## NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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November 24, 2017

Mr. David D. Day, P.E. President Day Environmental 1563 Lyell Avenue Rochester, New York 14606

### RE: Draft Interim Site Management Plan (9/2017) Former Valeo Site# 828099 Rochester(C), Monroe(C)

The New York State Department of Environmental Conservation (the Department) has reviewed referenced report. Upon receipt of a final signed and certified document, the Interim Site Management Plan shall be considered approved. It is understood that this document will apply only to the portion of the site identified in Figure B of the Interim Site Management Plan.

Please submit two hard copies of the final document and an electronic version. Thank you for your continued cooperation.

Sincerely

**Todd M. Caffoe, P.E.** Division of Environmental Remediation

New York State Department of Environmental Conservation 6274 East Avon-Lima Road, Avon, NY 14414 P: (585) 226-5350 |Todd.Caffoe@dec.ny.gov



ec: B. Schilling

- D. Loew
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Department of Environmental Conservation

# VALEO/FORMER GM – DELCO CHASSIS FACILITY MONROE COUNTY ROCHESTER, NEW YORK INTERIM SITE MANAGEMENT PLAN

NYSDEC Site Number: 828099 USEPA ID # B8-0543-98-08

#### Prepared for:

Maguire Family Properties 770 Rock Beach Road Rochester, New York 14617

Prepared by: Day Environmental, Inc. 1563 Lyell Avenue Rochester, New York (585) 454-0210

REGION 8

LEB 0 8 2018

RECEIVED

**Revisions to Interim Site Management Plan:** 

**Revision No.** 

**Date Submitted** 

Summary of Revision

**NYSDEC Approval Date** 

# CERTIFICATION STATEMENT

I, Heather M. McLennan, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Interim Site Management Plan was prepared in substantial accordance with applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Heather Man QEP

January 30, 2018 DATE



## 1555 LYELL AVENUE MONROE COUNTY ROCHESTER, NEW YORK

# INTERIM SITE MANAGEMENT PLAN

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#### LIST OF ACRONYMS

BCP = Brownfield Cleanup Program BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes CERCLA = Comprehensive Environmental Response, Compensation and Liability Act CAMP = Community Air Monitoring Plan C/D = Construction and Demolition CFR = Code of Federal Regulation CP = Commissioner Policy cVOCs = Chlorinated Volatile Organic Compounds DER = Division of Environmental Remediation EC = Engineering Control EWP = Excavation Work Plan HASP = Health and Safety Plan IC = Institutional Control LNAPL = Light Non-Aqueous Phase Liquid NYSDEC = New York State Department of Environmental Conservation NYSDOH = New York State Department of Health NYCRR = New York Codes, Rules and Regulations O&M = Operation and MaintenanceOM&M = Operation, Maintenance and Monitoring OSHA = Occupational Safety and Health Administration PAH = Polyclyclic Aromatic Hydrocarbon PID = Photoionization Detector PRAP = Proposed Remedial Action Plan PRP = Potentially Responsible Party PRR = Periodic Review Report QA/QC = Quality Assurance/Quality Control QAPP = Quality Assurance Project Plan RAO = Remedial Action Objective RCRA = Resource Conservation and Recovery Act **RI** = Remedial Investigation ROD = Record of Decision**RP** = Remedial Party RSO = Remedial System Optimization SAC = State Assistance Contract SCG = Standards, Criteria and Guidelines SCO = Soil Cleanup Objective SMP = Site Management Plan SOP = Standard Operating Procedures SPDES = State Pollutant Discharge Elimination System SSD = Sub-slab Depressurization SSDS = Sub-slab Depressurization System SVE = Soil Vapor Extraction SVI = Soil Vapor Intrusion TAL = Target Analyte List TCL = Target Compound List TCLP = Toxicity Characteristic Leachate Procedure USEPA = United States Environmental Protection Agency UST = Underground Storage Tank

VCA = Voluntary Cleanup Agreement VCP = Voluntary Cleanup Program VOC = Volatile Organic Compound

## **EXECUTIVE SUMMARY**

Provided below is a brief summary of the controls implemented for the Site, as well as the inspections, monitoring, maintenance and reporting activities required by this Interim Site Management Plan. (Note: the remedial actions associated with the Record of Decision dated March 2012 have not yet been completed at the Site. A Final SMP will be prepared subsequent to completion of the remedial actions which could include different inspections, monitoring, maintenance, and reporting activities requirements.)

Site Identification:	#828099,	Valeo/Former	GM –	Delco	Chassis	Facility,	1555	Lyell
	Avenue, R	Rochester, New						

Institutional Controls	1	The property may be used for commercial or industrial uses:
Institutional Controls	1.	The property may be used for commercial of industrial uses,
	2.	The remedial party or Site owner is required to complete and submit
		to the Department a periodic certification of institutional and
		engineering controls in accordance with 6 NYCRR Part 375-1.8
		(h)(3);
	3.	The use of groundwater underlying the property is prohibited as a
		source of potable or process water, without necessary water quality
		treatment as determined by the NYSDOH or Monroe County
		Department of Health; and
	4.	Compliance with the NYSDEC approved Interim SMP and Final
		SMP (when completed).
Engineering Controls	1.	A Site cover consisting of structures such as buildings, pavement,
		sidewalks, or a one foot soil cover meeting commercial SCOs placed
		above a demarcation layer, where the upper six inches of soil is of
		sufficient quality to maintain a vegetation layer; and
	2.	The sub-slab depressurization system at the Site shall continue to
		operate preventing the movement of soil vapors into that portion of
		the huilding
	-	uie building.
Monitoring	Fre	equency
1. SSDS	Mo	onthly

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

# **1.0 INTRODUCTION**

# 1.1 General

This Interim Site Management Plan (ISMP) is a required element of the remedial program for the property designated as the Valeo/Former GM – Delco Chassis Facility, 1555 Lyell Avenue, Rochester, New York (hereinafter referred to as the "Site"). Refer to Figure A for the Project Locus Map. The Site is currently a New York State (NYS) Inactive Hazardous Waste Disposal Site Remedial Program Site (No. 828099) which is administered by the New York State Department of Environmental Conservation (NYSDEC).

Maguire Family Properties, Inc. (MFP), the current owner of the Site, entered into an Order on Consent on October 3, 2016 with the NYSDEC to, among other things, prepared this ISMP for the Site. On June 23, 2017, the NYSDEC agreed that a portion of the Site could be excluded from the ISMP and the Final SMP. In general, the portion of the Site excluded from the ISMP and Final SMP is located to the north of the building on the Site, and is shown in detail on Figure B.

Work on the remaining portions of the Site is required to be conducted in compliance with this ISMP, until such time that a Final SMP for the Site has been approved by the NYSDEC. It is anticipated that the Final SMP will be prepared after the remedy for the Site has been substantially completed.

This ISMP is intended to manage contamination at the Site until the majority of the remedial activities have been completed, and a Final SMP has been prepared and subsequently approved by the NYSDEC. This ISMP, with any modifications, will form the basis for developing the Final SMP.

Additional Site data, requirements, and protocols may be added to this document in the future to address other Site media and/or remedial activities, as applicable. This ISMP may only be revised with the approval of the NYSDEC.

Reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency that manages environmental issues in New York State, or at the Rochester Public Library – Lyell Branch (956 Lyell Avenue, Rochester, NY 14613). A list of contacts for persons currently involved with this Site is provided in Appendix A of this ISMP.

This ISMP was prepared by Day Environmental, Inc. (DAY), on behalf of MFP, in accordance with the requirements of the NYSDEC's DER-10 ("Technical Guidance for Site Investigation and Remediation"), dated May 3, 2010, and the guidelines provided by the NYSDEC.

# 1.2 Revisions

Any revisions to this ISMP will be proposed in writing to the NYSDEC's Project Manager. Revisions will be necessary upon, but not limited to, the following occurring: a change in media monitoring requirements; upgrades to or shut-down of a remedial system; post-remedial removal of contaminated media; or, other significant changes to the Site conditions.

# **1.3 Notifications**

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

• 60-day advance notice of any proposed changes in Site use that are required under the terms of the Order on Consent, 6NYCRR Part 375, and/or Environmental Conservation Law.

- 7-day advance notice of any field activity associated with a remedial program.
- 15-day advance notice of any proposed ground-intrusive activity pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundation, structures or Engineering Controls (ECs) that reduce or have the potential to reduce the effectiveness of an EC, and likewise, any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire; flood; or earthquake that reduces or has the potential to reduce the effectiveness of ECs in place at the Site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action submitted to the NYSDEC within 45 days, describing and documenting actions taken to restore the effectiveness of the Engineering Controls (ECs)

Any change in the ownership of the Site or the responsibility for implementing this ISMP will include the following notifications

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser/Remedial Party has been provided with a copy of the Order on Consent and approved work plans and reports, including this ISMP.
- Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing to the NYSDEC.

Table 1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of Site-related contact information is provided in Appendix A.

Todd Caffoe, P.E.	585-226-5350
NVSDEC Project Manager	Todd Coffoo@doo py goy
N I SDEC Project Manager	<u>10uu.Carroe@dec.ny.gov</u>
Division of Environmental Remediation	6274 East Avon-Lima Road
	Avon, New York 14414
Bernette Schilling, P.E.	585-226-5315
NYSDEC Regional HW Engineer	bernette.schilling@dec.ny.gov
Division of Environmental Remediation	6274 East Avon-Lima Road
	Avon, NY 14414

# Table 1: Notifications\*

\* Note: Notifications are subject to change and will be updated as necessary.

# 2.0 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

## 2.1 Site Location and Description

The Site is located in Rochester, Monroe County, New York and is identified as Section 104, Subsection 76 Block 1 and Lot 3.006 on the Monroe County Tax Map. The Site is approximately 115acres area in size and is bounded by Lyell Avenue to the north, Interstate 490 to the south, a railroad line to the east, and NYS Barge canal to the west (refer to Figure B). The owner of the Site parcel at the time of issuance of this ISMP is:

Maguire Family Properties, Inc.

# 2.2 Physical Setting

## 2.2.1 Land Use

The Site contains: an approximate 1.5 million square foot building located on the southern portion of the Site. The remaining portions of the Site are largely paved areas. The Site is zoned for manufacturing and is currently used for commercial and light industrial uses. The Site is currently occupied by over fifty commercial and light industrial tenants.

The properties adjoining the Site and in the neighborhood surrounding the Site include commercial, residential, and industrial properties. The properties immediately south of the Site include an approximate 115 foot-wide strip of vacant land which abuts Interstate 490 and the east wall of the New York State Barge Canal; the properties immediately north of the Site include Lyell Avenue with commercial properties beyond; the properties immediately east of the Site include the Rochester & Southern Railroad line, with the Abandoned Chemical Sales (ACS) Site (#828105) located on the opposite side of the railroad line along the eastern boundary of the Site, and residential properties; and the properties to the west of the Site include the New York State Barge Canal and commercial properties.

# 2.2.2 Geology

# Overburden

The overburden at the Site consists of dense glacial till. Fill material is present to a maximum depth of eleven feet consisting of silty sand and gravel. The fill material was observed across the portion of the Site that is subject to this ISMP. Construction debris (assumed to be from the facility) is present in parts of the southwest portion of the Site, and a layer of ash and cinders is present in the fill throughout the portion of the Site that is subject to this ISMP. Fill material is discussed further below:

#### Debris Fill

Construction and demolition (C&D) debris from the facility and other inert waste material from the facility were land-filled in two areas on the southwest part of the Site prior to and during the 1970s (i.e., within Areas of Review [AORs] #6 and #7, which are described later in this ISMP).

#### Ash and Cinders Fill

A layer of ash and cinders is present in the fill throughout the portion of the Site that is subject to this ISMP. The ash and cinders occur either within the fill material in the overburden as distinct layers and pockets composed entirely of ash and cinders, ranging from a few inches to a maximum of four

feet thick; or, as a minor component of fill consisting of silt, sand, and gravel soil materials, sometimes containing concrete, brick, wood, glass, metal, or other debris. Ash and cinders is not present as surface material and was observed to a maximum depth of 10.6 ft. below ground surface (bgs).

## Bedrock

Bedrock at the Site is located at a depth ranging from two to about 21 ft. The uppermost bedrock unit at the Site is the Penfield Dolostone of the Lockport Group which is underlain by Clinton Group Decew Dolostone. Bedrock subcrops in the southern portion of the Site (Penfield Dolostone). In the northern part of the Site, the underlying Gates Dolostone member of the Clinton Group Rochester Formation is the uppermost bedrock unit. The Gates Dolostone is underlain by 80 to 100 ft. of Rochester Shale.

Top of bedrock elevations across the Site range from approximately 533 ft. at the southeast portion of the Site to approximately 516 ft. in the northeast corner of the Site and locations along the western Site boundary. Figure 4 (Top-of-Bedrock Elevation Contour Plan) from the 2005 RI report is included as part of this ISMP. Geologic cross-sections (Figure 5, Figures 6A and 6B) from the 2005 RI report are also provided as part of this ISMP.

# 2.2.3 Hydrogeology

The water table at the Site occurs approximately at the interface between the base of the overburden and the top of bedrock. The base of the overburden and the underlying fractured shallow bedrock appear to be connected as a single hydrogeologic unit. Groundwater at the Site typically ranges from five ft. along the eastern Site boundary to 10 to 20 ft. on the western part of the Site.

Groundwater flow at the Site in the overburden and shallow- to intermediate-depth bedrock is generally westward towards the Barge Canal. In general, the groundwater elevation data indicates a downward vertical flow gradient from the shallow groundwater (i.e., overburden and top-of-bedrock) to the intermediate groundwater (i.e., 10 to 30 ft. below the top-of-bedrock). The downward gradient ranged from one to six feet during the RI at most locations.

