penetration into the box. A means, such as a weep hole, is recommended to drain the box.

1.9 SPEED CONTROLS

The RP Series Fans are rated for use with electronic speed controls, however, they are generally not recommended. If used, the recommended speed control is Pass & Seymour Solid State Speed Control Cat. No. 94601-I.

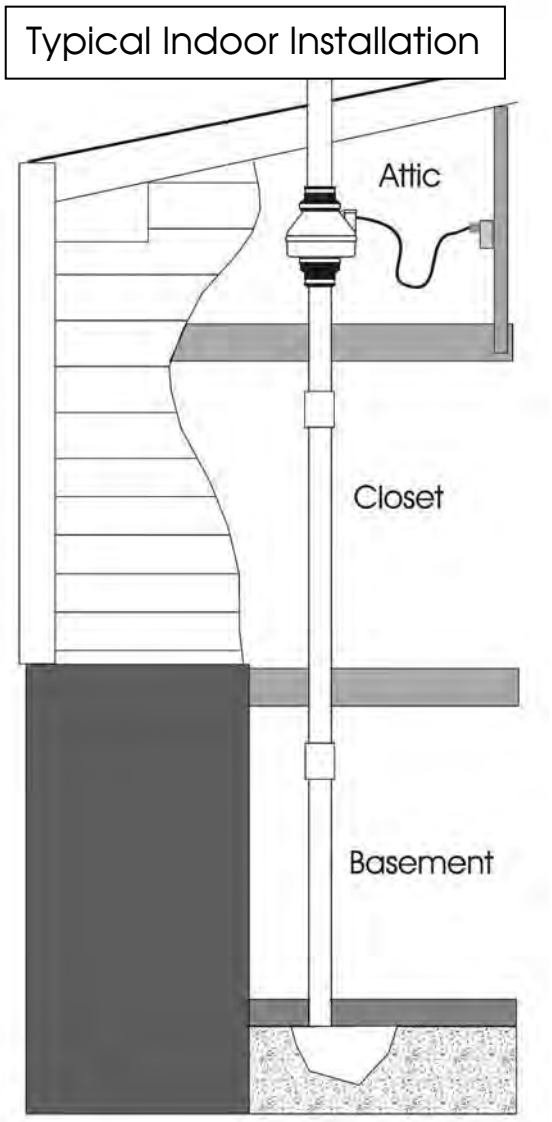
2.0 INSTALLATION

The RP Series Fan can be mounted indoors or outdoors. (It is suggested that EPA recommendations be followed in choosing the fan location.) The RP Series Fan may be mounted directly on the system piping or fastened to a supporting structure by means of optional mounting bracket.



2.1 MOUNTING

Mount the RP Series Fan vertically with outlet up. Insure the unit is plumb and level. When mounting directly on the system piping assure that the fan does not contact any building surface to avoid vibration noise.



2.2 MOUNTING BRACKET (optional)

The RP Series Fan may be optionally secured with the RadonAway P/N 25007-2 (25033 for RP385) mounting bracket. Foam or rubber grommets may also be used between the bracket and mounting surface for vibration isolation.

2.3 SYSTEM PIPING

Complete piping run, using flexible couplings as means of disconnect for servicing the unit and vibration isolation.

2.4 ELECTRICAL CONNECTION

Connect wiring with wire nuts provided, observing proper connections (See Section 1.8):

Fan Wire	Connection
Green	Ground
Black	AC Hot
White	AC Common

2.5 VENT MUFFLER (optional)

Install the muffler assembly in the selected location in the outlet ducting. Solvent weld all connections. The muffler is normally installed at the end of the vent pipe.

2.6 OPERATION CHECKS

_____ **Verify** all connections are tight and **leak-free**.

_____ **Insure** the RP Series Fan and all ducting is secure and vibration-free.

_____ **Verify** system vacuum pressure with manometer. **Insure** vacuum pressure is **less than** maximum recommended operating pressure

(Based on sea-level operation, at higher altitudes reduce by about 4% per 1000 Feet.)
(Further reduce Maximum Operating Pressure by 10% for High Temperature environments)
See Product Specifications. If this is exceeded, increase the number of suction points.

_____ **Verify Radon levels by testing to EPA protocol.**

RP SERIES PRODUCT SPECIFICATIONS

The following chart shows fan performance for the RP Series Fan:

Typical CFM Vs Static Pressure "WC									
	0"	.25"	.5"	.75"	1.0"	1.25"	1.5"	1.75"	2.0"
RP140	135	103	70	14	-	-	-	-	-
RP145	166	146	126	104	82	61	41	21	3
RP260	272	220	176	138	103	57	13	-	-
RP265	334	291	247	210	176	142	116	87	52
RP380*	497	401	353	281	220	176	130	80	38

* Tested with 6" inlet and discharge pipe.