In the southeast part of the Site, underground utility features and the roadcut for Interstate 490 appear to act to varying degrees as groundwater discharge features that have an influence on flow directions in the shallow or intermediate horizons. The sewer lines and underground electric and water mains in the southeast part of the Site are positioned below the level of the top-of-bedrock. Where borings have been installed close to sewer lines, relatively narrow trenches to accommodate the sewer lines in the top-of-bedrock have been evident. In the southeast part of the Site, the water table is generally a few feet to several feet above the invert elevations of the sewers. At wells installed adjacent to the sewers, water table elevations are slightly to significantly lower than in nearby wells not located along the utility lines, indicating that groundwater may be discharging into the sewers or the bedding material that surrounds the sewer pipes. Groundwater elevation data indicates that the most pronounced groundwater flow feature related to Site sewers occurs at the head of the Jay Street municipal sewer line. The vertical gradient is reversed at monitoring wells MW-518 (shallow well) and MW-519 (intermediate well), which were installed adjacent to Site sewer manhole MH-7, where the water table is depressed by several feet relative to other surrounding shallow-well locations. The water level in MW-519 was one to four ft. above the water level measured in MW-518 during the RI. This indicates that discharge of shallow groundwater to the manhole, sewer pipe, or sewer-line bedding is most likely occurring at this location.

Groundwater elevation contours also indicate that groundwater in the shallow and intermediate horizon flows towards the I-490 roadcut and the Barge Canal. The I-490 roadcut is 10 to 12 ft. deep along the eastern half of the southern boundary of the Site.

The canal is drained for the winter, and the water level in the bottom of the canal is generally 10 to 15 feet lower in winter than during the summer season. Site groundwater elevation data shows that the seasonal draining and filling affects the groundwater levels at some of the shallow to intermediate bedrock wells located along the western Site boundary. The remaining wells on the Site are not affected by the draining or filling of the canal.

Measured hydraulic conductivity in the overburden and shallow- to intermediate-bedrock units at the Site ranged from approximately 1 x  $10^{-2}$  cm/sec to 1 x  $10^{-5}$  cm/sec. Deeper bedrock generally exhibited low permeability with isolated intervals of higher permeability. Hydraulic conductivity in deeper bedrock wells screened in the relatively impermeable Rochester Shale member of the Rochester Formation was generally found to be less than 1 x  $10^{-6}$  cm/sec.

Groundwater contour maps (Figure 7 through Figure 16) from the 2005 RI report are provided as part of this ISMP.

Groundwater at the Site and in the surrounding area is not used for drinking or domestic water supply or for industrial purposes. Future potable, domestic, and industrial uses of groundwater at the Site and in the surrounding area are not expected, and groundwater wells for such uses are prohibited by the City of Rochester. Also, on-Site use of groundwater is prohibited by a restriction recorded on the deed to the property.

# 2.3 Investigation and Remedial History

The following narrative provides a brief history timeline and summary of the available project documents/reports that describe key investigative and remedial milestones for the Site. Full titles for each of the reports referenced below are provided in Section 8.0 - References. The NYSDEC has copies of these documents/reports in its files

In 1987, General Motors (GM) began the first environmental investigations at the Site when soil contamination was encountered during replacement of USTs located on the east side of the facility. GM performed remedial actions at the Site that have included the following removals and off-Site disposal of contaminated soil:

- GM removed the contaminated soil present around the USTs in 1987. (The UST area was designated AOR #1 in subsequent investigations).
- Contaminated soil present in the area of a dichromating-system sump located in a former plating area inside the manufacturing building was excavated, removed, and disposed of off-Site by GM in 1993, after the former plating equipment in the area was decommissioned and removed.
- In 1993, GM began a comprehensive investigation of the Site in co-operation with ITT Automotive (i.e., Baseline Study).

- In 1993, GM and ITT identified nine areas of the Site that required additional investigation or remediation, and named the nine areas "Areas of Review" #1 through #9 (AORs). Note: AOR #9 covered Site-wide groundwater quality.
- Excavation, removal, and off-Site disposal of contaminated soil was completed in 1994 in the areas listed below:
  - The former soil pile staging area and the adjacent former fire training area located in the area designated as AOR #7, near the southwest portion of the Site;
  - The former Magnet Dust Area located outside the south side of the manufacturing building; and
  - A former waste-oil UST area located at the facility Waste Water Treatment Plant (WWTP).
- Additional contaminated soil was excavated from the UST area (AOR #1) by ITT in 1994. Off-Site disposal of that contaminated soil was performed by GM.

## Baseline Study Report

Report Title: Baseline Study Report, Former Delco Chassis Facility, Rochester, New York, Volume I and Volume II Prepared for: General Motors Corporation Prepared by: Haley & Aldrich of New York Date: August 1996

The Baseline Study was undertaken in connection with the transfer of an ownership interest in the facility at the Site from GM to ITT Corporation (ITT). The Baseline Study activities included, but was not limited to, soil sampling; installation of groundwater monitoring wells; groundwater and LNAPL level monitoring of monitoring wells; and, groundwater sampling of monitoring wells. The Baseline Study Report includes test boring logs, groundwater level monitoring reports, test pit logs, monitoring well construction logs, EM-61 profiles, 1995 groundwater sampling field notes, and hydraulic conductivity testing results.

The Baseline Study Report identified various environmental concerns, including floating oil in AORs #2 and #3, the presence of PCBs in the subsurface in AOR #3, and, chlorinated VOCs in groundwater.

#### Supplement to the Baseline Study Report

Report Title: Supplement to the Baseline Study Report, Valeo / Former GM – Delco Chassis Facility, Rochester, New York, Registry Site #9-28-099 Prepared for: General Motors Corporation Prepared by: Haley & Aldrich of New York Date: December 2000

This report presents the results of Further Environmental Investigations (FEIs) that were performed at the Site. The Further Environmental Investigations were undertaken by GM in 1997 to supplement the Baseline Study of the Site completed in August 1996. This report had been prepared to accompany a Draft Remedial Investigation / Feasibility Study (RI/FS) Work Plan for the Site. The information in this report (and other information previously obtained) provided the technical basis for the Draft RI/FS Work Plan.

The FEIs included the activities identified below:

- Three groundwater and LNAPL sampling events (conducted in December 1996, April 1998, and June 1999)
- Periodic groundwater and LNAPL level monitoring in AORs #1 through #4
- Installation and operation of an automated LNAPL recovery system in AOR #3 (started in January 1997)
- Pilot testing of vacuum recovery methods for LNAPL recovery (started in December 1998)
- Testing of passive LNAPL recovery methods at the wells in which LNAPL has been detected (started in October 1998)

# Remedial Investigation

Report Title: Report on Remedial Investigation, Valeo / Former GM Delco Chassis Division Facility, Rochester, New York Prepared For: General Motors Corporation Prepared By: Haley & Aldrich of New York Date: April 15, 2005

The RI was performed during the period of June 2002 through February 2005. The following activities were completed at the Site:

- Installation and sampling of 29 new soil and bedrock test borings and groundwater monitoring wells;
- Sampling of groundwater discharging to the Barge Canal from a spring located downgradient at the Site;
- Laboratory analysis of samples collected at the new sampling locations (i.e., soil and bedrock test borings and groundwater monitoring wells) and 60 monitoring wells installed previous to the RI;
- Monitoring of groundwater elevations in on-Site monitoring wells and monitoring wells located on an adjacent upgradient Site;

Principal findings of the RI included:

- Three occurrences of oil contamination that were present as LNAPL at the top of the water column in wells that are screened across the water table (AOR #1, AOR #2/3, and in MW-511, located in the southern portion of the building). These occurred in areas located adjacent to and beneath the eastern part of the manufacturing building at the Site.
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) contamination in soil and shallow groundwater in AOR #1.
- Contamination of shallow groundwater by ketone volatile organic compounds (VOCs) and phenol compounds in AOR #4 in the area immediately surrounding the Former Railcar Scrap Dock. [Note: accessible contaminated soil was removed by excavation from the Railcar Scrap Dock in late 2001, after the scrap handling operations were discontinued in this location. Some soil remained in place due to the presence of underground utilities.]
- There is a small lens of contaminated soil in AOR #7 that is located upgradient of BTEX and cyclohexane contamination detected in bedrock groundwater. This soil lens may be the source of the bedrock groundwater contamination, or alternatively it may be due to naturally occurring BTEX in deep groundwater discharging upwards.
- Groundwater contamination is present in the southeast portion of the Site in the shallow and intermediate-bedrock. The apparent source is the Abandoned Chemical Sales (ACS) inactive

hazardous waste disposal Site that is located adjacent to the eastern boundary of the Site. Groundwater contamination by chlorinated VOCs, aromatic VOCs, and volatile ketone compounds are present in groundwater at the ACS Site at concentrations equal to or higher than those detected on-Site.

• No significant soil contamination was identified. Minor soil contamination consisting of metal contaminants was identified at the top of bedrock at the former process-wastewater sump in the Melonite heat-treating area.

Note: Select Figures obtained from the 2005 RI report are included as part of this ISMP.

# Phase I Environmental Site Assessment

Report Title: Phase I Environmental Site Assessment, Valeo, 1555 Lyell Avenue, Rochester, New York, 14606 Prepared By: URS Corporation Prepared For: Valeo Date: November 18, 2005

URS Corporation (URS) conducted a Phase I Environmental Site Assessment (Phase I ESA) of the Site and made the following observations:

• AOR #1 – Underground Storage Tank (UST) Farm Area

The UST farm was located outside the east wall of Building A. This area contained USTs for the storage of solvents, lubricating oils, hydraulic oil, gasoline, and waste since 1952. Valeo had removed the remaining USTs (4), and will file the UST Site assessment closure report for the USTs only, in the fourth quarter of 2005. Valeo will be petitioning the NYSDEC to grant closure of the four USTs even with the existing soil contamination in AOR #1 related to former activities in this location by GM.

• AOR #2 - Crane Bay Scrap Dock

This area is located in the high bay area along the east wall of Buildings A South and B. This is the area where the overhead crane is used to offload and stage bundles of steel used in manufacturing. Previous investigations have defined petroleum hydrocarbons and polyaromatic hydrocarbons (PAH) contamination of soil, and an LNAPL layer on the water table. Contaminated soil in the northern part of the area was removed prior to the area being decommissioned to the existing floor grade.

• AOR #3 – Oil Reclaim Area

This area includes the area of the Oil Reclaim Department located in the southeast corner of Building A – South. AOR #3 is adjacent to the west side of AOR #2. Previous investigations in the area found an LNAPL layer of oil on the water table and limited oily contamination of the soil (petroleum hydrocarbon and PAH).

• AOR #4 – Rail Car Scrap Deck

This area includes the area at the southeast corner of Building B and the adjacent area around the building exterior. An automated conveyor was used to load scrap metal chips into rail cars staged in the area. Various compounds, including VOCs, SVOCs, and LNAPL have been detected in the soil and groundwater in this area. Soil remediation in this area has included the excavation and disposal of exposed surface soils in 2001. The area was backfilled with clean soil.

The 2005 GM RI found that groundwater contaminant concentrations in AOR #4 have decreased by an order of magnitude from pre-RI levels. This decrease may be related to the cessation of scrap handling and the subsequent soil removal prior to the start of the RI.

• AOR #5 – Former Hazardous Waste Storage Area

This area is located outside the southwest corner of Building B and is related to an area where drums of waste material were stored prior to 1981. The area north of AOR #5 was referred to as the Magnet Dust area. Barium from magnet manufacturing had been detected in this area. Barium contaminated soils were removed in 1995-1996. Compounds detected in the area include trace VOCs, one detection of lead, and PAHs.

• AOR #6 – Former Land Disposal Area South of Building L

This area is south of Building L, where solid construction debris from the facility was buried from 1950 to approximately 1979. Debris encountered in the area includes metal, concrete, wood, bricks, clay pipe, and plastic as well as railroad ties and blocks.

Compounds detected in the soil include lead and copper. PCBs were detected in three samples. PAHs associated with ash and cinders were also detected. VOCs were generally not detected above trace levels except for one sample where ethylbenzene and xylene were detected. PAHs and PCBs were not detected in groundwater. Low levels of xylene and ethylbenzene were detected in one groundwater monitoring well.

• AOR #7 – Southwest Corner of Site

This area includes four contiguous areas in the southwest corner of the Site. It includes the Former Fire Training area, the former soil pile staging area, the debris disposal area, and the adjacent AOR #7 extension.

The former fire training activities used waste solvents and wood pallets for fire training exercises. The soil pile staging area is the area where xylene-contaminated soil excavated in 1987 from the UST farm in AOR #1 was temporarily staged on the unpaved ground surface. Soil contamination present in both of these areas was remediated when 1,400 tons of soils were removed for off-Site disposal.

The debris disposal area occupies the corner of the Site south and west of the former soil pile staging area. In this area, yard waste and construction debris from the facility was placed.

The AOR #7 extension is located east of the debris disposal area and south of AOR #6. Burial of construction debris or possibly other wastes was performed in this area.

• AOR #8 – Waste Storage Pad at the WWTP

This area is located east of the facility wastewater treatment plant (WWTP). The storage pad is a concrete structure where drummed wastes were temporarily stored prior to off-Site disposal. Soil borings in the area identified low levels of VOCs including primarily acetone and methyl ethyl ketone (MEK). RCRA closure activities have been completed at AOR #8 and approved by the NYSDEC.

• AOR #9 – Site wide Groundwater

This area covers groundwater quality at the Site which is not specifically addressed by investigations in AORs #1 through #8. It also covers three additional areas that the NYSDEC identified. The three areas were the sump by the former Melonite Heat Treating area, the Wash House Sump, and Building B Drum washers.

# Closure Report for USTs

Report Title: Closure Report for: Underground Storage Tanks Prepared For: Valeo Wiper Systems Prepared By: LaBella Associates, P.C. Date: February 2006

LaBella Associates, P.C. (LaBella) was retained by Valeo to conduct environmental consulting services for the removal of four USTs at the Site. TREC Environmental, Inc. (TREC) reportedly conducted the removal of the USTs in general accordance with NYSDEC draft DER-10 "Technical Guidance for Site Investigation and Remediation". The four USTs were a 8,000 gallon UST containing waste oil, a 3,000 gallon UST containing gasoline, a 3,000-gallon UST containing H-250 hydraulic oil, and a 3,000-gallon UST containing chlorinated paraffin-base lubricating oil. The four USTs and associated piping/pump island removed from the tank farm area were observed to be in good condition (i.e., structurally sound with no holes or cracks) and showed no signs of leaks. These four USTs were located in AOR #1, and soil with possible field impacts was assumed to be from historic impacts associated with GM USTs and not from the removed USTs.

Work Summary Report for: Trade Waste Line Cleaning

Report Title: Work Summary Report for: Trade Waste Line Cleaning Prepared For: Valeo Management Services Prepared By: LaBella Associates, P.C. Date: August 2006

LaBella was retained by Valeo to conduct the cleaning and abandonment of trade waste lines. The cleaning was conducted by Mr. Rooter and overseen by LaBella. The trade waste lines were primarily constructed as a sub-grade gravity drain system with two collection points and pump stations, GW-1 and GW-2 located immediately north and south of the facility building. From the pump stations, the trade waste was pumped through above grade piping to the WWTP. Manway and floor crocks were cleaned using a vac-truck. Hub outlets and cleanouts were flushed and trade waste lines were cleaned using hydro-jet technology, and miscellaneous structures including wash pits, sump pits, floor drains, and sumps were cleaned using a vac-truck.

## Work Summary Report for: Wastewater Treatment Plant Decommissioning Assistance

Report Title: Work Summary Report for: Wastewater Treatment Plant Decommissioning Assistance Prepared For: Valeo Management Services Prepared By: LaBella Associates, P.C. Date: December 2006

LaBella was retained by Valeo to assist with the decommissioning of the WWTP. The system was inspected, systematically cleaned, and dismantled. Bulk cleaning (i.e., removal of solids from the system, including the overflow weirs, and rinsing of surfaces), a second cleaning of tanks once the WWTP was shut down, and dismantlement of each tank (exterior tanks were dismantled to the concrete footers and interior tanks were dismantled down to their support structures). Subsurface trenches and vaults were cleaned and filled to grade.

A wastewater engineer from Malcolm Pirnie, Inc. completed an inspection of the WWTP current operational conditions prior to dismantling; the subsurface conditions in the general vicinity of the WWTP structures were characterized through soil borings and shallow groundwater sampling; the decommissioning/cleaning activities were documented; and, conditions below each vessel during demolition were monitored. Soil samples were tested for metals; and groundwater samples were tested for metals and VOCs. Petroleum and chemical related VOCs were not detected at concentrations above the reported laboratory detection limits, and metals detected in groundwater samples were below the applicable TOGS 1.1.1 groundwater standard or guidance value. Select soil samples had exceedances of Unrestricted Soil Cleanup Objectives (USCOs) for chromium, barium, and zinc; however, the concentrations were below the applicable Commercial Restricted Use Soil Cleanup Objectives (CSCOs) and the concentrations of chromium and barium were within range of NYS background values [Note: at the time of the Work Summary Report preparation applicable standards for soil were identified in NYSDEC TAGM 4046].

LaBella concluded that the samples where zinc was detected were relatively few in number, and not localized in one area, suggesting limited areas of minor housekeeping issues rather than a wider contamination problem. Given the industrial nature and use of the Site, no further action was recommended.

#### Report on Feasibility Study

Report Title: Report on Feasibility Study Prepared For: General Motors Corporation Prepared By: Haley & Aldrich of New York Date: May 15, 2007

The Feasibility Study (FS) was performed to enable the NYSDEC to select a remedy for the contamination identified during the RI. The recommended remedial alternative was a combination of the following:

• Institutional actions are recommended to address soil, groundwater, and soil-vapor conditions at the Site. The institutional control will include existing use restrictions that are in effect as a result of restrictions already recorded on the deed to the property. The recorded deed restrictions include a prohibition on use of Site groundwater for any purpose and a prohibition of use of the Site for any purposes other than industrial or commercial use. In addition to the deed restrictions, the recommended institutional actions include implementation of a Site Management Plan, groundwater monitoring, and sub-slab depressurization to mitigate potential soil-vapor intrusion.

• LNAPL source-area depletion actions were recommended to address areas of the Site affected by LNAPL.

# Former Electroplating Lines Evaluation

Report Title: Former Electroplating Lines Evaluation Prepared For: Valeo Wiper Systems Prepared By: LaBella Associates, P.C. Date: December 2007

LaBella was retained by Valeo to complete a preliminary investigation in proximity to the former electroplating lines to evaluate for potential subsurface impacts related to former Valeo operations. A structural evaluation of a former "ponding" area was conducted, three soil borings were advanced, and two groundwater monitoring wells were installed. No cracking of the concrete floor or substantial (i.e., full depth) pitting was observed during the structural evaluation. Groundwater samples were tested for pH, total glycols, bis(2-ethylhexyl) phthalate, chloroform and bromodichloromethane, and RCRA metals and zinc. Total glycols, barium, selenium, and zinc were detected at concentrations greater than the laboratory detection limit but less than the TOGS 1.1.1 groundwater standard or guidance value. LNAPL was observed in one of the monitoring wells during two sampling events; however, as the petroleum impacts were previously determined to be the responsibility of GM (i.e., as part of AOR #3), it was LaBella's opinion that further evaluation was not warranted at the time.

Decommissioning of Oil/Water Separator and Oil Holding Tank

Report Title: Closure Report For: Decommissioning of Oil/Water Separator & Oil Holding Tank Prepared For: Valeo Management Services Prepared By: LaBella Associates, P.C. Date: May 2008

LaBella provided professional third party management to assist Valeo with the decommissioning of an existing oil/water separator (OWS) and related oil holding tank (OHT) associated with the Boiler House that was designed as appropriate secondary containment for two 50,000-gallon #6 fuel oil tanks. LaBella retained TREC, a specialized environmental contractor to provide labor and equipment to thoroughly clean and decommission the OWS and OHT. The cleaning and decommissioning was reportedly completed in accordance with 6 NYCRR Part 613.9 – Closure of Tanks Permanently Out-of-Service. Work completed included the cleaning and removal of the OWS and OHT. Wastewater associated with the OWS and OHT was containerized and removed off-Site for disposal. Closure soil samples were collected and submitted for laboratory analysis. No VOCs or SVOCs were reported at levels exceeding TAGM #4046 SCOs. The excavation was back-filled to grade.

# Decommissioning of Tank 14 and Tank 15 (#6 Fuel Oil AST Tanks)

Report Title: Closure Report For: Decommissioning of Tank 14 and Tank 15 (#6 Fuel Oil AST Tanks) Prepared For: Valeo Management Services Prepared By: LaBella Associates, P.C. Date: May 2008

LaBella provided technical oversight to assist Valeo's Environmental Health & Safety Department with the permanent closure of two 50,000 gallon #6 Fuel Oil ASTs associated with the former boiler system located along the east side of the former Valeo Complex. TREC provided the labor and equipment to clean and decommission Tank 14 and Tank 15. Tank 14 and Tank 15 were reportedly

cleaned and decommissioned in accordance with 6 NYCRR Part 613 (b)(1) Closure of Tanks Permanently Out-of-Service.

Proposed Remedial Action Plan

Report Title: Proposed Remedial Action Plan, Valeo Former GM - Delco Chassis Facility, State Superfund Project, Rochester Monroe County, Site No. 828099 Prepared by: NYSDEC Date: February 2012

The Proposed Remedial Action Plan (PRAP) identifies the contaminants of concern (CoCs) at the Site as:

Benzene	Dichloroethene (DCE)
Trichloroethene (TCE)	Tetrachlorethene (PCE)
Toluene	Xylenes (mixed)
Polychlorinated Biphenyls (PCBs)	Polycyclic Aromatic Hydrocarbons (PAHs)
Cadmium	Chromium
Copper	Lead

The PRAP evaluated the following five remedial alternatives:

- 1. No Action
- 2. Continued Operation of SSDS and Site Management
- 3. Restoration to Pre-Disposal or Unrestricted Conditions
- 4. LNAPL collection with in-situ bioremediation and Site management
- 5. LNAPL collection with in-situ bioremediation, soil excavation, and Site management

The remedial alternatives were evaluated for the following criteria:

- 1. Protection of Human Health and the Environment
- 2. Compliance with New York State Standards, Criteria, and Guidance (SCGs)
- 3. Long-term Effectiveness and Permanence
- 4. Reduction of Toxicity, Mobility, or Volume
- 5. Short-term Impacts and Effectiveness
- 6. Implementability
- 7. Costs-Effectiveness
- 8. Land Use
- 9. Community Acceptance

Based on the criteria listed above, Alternative #5 (LNAPL collection with in-situ bioremediation, soil excavation, and Site management) was proposed.

#### Record of Decision

Report Title: Record of Decision, Valeo Former GM - Delco Chassis Facility, State Superfund Project, Rochester Monroe County, Site No. 828099 Prepared by: NYSDEC Date: March 2012

This document presents the selected remedy for the Site. The elements of the selected remedy include the following:

- 1. Remedial design program with green remediation components
- 2. LNAPL recovery with in-situ bioremediation
- 3. Soil excavation
- 4. Soil vapor mitigation (i.e., continued operation and monitoring of the SSDS)
- 5. Cover system
- 6. Institutional control in the form of an environmental easement
- 7. Site management

Note: Excerpted figures and tables from the ROD have been included in this ISMP.

# On-Site Soil Re-Use Area

MFP constructed an approximate 60-foot by 48-foot loading dock addition and associate sloped ramp (East Loading Docks) on the east side of Building A between Buildings A1 and A2 within AOR #1 in 2014. The subsurface material (i.e., soil, rock, concrete) generated during the construction of the East Loading Docks was segregated based on field screening results. Approximately 1,625 tons of soil (and rock) that exhibited visible staining, unusual odor, soil with residual product and/or PID readings greater than 10 ppm (i.e., field evidence of impact; referred to as the 'Impacted Soil Piles') was staged on plastic sheeting on the asphalt paved area east of the loading dock construction. The Impacted Soil Piles were covered with plastic and/or tarps. Two composite soil samples collected from the Impacted Soil Piles had concentrations of benzo(a)pyrene and/or dibenzo(a)anthracene that exceeded their respective Part 375 Restricted Commercial Use SCOs.

In January 2017, as approved by NYSDEC, the Impacted Soil Piles were transported to and placed in a Soil Re-Use Area. The Soil Re-Use Area consists of an approximate 16,100 square foot grass covered area within the southern portion of AOR #6. The Impacted Soil Piles were placed in an approximately one foot lift across a portion of the Soil Re-Use Area. A 6 oz. Geotextile Fabric Underlayment was placed on top of the impacted soil to function as a demarcation layer. Cover material was placed in an approximate 18 inch lift on top of the demarcation layer. The cover material was approved for use by the NYSDEC and consisted of approximately 1,900 cubic yards of soil that was transported onto the Site. The cover material was tested in accordance with Table 5.4(e)10 per Final DER-10 and found to meet the Restricted Commercial Use SCOs. Figure B shows the location of the Soil Re-Use Area at the Site.

# 2.4 Remedial Action Objectives

The Remedial Action Objectives (RAOs) for the Site as listed in the ROD dated March 2012 are as follows:

# 2.4.1 Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

# 2.4.2 Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

# 2.4.3 Soil Vapor

RAOs for Public Health Protection

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

# 2.5 Remaining Contamination

2.5.1 Soil

Over 350 soil samples were collected and analyzed from the Site during the RI. Exposed surface soil exists primarily on the southwest corner of the Site (AOR #7) and the former land disposal area (AOR #6). Overburden thickness varies across the Site from less than one foot thick (areas beneath the building) to up to eleven feet thick. Ash and cinder fill was noted on the portions of the Site subject to this ISMP from a thickness of a few inches to a thickness of about four feet thick.

Soil contaminated with polycyclic aromatic hydrocarbons (PAHs) is present on the portions of the Site subject to this ISMP, probably due to the presence of cinder and ash (refer to Figure 3). Commercial SCOs for PAHs are exceeded in the AORs investigated during the RI. Levels of PAHs are significantly higher in soils within and adjacent to the areas of LNAPL contamination (e.g., the PAH levels in the LNAPL tend to be two orders of magnitude higher than the remaining Site-wide soils). Additionally, higher levels of PAHs were encountered in one sample taken along the former trade-waste sewer lines, and one sample within the melonite (cyanide salt) heat treating area. The depth of these samples was 3 to 4 feet below the floor level of the building slab. VOC contamination in soil exceeded the groundwater protection SCOs in the LNAPL areas and the former fire training area (AOR #7) in the southwestern property corner. Metals contamination is found predominantly below the building slab near the former electroplating areas and within the land disposal area (AOR #6) located adjacent to the southwest portion of the building. Commercial SCOs are exceeded for barium, copper, cadmium, chromium, and lead in those areas. PCB contamination in soil exceeds the commercial SCOs in limited areas of the Site. SCOs for PCBs are exceeded in areas where LNAPL was encountered (UST tank farm, oil reclamation area, railcar scrap dock) and the fire training area in the southwest corner of the property. Chlorinated VOCs in soils exceeded the commercial SCOs beneath the building slab in the vicinity of the former oil reclamation area (AOR #3).

Based on the findings of the RI, the past disposal of hazardous waste has resulted in the contamination of soil. The Site contaminants identified in soil which are considered to be the primary contaminants

of concern to be addressed by the remedy selection process are toluene, ethylbenzene, total xylenes, cis-1,2-dichloroethene, 1,1,1-trichloroethane, barium, copper, cadmium, chromium, lead, PAHs, and PCBs.

Figure 3, Figure 19 through Figure 26, and Figure 31 through Figure 36 from the 2005 RI report provide a summary of detections in soil samples, both within AOR and non-AOR locations. Table 1 also provides a summary of the nature and extent of soil samples exceeding SCGs for the Site.

Remedial actions associated with the ROD have not yet been completed at the Site. The Final SMP will summarize the results of any soil samples that exceed the SCGs that were collected and analyzed as part of remedial activities.