Power Consumption 120 VAC, 60Hz 1.5 Amp Maximum		Maximum Recommended Operating Pressure* (Sea Level Operation)**	
RP140	17 - 21 watts	RP140	0.8" W.C.
RP145	41 - 72 watts	RP145	1.7" W.C.
RP260	52 - 72 watts	RP260	1.5" W.C.
RP265	91 - 129 watts	RP265	2.2" W.C.
RP380	95 - 152 watts	RP380	2.0" W.C.

**Reduce by 10% for High Temperature Operation*
***Reduce by 4% per 1000 feet of altitude*

	Size	Weight	Inlet/Outlet
RP140	8.5H" x 9.7" Dia.	5.5 lbs.	4.5" OD (4.0" PVC Sched 40 size compatible)
RP145	8.5H" x 9.7" Dia.	5.5 lbs.	4.5" OD (4.0" PVC Sched 40 size compatible)
RP260	8.6H" x 11.75" Dia.	5.5 lbs.	6.0" OD
RP265	8.6H" x 11.75" Dia.	6.5 lbs.	6.0" OD
RP380	10.53H" x 13.41" Dia.	11.5 lbs.	8.0" OD

Recommended ducting: 3" or 4" RP1xx/2xx, 6" RP380, Schedule 20/40 PVC Pipe

Mounting: Mount on the duct pipe or with optional mounting bracket.

Storage temperature range: 32 - 100 degrees F.

Normal operating temperature range: -20 - 120 degrees F.

Maximum inlet air temperature: 80 degrees F.

Continuous Duty

Class B Insulation

Thermally Protected

3000 RPM

Rated for Indoor or Outdoor Use

LISTED Electric Fan ETL® 77728 Tested to UL Std. 507

ENERGY STAR **RP140 and RP260 Only.**

TESTED/CERTIFIED HVI HOME VENTILATING INSTITUTE® DIVISION OF AMCA

IMPORTANT INSTRUCTIONS TO INSTALLER

Inspect the GP/XP/XR/RP Series Fan for shipping damage within 15 days of receipt. Notify **RadonAway of any damages immediately**. Radonaway is not responsible for damages incurred during shipping. However, for your benefit, Radonaway does insure shipments.

There are no user serviceable parts inside the fan. **Do not attempt to open.** Return unit to factory for service.

Install the GP/XP/XR/RP Series Fan in accordance with all EPA standard practices, and state and local building codes and state regulations.

WARRANTY

Subject to any applicable consumer protection legislation, RadonAway warrants that the GPX01/XP/XR/RP Series Fan (the "Fan") will be free from defects in materials and workmanship for a period of 90 days from the date of purchase (the "Warranty Term").

RadonAway will replace any Fan which fails due to defects in materials or workmanship. The Fan must be returned (at Owner's cost) to the RadonAway factory. Any Fan returned to the factory will be discarded unless the Owner provides specific instructions along with the Fan when it is returned regardless of whether or not the Fan is actually replaced under this warranty. Proof of purchase must be supplied upon request for service under this Warranty.

This Warranty is contingent on installation of the Fan in accordance with the instructions provided. This Warranty does not apply where any repairs or alterations have been made or attempted by others, or if the unit has been abused or misused. Warranty does not cover damage in shipment unless the damage is due to the negligence of RadonAway.

5 YEAR EXTENDED WARRANTY WITH PROFESSIONAL INSTALLATION.

RadonAway will extend the Warranty Term of the fan to 5 years from date of manufacture if the Fan is installed in a professionally designed and professionally installed radon system or installed as a replacement fan in a professionally designed and professionally installed radon system. Proof of purchase and/or proof of professional installation may be required for service under this warranty. Outside the Continental United States and Canada the extended Warranty Term is limited to one (1) year from the date of manufacture.

RadonAway is not responsible for installation, removal or delivery costs associated with this Warranty.

EXCEPT AS STATED ABOVE, THE GPx01/XP/XR/RP SERIES FANS ARE PROVIDED WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL RADONAWAY BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF, OR RELATING TO, THE FAN OR THE PERFORMANCE THEREOF. RADONAWAY'S AGGREGATE LIABILITY HEREUNDER SHALL NOT IN ANY EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE OF SAID PRODUCT. THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT, TO THE EXTENT THE SAME DOES NOT MEET WITH RADONAWAY'S WARRANTY AS PROVIDED ABOVE.

For service under this Warranty, contact RadonAway for a Return Material Authorization (RMA) number and shipping information. No returns can be accepted without an RMA. If factory return is required, the customer assumes all shipping cost to and from factory.

RadonAway
3 Saber Way
Ward Hill, MA 01835
TEL. (978) 521-3703
FAX (978) 521-3964

Record the following information for your records:

Serial No._____
Purchase Date_____