## 2.5.2 Groundwater

Groundwater samples were collected from a network of approximately 70 monitoring wells located throughout the Site. These wells monitored the following separate groundwater depth zones on-Site: overburden/shallow bedrock; intermediate bedrock; and, deep bedrock. In addition, a groundwater seep into the barge canal was sampled. The sample results in the overburden/shallow bedrock zone identified on-Site VOC contamination. The groundwater sample results are depicted on Figure 27 through Figure 30 from the 2005 RI Report. The VOC contamination consisted primarily of BTEX compounds associated with the areas of LNAPL. Total BTEX levels range from 100 ppb to 6,463 ppb, and are predominantly located near the former UST tank farm (AOR #1) and oil reclamation area (AOR #3) areas. Additional BTEX contamination in groundwater was identified in the southwest corner of the Site (AOR #7) near the former fire training area from 125 ppb to 338 ppb. Shallow groundwater contaminated with methyl isobutyl ketone and carbon disulfide is present to a very limited extent in the area outside the railcar scrap dock area (AOR #4); however, SCGs were not exceeded for these compounds. Lower levels of chlorinated VOCs (cVOCs) in AOR #4 were also detected in shallow wells ranging from ND to 734 ppb total cVOCs. Sample results from one well beneath the building indicated concentrations of 1,2-dichloroethene ranging from 60 to 260 ppb; trichloroethene ranging from 2 to 30 ppb; and, vinyl chloride ranging from 2 to 20 ppb. This well is located adjacent to the area where the sub-slab depressurization system was installed in 2009. Also, exterior wells on the southeast portion of the Site show higher concentrations of cVOCs.

The samples results from the intermediate bedrock wells predominantly showed contamination with VOCs above the SCGs with both BTEX and cVOCs; however, cVOCs were detected at concentrations of at least two orders of magnitude higher in the intermediate bedrock zone as compared to the other bedrock zones. Figure 5 from the Record of Decision (ROD) is a logarithmic bar chart that depicts this trend. Based upon groundwater flow patterns in the intermediate bedrock zone, it has been concluded that cVOC contamination in intermediate bedrock is migrating on-Site from the adjacent Abandoned Chemical Sales property (Site #828105).

Sample results for the deep bedrock wells show exceedances of SCGs for BTEX and cVOCs. The BTEX contamination in deep bedrock appears to be coming from an off-Site source or is possibly naturally occurring in the Rochester Shale bedrock. The cVOCs in deep bedrock are located in the southeast corner of the Site in well DB-309-2 (refer to Figure 7 from the ROD). This well is downgradient of the Abandoned Chemical Sales property (Site #828105).

Sample results from the groundwater seep into the barge canal did not indicate any Site-related contaminants.

The primary contaminants of concern in groundwater are benzene, toluene, ethylbenzene, and total xylenes from the former underground storage tank area (AOR #1), oil reclamation area (AOR #3), and

the railcar scrap dock area (AOR #4). The bulk of the cVOCs detected on-Site is most likely migrating on-Site from the adjacent Abandoned Chemical Sales property (Site #828105). Trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride may be present at the Site to a lesser degree from past degreasing operations at the facility. A distinct source of cVOCs could not be identified on-Site; however, there may be sporadic areas of soil contamination causing the dissolved cVOCs in shallow groundwater.

The inorganic compounds found in overburden and shallow bedrock groundwater were limited to the areas of LNAPL contamination, are of relatively low magnitude, and are not migrating off-Site.

Based on the findings of the RI, the past disposal of hazardous waste has resulted in the contamination of groundwater. The Site contaminants that are considered to be the primary contaminants of concern are benzene, ethylbenzene, total xylenes, TCE, cis-1,2-DCE, and vinyl chloride.

Figure 30 from the 2005 RI report provides a summary of exceedances of screening criteria in AOR #9 (i.e., Site groundwater). Also, Table 2 provides a summary of the nature and extent of groundwater samples exceeding SCGs for the Site.

Remedial actions associated with the ROD have not yet been completed at the Site. The Final SMP will summarize the results of groundwater samples that exceed the SCGs that are collected and analyzed as part of remedial actions.

#### 2.5.3 Soil Vapor

The evaluation of the potential for soil vapor intrusion resulting from the presence of Site related soil or groundwater contamination was evaluated by the sampling of sub-slab soil vapor under structures. Due to the presence of buildings in impacted areas, a full suite of samples were collected to evaluate whether soil vapor intrusion was occurring.

Sub-slab soil vapor samples were collected from several areas within the on-Site building. The results identified one area within the facility with elevated levels of TCE, cis-1,2-DCE, and vinyl chloride beneath the building slab. Based upon this data, GM installed a sub-slab depressurization system in April 2009. The area covered by the mitigation system is depicted on Figures 2 and 3 excerpted from the ROD. A detailed layout of the SSDS is depicted in Figure 8 excerpted from the ROD.

The affected area lies within the area bounded by building columns N-13 on the northeast, S-13 on the southeast, S-25 on the southwest, and N-25 on the northwest. The affected area is approximately 160 feet wide (north-south measurement) by 220 feet long (east-west measurement). The highest soil vapor concentrations occur between columns Q-16 and R-19 in the center of the affected area. The central area is 60 feet wide by 60 feet long.

During soil vapor intrusion assessment activities, concentrations of TCE, DCE, and vinyl chloride in sub-slab soil vapor were found to be above 250  $\mu$ g/m<sup>3</sup> in the affected area. The highest soil vapor concentrations were found in the 60 feet by 60 feet central area, where concentrations of up to 332,000  $\mu$ g/m<sup>3</sup> of TCE and 4,746,000  $\mu$ g/m<sup>3</sup> of DCE (cis-1,2-DCE and trans-1,2-DCE) were detected.

Soil vapor intrusion information is included in the Figures section of this ISMP. The GC Summary Results are shown on a hand drawn figure, and a "Summary of SVI Follow-Up, GM Screening Results" (Table 1) is also provided.

Remedial actions associated with the ROD have not yet been completed at the Site. The Final SMP will summarize the results of any samples of soil vapor that exceed the SCGs that are collected and analyzed as part of the remedial activities.

# 3.0 INSTITUTIONAL AND ENGINEERING CONTROL PLAN

## 3.1 General

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

This plan provides:

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

#### **3.2 Institutional Controls**

A series of ICs is required by the ROD to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination; and, (3) limit the use and development of the Site to commercial and industrial uses only. Adherence to these ICs at the Site is required by the Environmental Easement<sup>1</sup> and will be implemented under this ISMP. A copy of the Environmental Easement is provided in Appendix H.

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

Restrictions that apply to the Site are:

- The property may be used only for commercial or industrial uses as defined by Part 375-1.8(g); although land use is subject to local zoning laws;
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Monroe Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

<sup>&</sup>lt;sup>1</sup> At this time, a draft Environmental Easement has been provided to the Department for its review, approval and execution.

- The remedial party or Site owner is required to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3); and,
- Compliance with the Department approved Environmental Easement and this Interim Site Management Plan. (Note: the remedial actions associated with the ROD have not yet been completed at the Site. A Final SMP will be prepared subsequent to completion of these remedial actions.)
- Engineering Controls must be operated and maintained as specified in the ISMP;
- Engineering Controls must be inspected at a frequency and in a manner defined in the ISMP;
- Groundwater and other environmental or public health monitoring must be performed as defined in the ISMP;
- Data and information pertinent to Site management of the Site must be reported at the frequency and in a manner defined in the ISMP;
- Future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the ISMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the engineering controls shall be performed as defined in the ISMP;
- Access to the Site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

# **3.3 Engineering Controls**

# 3.3.1 Cover System

A Site cover currently exists at the Site. This cover will be maintained to allow for restricted commercial or industrial use of the Site. Any Site redevelopment will maintain a Site cover, which may consist either of the structures such as buildings, pavement, sidewalks, etc. or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable SCOs. Where a soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial or industrial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the Site will meet the requirements for the identified Site use as set forth in 6 NYCRR Part 375-6.7(d).

# 3.3.2 Sub-Slab Depressurization System (SSDS)

A sub-slab depressurization system (SSDS) has been installed for the purpose of providing mitigation for potential soil vapor intrusion within the portion of the building area as depicted on Figures 2 and 3 excerpted from the ROD. The SSDS began operation on August 9, 2009. The SSDS components are described below:

• Suction Pits

There are nine suction pits located adjacent to the nine building columns within the interior of the affected area (Columns P-16, Q-16, and R-16; P-19, Q-19, and R-19; P-22, Q-22, and R-22). Each suction pit was constructed with a 3.5 inch hole cored through the concrete slab adjacent to the column and a suction cavity excavated below the slab from which approximately 1cubic foot of sub-slab base material (stone or sand and gravel) was removed.

• Pipe Installation

The piping network for the SSDS is constructed of 3-inch diameter PVC pipes. Pipe ends were installed to approximately 1 inch below the bottom of the floor slab, and the suction cavity opening was sealed around the pipe with newly poured concrete. The piping from each suction point is routed up along the column into the truss space. The piping from the three suction pits located along each north-south column line connects to a single 3-inch pipe leading to an SSDS fan located on the roof of the building. The horizontal piping runs in the truss space are sloped down back towards the suction pits to minimize any water buildup from condensation.

• Miscellaneous sealing

Smoke testing of cracks, floor joints, and other floor penetrations performed during the SSDS installation indicated that sealing was not required in the affected areas.

• Fans and Stacks

Three SSDS fans (F1, F2, and F3) are mounted on the roof of the building. The fans are low wattage and suitable for continuous operation.

• Visual Vacuum Indicator

Each fan system (the three suction points and piping leading to each fan) has one visual vacuum (negative pressure) indicator on the vertical pipe leading from the center suction point (the Q-column suction point).

• Permanent Monitoring Points

There are eight monitoring points installed to permit periodic monitoring of sub-slab vacuum pressure and occasional sampling of soil vapor. The permanent monitoring points consist of a hole drilled through the slab and a short length of tubing sealed in the hole. The points are completed with a removable cap.

Procedures for operating and maintaining the SSDS are documented in the Operations and Maintenance Manual (Appendix G of this ISMP).

3.3.3 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.4 of NYSDEC DER-10.

# 3.3.3.1 Cover System

The cover system will not be discontinued unless prior written approval is granted by the NYSDEC and the NYSDOH.

# 3.3.3.2 Sub-Slab Depressurization (SSD) System

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

## 3.3.3.3 Future Treatment Systems

Treatment systems may be installed as part of the Remedial Actions. These will be described in the Final SMP.

# 4.0 MONITORING AND SAMPLING PLAN

Remedial actions associated with the ROD have not yet been completed at the Site. The monitoring and sampling plan will be completed when the Final SMP is prepared.

# 5.0 OPERATION AND MAINTENANCE PLAN

# 5.1 General

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

- Includes the procedures necessary to allow individuals unfamiliar with the Site to operate and maintain the SSD system;
- Will be updated periodically to reflect changes in Site conditions or the manner in which the SSD systems are operated and maintained.

Further detail regarding the Operation and Maintenance of the SSD is provided in Appendix G - Operation and Maintenance Manual. A copy of this Operation and Maintenance Manual, along with the complete ISMP, is to be maintained at the Site. This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of this ISMP.

# **5.2 Remedial System Performance Criteria**

# 5.2.1 SSD System Performance Criteria

The SSD system is intended to be operated indefinitely until such time as monitoring data indicates that the system is no longer required (e.g., VOC concentrations in sub-slab air have been reduced below applicable target levels), and approval is received by NYSDEC and NYSDOH to discontinue system operations.

The basic processes used in this system are summarized below:

• Sub-Slab Ventilation System: A series of vent points have been installed to induce a negative pressure beneath the floor in the vapor mitigation area of the building, thus minimizing the potential for soil vapors to enter the building.

# 5.3 Operation and Maintenance of Sub-slab Depressurization System

The following sections provide a description of the operations and maintenance of the SSD system. Cut-sheets and as-built drawings for the SSD system are provided in Appendix G - Operations and Maintenance Manual.

# 5.3.1 System Start-Up and Testing

The system testing described above will be conducted if, in the course of the SSD system lifetime, the system goes down or significant changes are made to the system and the system must be restarted.

The only mechanical portion of the system is the set of fans. Start-up of any of these fans from a shutdown condition requires only that power be restored to the fan. It is expected that the fans will be continuously maintained in an operational condition, and since these fans do not require any type of manual restart, the fans will restart automatically once power is restored to the building or circuit. In the event that a fan is de-energized for work on the fan or associated ductwork, re-energizing of the fan will similarly re-enable that portion of the soil vapor mitigation system.

Equipment manufacturer and model number information is provided in the record drawings (refer to Appendix G).

## 5.3.2 Routine System Operation and Maintenance

The soil vapor intrusion mitigation system is designed for continuous, unmanned operation, and requires very little operation and maintenance labor. The components of this system are designed for years of uninterrupted service. Nonetheless, monthly system checks and annual inspections will be performed to confirm that the systems components are operating as intended, and to identify the need for any maintenance. These monitoring activities will be completed as described in, and documented on, the log forms in Appendix F. Provided below is a summary of the monitoring activities that will be completed.

#### Periodic Monitoring:

Building security personnel will conduct routine monitoring (at a maximum interval of monthly) to confirm system operation and performance. This monitoring will include the items listed below:

- A visual inspection of the system piping;
- Recording of vacuum readings at each fan system manometer; and
- Notation of any observation concerning the SSDS that is out of the ordinary.

## Annual Monitoring:

The annual monitoring will be conducted by a competent environmental professional. This will include the items listed below:

- A visual inspection of the complete system (i.e., fan, piping, labelling system, seals, etc.);
- Recording of vacuum readings at each fan system manometer;
- Recording of vacuum readings from permanent vacuum monitoring points installed in the floor slabs;
- Identification of potential leaks;
- Inspection of exhaust points to verify that air intakes have not been located nearby;
- Audible inspection to verify a fan's operational performance;
- Test of warning alarm non-acknowledgement and automatic system dial out;
- Review of contact information;
- Recording of any system maintenance activities that have occurred during the past year; and
- Review of renovations or changes of use in the affected area and/or surrounding area of the building that may affect the effectiveness of the SSDS.

Vacuum monitoring to confirm that a lower pressure is being maintained in the sub-slab shall be performed by measuring the differential pressure between the indoor air and sub-slab at the permanent monitoring points. The operational target is a minimum differential pressure of 0.004 inches between the interior space and the sub-slab depressurized space on the accessible permanent monitoring points in the affected area.

# 5.3.3 Non-Routine Operation and Maintenance

As stated above, the soil vapor mitigation system is designed for continuous, unmanned operation. Non-routine maintenance would be limited to damage incurred to the system that would likely reduce system effectiveness, and would result in the need to either repair or replace the affected system component.

## 5.3.4 System Monitoring Devices and Alarms

There are three low pressure sensors installed on the riser stack from the Q-column suction point for each fan system. These devices will send an alarm to the main building security system in the event that pressure drops below 0.25 inches of water column (w.c.) of negative pressure (vacuum). When the sensors are triggered by a drop in vacuum, an automatic dial-out device will continuously call four on-call Site personnel that are part of the owner's site management and/or security departments. The calls will continue until the call is answered.

The SSDS is designed for continuous, unmanned operation and does not have alarms. Monthly checks of the pressure gauge at the fan inlets will indicate if maintenance and repairs are warranted.

## 6.0 PERIODIC ASSESSMENTS/EVALUATIONS

#### 6.1 Climate Change Vulnerability Assessment

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

This section provides a summary of vulnerability assessments that will be conducted for the Site during periodic assessments, and briefly summarizes the vulnerability of the Site and/or engineering controls to severe storms/weather events and associated flooding.

- Flood Plain: Based on review of a Flood Insurance Rate Map for a portion of the City of Rochester, NY (Map 36055C0191G) acquired from the online FEMA Flood map services Center, the Site is identified with Zone X designation. This is defined as "Areas determined to be outside the 0.2% annual chance floodplain". As such, the Site is considered outside the 100-year floodplain.
- Site Drainage and Storm Water Management: The existing Site development has adequate storm water management systems.
- Erosion: The majority of the Site is covered by the existing building, asphalt-paved parking areas and access roads, and established turf. The grade of the Site is such that erosion will not occur during periods of severe rain events.
- High Wind: The majority of the Site is covered by the existing building, asphalt-paved parking areas and access roads, and established turf. Remedial system components are not susceptible to damage from the wind itself or falling objects, such as trees or utility structures during periods of high wind.
- Electricity: The SSDS associated with mitigation of soil vapor intrusion is a component of the interim remedy that could be susceptible to power loss and/or dips/surges in voltage during severe weather events, including lighting strikes. It is anticipated that such disruptions would be temporary and would have minimal effect on human health since business operations at the Site would also be shut down during such events due to the lack of electricity.
- Spill/Contaminant Release: No areas of the Site and/or remedial system are anticipated to be susceptible to a spill or other contaminant release due to storm-related damage caused by flooding, erosion, high winds, loss of power, etc.

#### **6.2 Green Remediation Evaluation**

NYSDEC's DER-31 Green Remediation requires that green remediation concepts and techniques be considered during the stages of the remedial program including Site management, with the goal of improving the sustainability of the cleanup and summarizing the net environmental benefit of any implemented green technology. This section of the ISMP provides a summary of any green remediation evaluations to be completed for the Site during Site management.

• Waste Generation: The remediation method for the Site has not yet been determined; however, it may include excavation of soil and the generation of water during water sampling events.
- Energy Usage: The SSDS is powered by electricity provided by an energy services company. The system has been engineered and calibrated to generally run on as little electrical energy as possible to maintain negative pressure beneath the portions of the building slab where mitigation of potential soil vapor intrusion is required. Other sources of electrical energy (hydro, solar, wind) may be cost prohibitive, may not be efficient, may not be available, or may not be reliable to solely maintain SSDS operation.
- Emissions: Potential emissions at the Site include operation of the SSDS, from automobiles used for transportation to and from the Site for inspections and/or sampling, and from equipment used at the Site for possible remedial investigations and actions. These emissions are considered typical in relation to the possible investigations and remedies.
- Water usage: Potable water use at the Site as part of the possible remedial investigations and actions is considered minimal (e.g., decontamination water), and will be procured from the City of Rochester public water system.
- Land and/or ecosystems: The remediation method for the Site has not yet been determined; however, it may include restoration of land.

# 6.2.1 Timing of Green Remediation Evaluations

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

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

## 6.2.2. Remedial Systems

Remedial systems will be operated properly considering the current Site conditions to conserve materials and resources to the greatest extent possible. Consideration will be given to operating rates and use of reagents and consumables. Spent materials will be sent for recycling, as appropriate. The SSDS will be evaluated as part of the green remediation evaluation.

## 6.2.3 Frequency of System Checks, Sampling and Other Periodic Activities

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

Consideration shall be given to:

- Reduced sampling frequencies;
- Reduced Site visits and system checks;
- Installation of remote sensing/operations and telemetry;

- Coordination/consolidation of activities to maximize foreman/labor time; and
- Use of mass transit for Site visits, where available.

6.2.4 Metrics and Reporting

Remedial actions associated with the ROD have not yet been completed at the Site. The Metrics and Reporting will be provided in the Final SMP.

# 6.3 Remedial System Optimization

A Remedial Site Optimization (RSO) study will be conducted by the NYSDEC whenever an in-depth evaluation of the remedy is needed. An RSO may be appropriate if any of the following occur:

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

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

# 7.0 REPORTING REQUIREMENTS

Remedial actions associated with the ROD have not yet been completed at the Site. The reporting requirements will be provided in the Final SMP.

# 8.0 REFERENCES

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**FIGURES** 





Figures Excerpted from 2005 Remedial Investigation Report



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<ul> <li>#1</li> <li>BASE PLAN PROVIDED BY DELCO CHASSIS DIVISION.</li> <li>ALL LOCATIONS ARE APPROXIMATE MW-99-1, MW-99-2 ADD MW-99-2 LOCATIONS BASED ON GOLDER ASSOCIATES REPORT. ACS WELL LOCATIONS BASED ON E&amp; REPORT.</li> <li>REFER TO TEXT FOR ADDITIONAL INFORMATION.</li> <li>ROCHESTER CITY DATUM = NGVD + 1.08 FEET.</li> </ul>	ΝΟΤΙ		
<ul> <li>BALL TEAL TRAIT ROUBS ARE APPROXIMATE MW-99-1.</li> <li>ALL LOCATIONS ARE APPROXIMATE MW-99-1.</li> <li>ALL LOCATIONS BASED ON GOLDER ASSOCIATES REPORT. ACS WELL LOCATIONS BASED ON EAR EPPORT.</li> <li>REFER TO TEXT FOR ADDITIONAL INFORMATION.</li> <li>ROCHESTER CITY DATUM = NGVD + 1.08 FEET.</li> </ul>	<u>1 B</u>	LO.	
<ul> <li>REFER TO TEXT FOR ADDITIONAL INFORMATION.</li> <li>ROCHESTER CITY DATUM = NGVD + 1.08 FEET.</li> <li>ACS</li></ul>	2. A M G B	LL LOCATIONS ARE APPROXIMATE. MW-99-1, IW-99-2 AND MW-99-3 LOCATIONS BASED OLDER ASSOCIATES REPORT. ACS WELL LOCA ASED ON E&E REPORT.	ON TIONS
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$ \begin{array}{c}                                     $	DODGE STREET SEWI	ER	
HALFYCH       VALEO/FORMER GM DELCO CHASIS DIVISION FACILITY         General Motors Corporation         ROUTE       DI ANI	(24" RCP")		
HALFY CHERAL MOTORS CORPORATION ROCHESTER, NEW YORK			
HALFY & VALEO/FORMER GM DELCO CHASIS DIVISION FACILITY GENERAL MOTORS CORPORATION ROCHESTER, NEW YORK	t - 1		
INV. 517.07 INV. 516.98 0 60 120 240 SCALE (IN FEET) HALFN & ALDRICH WALEO/FORMER GM DELCO CHASIS DIVISION FACILITY GENERAL MOTORS CORPORATION ROCHESTER, NEW YORK	HINV. 523.06 JAY STREET MH (36" SEGM	SEWER ENTED BLOCK)	
UNDER ALL DI ANI	INV. 516.98		na na mangana ang kang kang kang kang kang kang
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ENVIRONMENTAL SOLUTIONS SCALE: AS SHOWN APRIL 2005	a, 1 201 24 202 * 6 21 · · · ·		



FIGURE





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N	LEGEND	• •		
	O₩-105 🔶	OVERBURDEN MONITORING WELL	LOCATION	
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	<b>\</b>	WELL LOCATION	ACE MONITORING	
	<b>•</b>	BEDROCK MONITORING WELL LOO	CATION	
	•	DEEP BEDROCK MONITORING WE	LL LOCATION	
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	Ф	RI/FS INTERMEDIATE BEDROCK MONITORING WELL		
	\$	RI/FS OVERBURDEN-BEDROCK INTERFACE MONITORING WELL		
	0	RI/FS SOIL BORING		
	~ ~	OVERBURDEN-BEDROCK INTERFA	ACE WELL.	
	$\oplus$	ABANDONED CHEMICAL SALES S	SITE.	
		APPROXIMATE LOCATION OF PRI OR COMBINED SEWER LINES (SH ON EAST SIDE OF FACILITY)	NCIPAL STORMWATER IOWN ONLY	
	MH-1 <b>b</b> INV. 526.43	ELEVATION OF DISCHARGE PIPE		
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R #1	<u>INO</u>	<u>1E5:</u>		
	1.	BASE PLAN PROVIDED BY DELCO	CHASSIS DIVISION.	
	2.	ALL LOCATIONS ARE APPROXIMA MW-99-2 AND MW-99-3 LOCAT GOLDER ASSOCIATES REPORT. AC BASED ON EXE REPORT	TE. MW-99-1, TIONS BASED ON CS WELL LOCATIONS	
C	3.	REFER TO TEXT FOR ADDITIONAL	INFORMATION.	
	4.	ROCHESTER CITY DATUM = NGVE	) + 1.08 FEET.	
ACS MW-2	V 1			
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	MH INV. 525.55			
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	0	60 120 240 SCALE (IN FEET)		
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HALFY	& FORMER GENERA H ROCHES	R DELCO CHASSIS DIVISION I AL MOTORS CORPORATION STER, NEW YORK	FACILITY	
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	SITE	PLAN SHOWIN	G	
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ENGINERIUNG ERVIRONMEN	) & TIAL			
SOLUTIONS	SCALE:	AS SHOWN	APRIL 2005	
-			FIGURE	5



₩-211 ELEV (FT.) B' WATER TABLE - 535 (NORTH) TTTTT . . 515 • . 495 • . 475 . - 455 C' ACS MW-2 ELEV (FT.) (EAST) · 535 11111 . - 515 . . 495 . 475 . · 455 HORIZONTAL SCALE: 1" = 140' VERTICAL SCALE: 1" = 40' VERTICAL EXAGGERATION = 3.5X VALEO/FORMER GM - DELCO CHASSIS FACILITY ROCHESTER, NEW YORK SITE NO. 8-28-099 HALEY& ALDRICH CROSS SECTIONS B-B' & C-C' . SCALE: AS SHOWN APRIL 2005 FIGURE 6A



70436\271-RI REPORT\DRAWINGS\FIG 6B XSEC.DWG

FIGURE 6B



0w-105 526.89	OVERBURDEN MONITORING WELL LOCATION GROUNDWATER ELEVATION (FEET ABOVE RCD)
(OIL - 4 20)	THICKNESS OF OIL LAYER (IN FEET)
Ň *	OVERBURDEN-BEDROCK INTERFACE MONITORING WELL LOCATION
<b>⊕</b> ◆	BEDROCK MONITORING WELL LOCATION
•	DEEP BEDROCK MONITORING WELL LOCATION
	LNAPL INVESTIGATION PIEZOMETER LOCATION
ų 🔶	RI/FS INTERMEDIATE BEDROCK MONITORING WELL
\$	RI/FS OVERBURDEN-BEDROCK INTERFACE MONITORING WELL
<b>+</b>	RI/FS OVERBURDEN MONITORING WELL
	RI/FS SOIL BORING
⊕	OVERBURDEN-BEDROCK INTERFACE WELL, ABANDONED CHEMICAL SALES FACILITY SITE (ACS)
s >	APPROXIMATE LOCATION OF PRINCIPAL STORMWATER OR COMBINED SEWER LINES (SHOWN ONLY ON EAST SIDE OF FACILITY)
i. Alter D	SEWER SYSTEM MANHOLE SHOWING INVERT
	GROUNDWATER ELEVATION CONTOUR LINE (POTENTIOMETRIC LEVEL IN FEET ABOVE RCD) SHOWING APPARENT DIRECTION OF GROUNDWATER FLOW
NC	ITES:
1.	BASE PLAN PROVIDED BY DELCO CHASSIS DIVISION.
2. AOF, #1	ALL LOCATIONS ARE APPROXIMATE. MW-99-1, MW-99-2 AND MW-99-3 LOCATIONS BASED ON GOLDER ASSOCIATES REPORT. ACS WELL LOCATIONS BASED ON E&E REPORT.
3.	REFER TO TEXT FOR ADDITIONAL INFORMATION.
4.	ALL ELEVATIONS ARE FEET ABOVE ROCHESTER CITY DATUM (RCD), RCD = NGVD + 1.08 FEET.
5.	CONTOUR LINES ARE BASED ON INTERPOLATION OF DATA BETWEEN MONITORING WELL LOCATIONS. ACTUAL GROUNDWATTER ELEVATIONS MAY BE DIFFERENT THAN THOSE SHOWN.
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	SCALE IN FEET
HALEY & VALEO/FOI ALDRICH SITE NO.	KMER GM - DELCO CHASSIS FACILITY R, NEW YORK 8-28-099
GROUN	NDWATER ELEVATIONS OW WELLS 11/11/02
SCALE: AS	SHOWN APRIL 2005





0W~105 +	OVERBURDEN MONITORING WELL LOCATION GROUNDWATER ELEVATION (FEET ABOVE RCD)
(0) ( 00)	

- (OIL 4.20) THICKNESS OF OIL LAYER (IN FEET)
  - OVERBURDEN-BEDROCK INTERFACE MONITORING ٠ WELL LOCATION
  - BEDROCK MONITORING WELL LOCATION
  - DEEP BEDROCK MONITORING WELL LOCATION
  - LNAPL INVESTIGATION PIEZOMETER LOCATION
  - RI/FS INTERMEDIATE BEDROCK
  - RI/FS OVERBURDEN-BEDROCK
  - RI/FS OVERBURDEN MONITORING WELL ۰
  - RI/FS SOIL BORING
  - OVERBURDEN-BEDROCK INTERFACE WELL, ABANDONED CHEMICAL SALES FACILITY SITE (ACS) Ð

APPROXIMATE LOCATION OF PRINCIPAL STORMWATER OR COMBINED SEWER LINES (SHOWN ONLY ON EAST SIDE OF FACILITY)

SEWER SYSTEM MANHOLE SHOWING INVERT ELEVATION OF DISCHARGE PIPE

GROUNDWATER ELEVATION CONTOUR LINE (POTENTIOMETRIC LEVEL IN FEET ABOVE RCD) SHOWING APPARENT DIRECTION OF GROUNDWATER FLOW

### NOTES:

hand Sheriki Acade

5 9 5 0 6 2 6 2 7 2

- 1. BASE PLAN PROVIDED BY DELCO CHASSIS DIVISION.
- ALL LOCATIONS ARE APPROXIMATE. MW-99-1, MW-99-2 AND MW-99-3 LOCATIONS BASED ON GOLDER ASSOCIATES REPORT. ACS WELL LOCATIONS BASED ON E&E REPORT.
- 3. REFER TO TEXT FOR ADDITIONAL INFORMATION.
- ALL ELEVATIONS ARE FEET ABOVE ROCHESTER CITY DATUM (RCD). RCD = NGVD + 1.08 FEET. 4.

N 7 81 240 480 SCALE IN FEET VALEO/FORMER GM - DELCO CHASSIS FACILITY ROCHESTER, NEW YORK HALEY & ALDRICH SITE NO. 8-28-099 GROUNDWATER ELEVATIONS DEEP WELLS, 11/11/02 SCALE: AS SHOWN APRIL 2005





	LEGEND:	
	0W-105	OVERBURDEN MONITORING WELL LOCATION GROUNDWATER ELEVATION (FEET ABOVE RCD)
N	(OIL - 4.20)	THICKNESS OF OIL LAYER (IN FEET)
$\bullet$	٠	OVERBURDEN-BEDROCK INTERFACE MONITORING WELL LOCATION
	<b>\$</b>	BEDROCK MONITORING WELL LOCATION
	•	DEEP BEDROCK MONITORING WELL LOCATION
L L L	<b></b>	LNAPL INVESTIGATION PIEZOMETER LOCATION
	<b>*</b>	RI/FS INTERMEDIATE BEDROCK MONITORING WELL
e e	۲	RI/FS OVERBURDEN-BEDROCK INTERFACE MONITORING WELL
0	<b></b>	RI/FS OVERBURDEN MONITORING WELL
	2	RI/FS SOIL BORING
	⊕	OVERBURDEN-BEDROCK INTERFACE WELL, ABANDONED CHEMICAL SALES FACILITY SITE (ACS)
NVI .	i >	APPROXIMATE LOCATION OF PRINCIPAL STORMWATER OR COMBINED SEWER LINES (SHOWN ONLY ON EAST SIDE OF FACILITY)
	에 되는다.	SEWER SYSTEM MANHOLE SHOWING INVERT ELEVATION OF DISCHARGE PIPE
		GROUNDWATER ELEVATION CONTOUR LINE (POTENTIOMETRIC LEVEL IN FEET ABOVE RCD) SHOWING APPARENT DIRECTION OF GROUNDWATER FLC
	NOT	'ES:
	1.	BASE PLAN PROVIDED BY DELCO CHASSIS DIVISION.
A BARA	2.	ALL LOCATIONS ARE APPROXIMATE. MW-99-1, MW-99-2 AND MW-99-3 LOCATIONS BASED ON GOLDER ASSOCIATES REPORT. ACS WELL LOCATIONS BASED ON EAF PERDAT
	3.	REFER TO TEXT FOR ADDITIONAL INFORMATION.
	4	ALL ELEVATIONS ARE FEET ABOVE ROCHESTER CITY DATUM (RCD). RCD = NGVD + 1.08 FEET.
	5.	CONTOUR LINES ARE BASED ON INTERPOLATION OF DATA BETWEEN MONITORING WELL LOCATIONS. ACTUAL GROUNDWATER ELEVATIONS MAY BE DIFFERENT THAN THOSE SHOWN.
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HALEY &	VALEO/FORMER ROCHESTER, NI SITE NO. 8-28	: GM – DELCO CHASSIS FACILITY EW YORK 3-099
	GROUNDW INTERMED	VATER ELEVATIONS DIATE WELLS, 11/25/02

SCALE: AS SHOWN









### 0W-105 526.69 OVERBURDEN MONITORING WELL LOCATION GROUNDWATER ELEVATION (FEET ABOVE RCD) (OL - 4 20) THICKNESS OF OIL LAYER (IN FEET)

- OVERBURDEN-BEDROCK INTERFACE MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- DEEP BEDROCK MONITORING WELL LOCATION
- LNAPL INVESTIGATION PIEZOMETER LOCATION
- RI/FS INTERMEDIATE BEDROCK
   MONITORING WELL
- RI/FS OVERBURDEN-BEDROCK
- RI/FS OVERBURDEN MONITORING WELL
- RI/FS SOIL BORING
- ⊕ OVERBURDEN-BEDROCK INTERFACE WELL, ABANDONED CHEMICAL SALES FACILITY SITE (ACS)

APPROXIMATE LOCATION OF PRINCIPAL STORMWATER OR COMBINED SEWER LINES (SHOWN ONLY ON EAST SIDE OF FACILITY)

SEWER SYSTEM MANHOLE SHOWING INVERT ELEVATION OF DISCHARGE PIPE

GROUNDWATER ELEVATION CONTOUR LINE (POTENTIOMETRIC LEVEL IN FEET ABOVE RCD) SHOWING APPARENT DIRECTION OF GROUNDWATER FLOW

### NOTES:

⊕ ACS M₩-2 531.55

⊕ ACS ₩₩-1 \$30.4

> ⊕ ACS MW-3

- 1. BASE PLAN PROVIDED BY DELCO CHASSIS DIVISION.
- 2. ALL LOCATIONS ARE APPROXIMATE. MW-99-1, MW-99-2 AND MW-99-3 LOCATIONS BASED ON GOLDER ASSOCIATES REPORT. ACS WELL LOCATIONS BASED ON E&E REPORT.
- 3. REFER TO TEXT FOR ADDITIONAL INFORMATION.
- 4. ALL ELEVATIONS ARE FEET ABOVE ROCHESTER CITY DATUM (RCD). RCD = NGVD + 1.08 FEET.
- 5. \*-GROUNDWATER ELEVATIONS AND OIL THICKNESS MEASURMENTS MADE ON 3/10/03 EXCEPT WHERE NOTED BY ASTERISK. NM=NOT MEASURED.
- 6. CONTOUR LINES ARE BASED ON INTERPOLATION OF DATA BETWEEN MONITORING WELL LOCATIONS. ACTUAL GROUNDWATER ELEVATIONS MAY BE DIFFENENT THAN THOSE SHOWN. CONTOURS ARE DASHED WHERE INFERRED, WITH INFERENCE BASED ON MEASUREMENTS MADE ON DATES AFTER 3/10/03.
- 7. GROUNDWATER ELEVATION ADJUSTED FOR THICKNESS AND DENSITY OF OIL LAYER WHERE PRESENT.

 

 0
 240
 480

 SCALE IN FEET

 WALEO/FORMER GM - DELCO CHASSIS FACILITY ROCHESTER, NEW YORK SITE NO. 8-28-099

 GROUNDWATER ELEVATIONS SHALLOW MARCH 2003

 SCALE: AS SHOWN

No. Total \* Server The Schuleger and



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# 0W-105 COVERBURDEN MONITORING WELL LOCATION GROUNDWATER ELEVATION (FEET ABOVE RCD)

### (OIL - 4.20) THICKNESS OF OIL LAYER (IN FEET)

- OVERBURDEN-BEDROCK INTERFACE MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- DEEP BEDROCK MONITORING WELL LOCATION
- LNAPL INVESTIGATION PIEZOMETER LOCATION
- RI/FS INTERMEDIATE BEDROCK
- RI/FS OVERBURDEN-BEDROCK
- + RI/FS OVERBURDEN
- RI/FS SOIL BORING
- ⊕ OVERBURDEN−BEDROCK INTERFACE WELL, ABANDONED CHEMICAL SALES FACILITY SITE (ACS)

APPROXIMATE LOCATION OF PRINCIPAL STORMWATER OR COMBINED SEWER LINES (SHOWN ONLY ON EAST SIDE OF FACILITY)

SEWER SYSTEM MANHOLE SHOWING INVERT

GROUNDWATER ELEVATION CONTOUR LINE (POTENTIOMETRIC LEVEL IN FEET ABOVE RCD) SHOWING APPARENT DIRECTION OF GROUNDWATER FLOW IN THE INTERMEDIATE BEDROCK ZONE

NM = NOT MEASURED

### NOTES:

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SALES AND AND

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- 1. BASE PLAN PROVIDED BY DELCO CHASSIS DIVISION.
- ALL LOCATIONS ARE APPROXIMATE. MW-99-1, MW-99-2 AND MW-99-3 LOCATIONS BASED ON GOLDER ASSOCIATES REPORT. ACS WELL LOCATIONS BASED ON EAE REPORT.
- 3. REFER TO TEXT FOR ADDITIONAL INFORMATION.
- 4. ALL ELEVATIONS ARE FEET ABOVE ROCHESTER CITY DATUM (RCD). RCD = NGVD + 1.08 FEET.
- 5. CONTOUR LINES ARE BASED ON INTERPOLATION OF DATA BETWEEN INTERMEDIATE-BEDROCK ZONE MONITORING WELLS, ACTUAL GROUNDWATER ELEVATIONS MAY BE DIFFERENT THAN THOSE SHOWN.

		0 240 SCALE IN FEET	480
	HALEY &	VALEO/FORMER GM - DELCO CHASSI: ROCHESTER, NEW YORK SITE NO. 8-28-099	S FACILITY
		GROUNDWATER ELEVATION INTERMEDIATE AND DEE WELLS, MARCH 2003	DNS P-BEDROCK
-		SCALE: AS SHOWN	APRIL 2005



	LEGEND:		
	0W-105	OVERBURDEN MONITORING WELL LOCATI GROUNDWATER ELEVATION (FEET ABOVI	on E RCD)
	(OIL - 4.20)	THICKNESS OF OIL LAYER (IN FEET)	
	¢	OVERBURDEN-BEDROCK INTERFACE MON WELL LOCATION	NITORING
	<b></b>	BEDROCK MONITORING WELL LOCATION	
	٠	DEEP BEDROCK MONITORING WELL LOC	TION
		LNAPL INVESTIGATION PIEZOMETER LOC	ATION
	<b></b>	RI/FS INTERMEDIATE BEDROCK MONITORING WELL	
	-	RI/FS OVERBURDEN-BEDROCK INTERFACE MONITORING WELL	
	•	RI/FS OVERBURDEN MONITORING WELL	
		RI/FS SOIL BORING	
	⊕	OVERBURDEN-BEDROCK INTERFACE WEL ABANDONED CHEMICAL SALES FACILITY	l, Site (ACS)
	inen zinen	APPROXIMATE LOCATION OF PRINCIPAL OR COMBINED SEWER LINES (SHOWN OF ON EAST SIDE OF FACILITY)	STORMWATER
		SEWER SYSTEM MANHOLE SHOWING INVI	ERT
	the second secon	GROUNDWATER ELEVATION CONTOUR LIN (POTENTIOMETRIC LEVEL IN FEET ABOVE SHOWING APPARENT DIRECTION OF GRO	IE : RCD) UNDWATER FLOW
	<u>N0T</u>	<u> </u>	
	1.	BASE PLAN PROVIDED BY DELCO CHASS	IS DIVISION.
	2.	ALL LOCATIONS ARE APPROXIMATE. MW- MW-99-2 AND MW-99-3 LOCATIONS B. GOLDER ASSOCIATES REPORT. ACS WELL BASED ON E&E REPORT.	99—1, ASED ON LOCATIONS
<b>0</b>	3.	REFER TO TEXT FOR ADDITIONAL INFORM	ATION.
WW-4	4.	ALL ELEVATIONS ARE FEET ABOVE ROCH DATUM (RCD). RCD = NGVD + 1.08 FEE	ESTER CITY T.
	5.	*-GROUNDWATER ELEVATIONS AND OIL 1 MEASUREMENTS MADE ON 9/2/03 AND EXCEPT AS NOTED.	HICKNESS 9/3/03
-4 0 ACS ACS -5 MW-1	6.	CONTOUR LINES ARE BASED ON INTERPO DATA BETWEEN MONITORING WELL LOCAT ACTUAL GROUNDWATER ELEVATIONS MAY DIFFERENT THAN THOSE SHOWN. CONTO DASHED WHERE INFERRED, WITH INFEREN ON MEASUREMENTS MADE ON DATES AF 9/4/03.	OLATION OF TONS, BE IRS ARE ICE BASED TER
1911-	7.	GROUNDWATER ELEVATION ADJUSTED FOR THICKNESS AND DENSITY OF OIL LAYER	R WHERE
Tablet and and and	CONTRACT	PRESENT.	
ACS MW-3			
		n en to)	
ALTERNAL DISEL AND DR			
		0 60 120 240	
		SCALE (IN FEET)	
<b></b>			
RATE	VALEO/FORI ROCHESTER	MER GM - DELCO CHASSIS FACILI , NEW YORK	TΥ
ALDACIE	SITE NO. 8-	-28099	
	CROUNT		
	SHALLO	WATER ELEVATIONS	
	SEPTEM	BER 2003	
	SCALE: AS	SHOWN	APRIL 2005



0₩-105 + OVERBURDEN MONITORING WELL LOCATION (OIL - 4.20) THICKNESS OF OIL LAYER (IN FEET) OVERBURDEN-BEDROCK INTERFACE MONITORING WELL LOCATION ٠ BEDROCK MONITORING WELL LOCATION 4 ٠ DEEP BEDROCK MONITORING WELL LOCATION LNAPL INVESTIGATION PIEZOMETER LOCATION RI/FS INTERMEDIATE BEDROCK MONITORING WELL RI/FS OVERBURDEN-BEDROCK -RI/FS OVERBURDEN MONITORING WELL ۰ RI/FS SOIL BORING OVERBURDEN-BEDROCK INTERFACE WELL, ABANDONED CHEMICAL SALES FACILITY SITE (ACS) Ð APPROXIMATE LOCATION OF PRINCIPAL STORMWATER OR COMBINED SEWER LINES (SHOWN ONLY ON EAST SIDE OF FACILITY) SEWER SYSTEM MANHOLE SHOWING INVERT ELEVATION OF DISCHARGE PIPE GROUNDWATER ELEVATION CONTOUR LINE (POTENTIOMETRIC LEVEL IN FEET ABOVE RCD) SHOWING APPARENT DIRECTION OF GROUNDWATER FLOW IN THE INTERMEDIATE BEDROCK ZONE NM = NOT MEASURED NOTES: 1. BASE PLAN PROVIDED BY DELCO CHASSIS DIVISION. ALL LOCATIONS ARE APPROXIMATE. MW-99-1, MW-99-2 AND MW-99-3 LOCATIONS BASED ON GOLDER ASSOCIATES REPORT. ACS WELL LOCATIONS BASED ON E& REPORT. 2. 3. REFER TO TEXT FOR ADDITIONAL INFORMATION. ALL ELEVATIONS ARE FEET ABOVE ROCHESTER CITY DATUM (RCD). RCD = NGVD + 1.08 FEET. 4. \*-GROUNDWATER ELEVATIONS AND OIL THICKNESS MEASUREMENTS MADE ON 9/2/03 AND 9/3/03 EXCEPT AS NOTED. 5. 6. CONTOUR LINES ARE BASED ON INTERPOLATION OF DATA BETWEEN INTERMEDIATE-BEDROCK ZONE MONITORING WELLS. ACTUAL GROUNDWATER ELEVATIONS MAY BE DIFFERENT THAN THOSE SHOWN. CONTOURS ARE DASHED WHERE INFERED, WITH INFERENCE BASED ON MEASUREMENTS MADE AFTER O 4 (1) 9/4/03. 7. REFER TO TABLE 1 FOR A COMPLETE SUMMARY OF GROUNDWATER SAMPLE ANALYSIS RESULTS. 50 120 240 SCALE (IN FEET)

VALEO/FORMER GM - DELCO CHASSIS FACILITY ROCHESTER, NEW YORK SITE NO. 8-28-099 GROUNDWATER ELEVATIONS INTERMEDIATE - AND DEEP-BEDROCK WELLS, SEPTEMBER 2003 SCALE: AS SHOWN APRIL 2005

# FIGURE 16



0	60		J 120
	SCALE (IN	FEET)	
	LEGE	END:	
	OW-105	¢	OVERBURDEN MONITORING WELL LOCATION
		\$	OVERBURDEN-BEDROCK INTERFACE MONITORING WELL LOCATION
		¢	BEDROCK MONITORING WELL LOCATION
		<b>(</b>	DEEP BEDROCK MONITORING WELL LOCATION
		Δ	LNAPL INVESTIGATION PIEZOMETER LOCATION
		¢	RI/FS INTERMEDIATE BEDROCK MONITORING WELL
		¢	RI/FS OVERBURDEN-BEDROCK INTERFACE MONITORING WELL
		0	RI/FS SOIL BORING
		$\oplus$	OVERBURDEN-BEDROCK INTERFACE WELL, ABANDONED CHEMICAL SALES SITE
		>	APPROXIMATE LOCATION OF PRINCIPAL STORMWATER OR COMBINED SEWER LINES (SHOWN ONLY ON EAST SIDE OF FACILITY)
·	MH INV. 526.43	112	SEWER SYSTEM MANHOLE SHOWING INVERT ELEVATION OF DISCHARGE PIPE

ALL LOCATIONS ARE APPROXIMATE. MW-99-1, MW-99-2 AND MW-99-3 LOCATIONS BASED ON GOLDER ASSOCIATES REPORT. ACS WELL LOCATIONS BASED ON E&E REPORT.

REFER TO TEXT FOR ADDITIONAL INFORMATION. 3.

![](_page_61_Picture_4.jpeg)

VALEO/FORMER GM DELCO CHASSIS DIVISION FACILITY GENERAL MOTORS CORPORATION ROCHESTER, NEW YORK HALEY & ALDRICH SAMPLE ANALYSIS RESULTS (DETECTIONS ONLY) AOR #1

SCALE: AS SHOWN

GNDERGROUND. ENGREENC & ENVIRONMENTAL SOLUTIONS

FIGURE 19

**APRIL 2005** 

![](_page_62_Figure_0.jpeg)

![](_page_63_Figure_0.jpeg)

![](_page_64_Figure_0.jpeg)

![](_page_65_Figure_0.jpeg)

![](_page_65_Figure_5.jpeg)

APRIL 2005

FIGURE 23

![](_page_66_Figure_0.jpeg)

 $\sim$  $\sim$  $(\mathcal{N})$  $\bigcirc$ Ζ  $\geq$  $\triangleleft$ N  $\square$  $\mathbb{C}$  $\bigcirc$ N

![](_page_67_Figure_0.jpeg)

![](_page_68_Figure_0.jpeg)

![](_page_69_Figure_0.jpeg)

60 120 SCALE (IN FEET) ED BY DELCO CHA E APPROXIMATE. M -99-3 LOCATIONS S REPORT. ACS W PORT. R ADDITIONAL INFO	240 ASSIS DI (W-99- S BASED ELL LOC DRMATIO	VISION. 1, ON CATIONS		
7     Ground water Intermediate Intermediate Intermediate Intermediate Intermediate Intermediate Intermediate Intermediate Interme Subervent Chiorineted thore     Ground water Interme Subervent Cool (Cool)	Sund water Isrmedicts	und sctar armedide in mg/l 20/2003 9 mg/l 0.001 0 0.004 1 (0.001) NI 0.002 0 0.001 NI 0.001 NI 0.001 NI 0.001 NI 0.001 NI 0.001 NI 0.001 NI 0.001 NI 0.001 NI 0.001 NI 0.005 NI 0.005 NI 0.005 NI	und water samediate /////2003 mg// 0.003 0.003 0.003 0.003 0.003 0.003 0.003 0.001 0.001) 0.0001) 0.0001) 0.0001) 0.0001) 0.0001) 0.0001) 0.0001) 0.0001) 0.0001) 0.0001) 0.0001) 0.0001) 0.0001) 0.0001) 0.0001)	
Iround weter Shellow Shello	Ground woter Intermediate 11/14/2002 mg/J 0.57 ND (2) ND (	Ground wother information 3/19/2003 mg/l ND (1) ND (2) ND	Ground water Intermediate 9/8/2003 mg/l ND (0.5) ND (0.01) ND (0.001) ND (0.001)	
RESULT #9	DN FA	VCILIT	Y 2005 E 2	.7

![](_page_70_Picture_0.jpeg)

•

60 120 SCALE (IN FEET)	240	IN
ED BY DELCO CHAS E APPROXIMATE, M -99-3 LOCATIONS S REPORT, ACS WE PORT, R ADDITIONAL INFO	SSIS DIVISION. N-99-1, BASED ON LL LOCATIONS RMATION.	
Ground water Intermediate 11/18/2002         Ground water Intermediate 3/20/2003 mg/l           ND (0.01)         ND (0.01)           ND (0.01)         ND (0.01)           ND (0.01)         ND (0.01)		
ND         (0.01)         ND         (0.01)		
Ground water Shallow 3/12/2003 mg/l ND (0.01) ND (0.01)		
ND         (0.01)         ND         (0.01)		
MW-521	Ground water Intermediate 9/23/2002 11/14/20 ms/l ms/l	ter Ground water intermediate 2. 3/19/2003 mg/
Illow SV0A - PARe 2003 Benzo(a)enthracene 2/1 Benzo(b)fluoranthene Benzo(c)fluoranthene Benzo(c)fluoranthene 0.01) Dibenz(c),fluoranthene 0.01) Dibenz(c),fluoranthene 0.01) Dibenz(c),fluoranthene 0.01) Ruoranthene 0.01) Indeno(1,2,3-cd)pyrene 0.01) Nophtholene 0.01) Phenanthrene 0.01) Phenanthrene 0.01) SV0A - Phenols 0.01) SV0A - Phenols 0.01) Dimethylphenol 4 3	ND         (0.009)         ND         (0.0           ND         (0.009)         ND         (0.0	ND         (0.01)           ND         (0.01)
ASSIS DIVISIC	0.005 J ND (0.009) ND (0.0 0.002 - ND (0.0001) -	) ND (0.01) ND (0.03) 
RESULT PCRs IN	S Anr	#9
	APRIL	2005
	FIGUR	E 28

![](_page_71_Figure_0.jpeg)










Ground water Shallow Shallow 11/13/2002 3/12/2003 mg/l mg/l

ND (0.001)

0.002

ND (0.01)

ND (0.007) 0.15 ND (0.001) ND (0.002) ND (0.01) ND (0.02)

Ground water Shallow 11/13/2002 3/12/2003 9/3/2003 mg/1 mg/1 mg/1

2 <u>-</u>

0.003

 Soft
 Soft
 Soft
 Soft

 1.8-2.6(n)
 1-1.8(n)
 2.6-4(n)
 4-5.4(n)

 6/30/2002
 6/30/2002
 6/30/2002
 6/30/2002

ma/ka ma/ka ma/ka ma/ka

 3
 2.8
 4.1
 215

 0.07 J
 0.21 J
 0.17 J
 9.8

 7.9 J
 7.5 J
 10.4 J
 260 J

 6.4
 9.2
 8.3
 739

 8.4
 8.8
 36
 1080

 0.013
 0.015
 0.093
 M0 (0.005)

 3.9 J
 8.3 J
 6.3 J
 93.6 J

 0.67
 N0 (0.52)
 N0 (0.58)
 205

 1 J
 0.59 J
 N0 (0.51)
 228

 9.6 J
 21.5 J
 54.2 J
 3630 J

Soll 4-6(ft) 4/9/2004 mg/log

2.4 HE (0.23) 13.6 17.1 9.9 ND (0.024) 18.8 ND (4.5) ND (6.9) 59.2

Areenic Borken Codmium Chromium (total Lead Thaffiam

ND (0.007) 0.11 0.002 ND (0.002) ND (0.01) ND (0.01) ND (0.02)

Ground water Shallow 11/13/2002 mg/l Ground water Shallow 3/13/2003 mg/l Shallow 9/3/2003 mg/l

) Mitais Areenia Bartum Cadmitum Chromkum Lead Tholikum

01-104

Metals Arsimic Borkum Codmisum Chromisum Lind Thalifum

Soli 6-8(ft) 4/9/2004

\_ma/la

2.7

2.7 ND (0.22) 7.9 12 4.4 ND (0.022) 7.9 ND (4.4) ND (4.4) ND (6.5) 22.7

Goulind water Shollow 4/28/2004 mg/l

0.004 ND (0.001) ND (0.004) ND (0.006) ND (0.006) ND (0.006) ND (0.015) ND (0.015) ND (0.02) ND (0.02)

 $\oplus$ 

ACS

MW-4

Metola Arsenic Cadmium Chromium Copper Lead Mercuny Nickal Satonium Tholikum Zina

B-527

Metots Arientic Codmium Chromium Copper Laod Mercuny Nickel Selenium Thelium Thelium

11

0W-105 💮 OVERBURDEN MONITORING WELL LOCATION

- OVERBURDEN-BEDROCK INTERFACE MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION -
- ۲ DEEP BEDROCK MONITORING WELL LOCATION
- LNAPL INVESTIGATION PIEZOMETER LOCATION A A
- RI/FS INTERMEDIATE BEDROCK MONITORING WELL
- RI/FS OVERBURDEN-BEDROCK INTERFACE MONITORING WELL

(i) RI/FS SOIL BORING

OVERBURDEN-BEDROCK INTERFACE WELL, ABANDONED CHEMICAL SALES SITE

APPROXIMATE LOCATION OF PRINCIPAL STORMWATER OR COMBINED SEWER LINES (SHOWN ONLY ON EAST SIDE OF FACILITY)

SEWER SYSTEM MANHOLE SHOWING INVERT ELEVATION OF DISCHARGE PIPE

# NOTES:

Æ

MH-11 INV. 526.43

- BASE PLAN PROVIDED BY DELCO CHASSIS DIVISION. 1.
- ALL LOCATIONS ARE APPROXIMATE. MW-99-1, MW-99-2 AND MW-99-3 LOCATIONS BASED ON GOLDER ASSOCIATES REPORT. ACS WELL LOCATIONS BASED ON E&E REPORT.
- REFER TO TEXT FOR ADDITIONAL INFORMATION. 3

 $\oplus$ Soli 0.7--2(ft) 7/7/2002 Soli 2--4(ft) 7/7/2002 Soli 4-5(ft) 7/7/2002 Soli 6—8(ft) 7/7/2002 mg/log Soil 8–9.6(ft) 7/7/2002 mg/kg 
 1.2/2.8
 1.3
 2.7

 ND (0.04)/ND (0.08)
 ND (0.04)
 ND (0.05)
 ND (0.05)

 7.4 J/28.6 J
 10.9 J
 8.5 J

 8.1 J/18.2 J
 7.2 J
 8.4 J

 2.22/4.7
 2.7
 9.4

 ND (0.005)/ND (0.009)
 ND (0.005)
 0.007

 4.9/10
 5.5
 8

 0.635/ND (0.98)
 ND (0.52)
 ND (0.55)

 ND (0.44)/1.7 J
 ND (0.46)
 ND (0.46)

 14.2 J/27.8 J
 16.1 J
 18.2 J
 1.3 1.5 HD (0.04) ND (0.04) 22.9 J 20 J 7.5 J 13.7 J 2.8 3.1 ND (0.005) ND (0.005) N 6.2 8.5 ND (0.44) ND (0.43) ND (0.44) ND (0.43) 15.2 J 15.5 J 525.55 DODGE STREET SEWER (24" RCP") A Soli 4-5.4(ft) 11/21/1994 mg/kg 2.65 31.9 NB (0.5) ND (0.5) ND (0.5) ND (0.5) 150 124 NV. 516.98 Metots Arsenic Barlum Codmium Chromium Lood Morctary Solenium Lin Zine JAY STREET SEWER (36" SEGMENTED BLOCK) MH JAY ST Soil 0.6-2.6(ft) 11/22/1994 mg/kg Soli Soli 0.8-2(n) 4-4.8(n) 11/21/1994 11/21/1994 mg/kg mg/kg Métulis Arsonic Bairtum Cadmium Chromium Chromium Chromium Chromium Selenium Tin Zinc 2.67/3.52 27.4/26.5 ND (0.5)/ND (0.5 5.93/7.59 56.7/16.2 0.132/0.162 ND (0.5)/ND (0.5 5780/5520 68.1/29.2 5.45 2.51 38.7 31.4 ND (0.5) ND (0.1) 6.58 7.32 19 22.7 ND (0.1) ND (0.1) 0.932 ND (0.5) 4850 4510 29.7 13.5 120 240 SCALE (IN FEET) VALEO/FORMER GM DELCO CHASSIS DIVISION FACILITY GENERAL MOTORS CORPORATION HALFY & ALDRICH ROCHESTER, NEW YORK SAMPLE ANALYSIS RESULTS FOR METALS AT INDOOR NON-AOR LOCATIONS UNDERGROUND **ENGINEERING &** ENVIRONMENTAL APRIL 2005 SCALE: AS SHOWN SOLUTIONS FIGURE 3









FIGURE 36

Figures Excerpted from NYSDEC Record of Decision











#### LEGEND:

 $\diamond$ 

DEPRESSURIZATION SYSTEM PIPING

SUCTION POINT

TEMPORARY TEST POINT LOCATION

PERMANENT TEST POINT LOCATION



FAN LOCATION

Test Point	Initial Vacuum		
TP-1	-0.015		
TP-2	-0.046		
TP-3	-0.075		
TP-4	-0.102		
TP-5	-0.039		
TP-8	-0.011		
TP-9	(+)0.001		
TP-10	(+)0.002		
TP-11	-0.028		
TP-14	-0.004		
TP-17	-0.019		
TP-18	-0.019		
TP-19	-0.01		
TP-20	(+)0.017		
PT-1 (TP-12)	-0.029		
PT-2 (TP-13)	-0.001		
PT-3 (TP-16)	-0.004		
PT-4 (TP-21)	(+)0.003		
PT-5 (TP-22)	(+)0.001		
PT-6 (TP-15)	-0.022		
PT-7 (TP-7)	-0.018		
PT-8 (TP-6)	-0.035		
Note: ND -non-detect			



SCALE IN FEET



HALEY& VALEO/FORMER GM DELCO CHASSIS DIVISION FACILITY GENERAL MOTORS CORPORATION ROCHESTER, NEW YORK

#### AS-BUILT SUB-SLAB DEPRESSURIZATION SYSTEM PLAN

SCALE: AS SHOWN APRIL 2009

Figure 8

Soil Vapor Intrusion Information



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#### Table 1

#### Summary of SVI Follow-up GC Screening Results Former GM Delco Chassis Facility Site Rochester, New York



Sample Name		SVI-3		A	B	C	D	E	F	G
Sample Location	11 ' South a	and 30' East of c	olumn R-19	10' S and 8' E of R-19	20' N and 7' E of R-19	15' N and 30' E of R-19	0.5' N and 4' E of Q-19	10' N and 4' E of P-19	0.5' N and 20' E of Q-22	0' N/S and 20' E of R-22
Matrix	Sub-slab vapor	Soll vapor to :	24 " below slab	Soll vapor to 24 " below stab	Soll vapor to 24 * below slab	Soll vapor to 24 " below slab	Soil vapor to 24 * below slab	Soll vapor to 24 " below stab	Soil vapor to 24 " below slab	Soll vapor to 24 " below slab
Sample Date	4/11/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	8/21/2006	6/21/2006	6/21/2006	6/21/2006
Lab	CAS	H&A	H&A	H&A	H&A	H&A	H&A	H&A	H&A	H&A
Method	TO-15	GC	GC	GC	GC	GC	GC	GC	GC	GC
Concentration units	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
Injection volume		500 uL	Re-analysis w/ 250 uL	500 uL	250 ul.	500 ul.	500 uL	500 uL	500 uL	500 uL
Compound name										
Tetrachloroethene	ND <7,000	ND <200	ND <400	ND <200	450	ND <200				
Trichloroethene	220,000	332,000	320,000	13,500	144,000	82,900	18,900	6,220	3,200	210
cis-1,2-Dichloroethene	1,700,000	2,625,000	2,408,000	1,227,000	4,555,000	1,269,000	150,000	51,100	31,500	19,200
trans-1,2-Dichloroethene	60,000	85,000	79,000	89,000	191,000	42,700	220	ND <200	ND <200	ND <200
Vinyl Ch;orlde	ND <7,000	6,610	4,720	7,680	239,000	13,700	ND <200	ND <200	ND <200	ND <200
1,1-Dichloroethene	ND <7,000	ND <200	ND <400	ND <200						
1,1,1-Trichloroethane	ND <7,000	ND <200	ND <400	ND <200	ND <400	ND <200				
1,1-Dichloroethane	ND <7,000	ND <200	ND <400	ND <200	ND <400	ND <200				
Chloroform	ND <7,000	ND <200	ND <400	ND <200	ND <400	ND <200				
Methylene Chloride	ND <7,000	ND <200	ND <400	ND <200	ND <400	ND <200				
Benzene	ND <7,000	ND <200	ND <400	ND <200	ND <400	ND <200				
Toluene	ND <7,000	ND <200	ND <400	1,180	ND <400	ND <200	ND <200	ND <200	1,840	ND <200
Ethylbenzene	ND <7,000	700	1,240	1,200	1,440	ND <200				
o-Xylene	ND <7,000	420	ND <400	ND <200	2,160	ND <200				
m,p-Xylenes	8,600	1,980	2,080	2,360	ND <200	400	580	ND <200	520	ND <200
MEK	ND <7.000	ND <200	ND <400	ND <400	ND <200					
MTBE	ND <7.000	ND <200	ND <400	ND <400	ND <200					
Total VOCs	1.988.600	3.051.710	2,815,040	1 341 920	5,133,050	1,408,700	169 700	57 320	37 080	19,410

Sample Name	Н	1	J	К	L	N	P	Q	T	U
11	4' N and 20' E	5' N and 30' W	2' N and 8' E of	2' N and 30' E	6' N and 4' E	4' N and 40' E	12' S and 1' E	4' N and 10' E	27' N and 26' E	27' N and 20'
Sample Location	of S-22	of 6-22	S-19	of \$-19	of S-16	of R-16	of Q-16	of R-16	of T-19	W of T-19
Matrix	Soil vapor to	Soll vapor to	Soil vapor to	Soll vapor to	Soil vapor to	Soil vapor to	Soll vapor to	Soll vapor to	Soil vapor to	Soil vapor to
	24 " below slab	24 " below slab	24 " below slab	24 " below slab	24 " below slab	24 " below slab	24 " below slab	24 " below slab	24 * below slab	24 * below slab
Sample Date	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006	6/21/2006
Lab	H&A	H&A	H&A	H&A	H&A	H&A	H&A	H&A	H&A	H&A
Method	GC	GC	GC	GC	GC	GC	GC	GC	GC	GC
Concentration units	µg/m3	µg/m3	µg/m3	µg/m3	μ <u>p</u> /m3	pg/m3	µg/m3	µg/m3	µg/m3	pg/m3
Injection volume	500 uL	500 uL	500 uL	500 uL	600 uL	500 uL	500 uL	500 uL	500 ul.	500 uL
Compound name										
Tetrachloroethene	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	480	ND <200	ND <200	ND <200
Trichloroethene	1,240	ND <200	6,260	1,100	ND <200	1,930	ND <200	1,980	ND <200	ND <200
cis-1,2-Dichloroethene	12,000	6,410	410	1,000	ND <200	1,390	ND <200	2,210	660	ND <200
trans-1,2-Dichloroethene	ND <200	ND <200	ND <200	ND <200	ND <200	240	ND <200	240	ND <200	ND <200
Vinyl Ch;oride	3,620	ND <200	ND <200	ND <200	1.120	ND <200	200	340	ND <200	ND <200
1,1-Dichloroethene	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
1,1.1-Trichloroethane	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
1,1-Dichloroethane	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
Chioroform	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
Methylene Chloride	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
Benzene	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
Toluene	ND <200	540	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
Ethylbenzene	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
o-Xylene	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
m,p-Xylenes	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
MEK	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
MTBE	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200	ND <200
Total VOCs	17,360	6,950	6,670	2,100	1,120	3,560	680	4,770	660	0

TABLES

#### Table 1 Nature and Extent of Soil Exceedances 1555 Lyell Avenue Rochester, New York NYSDEC Site Number 828099

Detected Constituents	Concentration Range Detected (ppm) <sup>a</sup>	Unsrestricted SCB <sup>b</sup> (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Commercial SCG <sup>c</sup> (ppm)	Frequency Exceeding Restricted Commercial SCG	Protection of Groundwater SCG <sup>d</sup> (ppm)	Frequency Exceeding Protection of Groundwater SCG
Volatile Organic Compounds	(VOCs)						
Acetone	ND - 0.57	0.05	10 of 358	500	0 of 358	0.05	10 of 358
Benzene	ND - 0.8	0.06	2 of 358	44	0 of 358	0.06	2 of 358
Ethylbenzene	ND - 9,100	1	38 of 358	390	4 of 358	1	38 of 358
Toluene	ND - 100	0.7	7 of 358	500	0 of 358	0.7	7 of 358
Total Xylenes	ND - 36,000	0.26	53 of 358	500	30 of 358	1.6	51 of 358
1,1,1-Trichloroethane	ND - 5.2	0.68	3 of 358	500	0 of 358	0.68	3 of 358
Cis-1,2-dichloroethene	ND - 5.1	0.25	2 of 358	500	0 of 358	0.25	2 of 358
Semivolatile Organic Compounds (SVOCs)							
Benzo(a)anthracene	ND - 55	1	83 of 126	5.6	31 of 126	1	83 of 126
Benzo(a)pyrene	ND - 93	1	92 of 126	1	92 of 126	22	7 of 126
Benzo(b)fluoranthene	ND - 130	1	99 of 126	5.6	52 of 126	1.7	95 of 126
Benzo(k)fluoranthene	ND - 87	0.8	84 of 126	56	1 of 126	1	84 of 126
Chrysene	ND - 73	1	96 of 126	56	1 of 126	1	96 of 126
Dibenzo(a,h)anthracene	ND - 21	0.33	62 of 126	0.56	50 of 126	1,000	0 of 126
Indeno(1,2,3-cd)pyrene	ND - 54	0.5	91 of 126	5.6	27 of 126	8.2	15 of 126
Naphthalene	ND - 32	12	1 of 126	500	0 of 126	12	1 of 126
Metals							
Arsenic	ND - 15.5	13	2 of 214	16	0 of 214	16	0 of 214
Barium	ND - 30,000	350	9 of 214	4,000	3 of 214	820	5 of 214
Cadmium	ND - 48.1	2.5	9 of 214	9.3	4 of 214	7.5	5 of 214
Chromium (trivalent)		30	19 of 214	1,500	2 of 214	NS*	
Chromium (hexavalent)	ND - 080	1	25 of 214	400	3 of 214	19	1 of 214
Copper	ND - 3,570	50	16 of 214	270	11 of 214	1,720	1 of 214
Lead	NE - 5,200	63	16 of 214	1,000	7 of 214	450	8 of 214
Mercury	ND - 1.99	0.18	of 214	2.8	0 of 214	0.73	1 of 214
Nickel	ND - 110	30	of 214	310	0 of 214	130	0 of 214
Silver	ND - 10.5	2	of 214	1,500	0 of 214	8.3	3 of 214
Zinc	ND - 1,440	109	of 214	10,000	0 of 214	2,480	0 of 214
Polychlorinated Biphenyls (PCBs)							
Total PCBs	ND - 8.5	0.1	6 of 144	1	6 of 144	3.2	2 of 144

Notes

a - ppm: parts per million, which is equivalent to milligrams per kilogram (mg/kg) in soil

b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives

c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Restricted Commercial use

d - SCG: Part 375-8.6(b), Restricted Use Soil Cleanup Objectives for the Protection of Groundwater

#### Table 2 Nature and Extent of Groundwater Exceedances 1555 Lyell Avenue Rochester, New York NYSDEC Site Number 828099

	Concentration		Frequency
	Range Detected	SCGb (ppb)	Exceeding
<b>Detected Constituents</b>	(ppb) <sup>a</sup>		SCG
Volatile Organic Compounds	(VOCs)		
1,1,1-Trichloroethane	ND - 2,700	5	6 of 210
1,1-Dichloroethane	ND - 3,600	5	48 of 210
1,1-Dichloroethene	ND - 700	5	8 of 210
Benzene	ND - 710	1	26 of 210
Cis-1,2-dichloroethene	ND - 46,000	5	51 of 210
Ethylbenzene	ND - 3,200	5	17 of 210
Tetrachloroethene	ND - 80	5	1 of 210
Toluene	ND - 2,200	5	20 of 210
Trans-1,2-dichloroethene	ND - 120	5	6 of 210
Trichloroethene	ND - 5,200	5	11 of 210
Vinyl chloride	ND - 3,000	2	44 of 210
Xylenes (total)	ND - 3,200	5	32 of 210
Metals			
Cadmium	ND - 20	5	7 of 210
Lead	ND-52	25	3 of 210

Notes:

a - ppb: parts per billion, which is equivalent to micrograms per liter ( $\mu$ g/I), in water

b - SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGS 1.1.1), 6 NYCRR Part 703, Surface Water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5)

#### **APPENDIX A**

## LIST OF SITE CONTACTS

# **APPENDIX A – LIST OF SITE CONTACTS**

Name	Phone/Email Address
Ivallie	1 HOHE/12HIAH AUUL CSS
Maguire Family Properties, Inc.	585-338-2269
Attn: Dennis Maguire	
Property Owner	dext@rochester.rr.com
Todd Caffoe, P.E.	585-226-5350
NYSDEC Project Manager	Todd.Caffoe@dec.ny.gov
Bernette Schilling, P.E.	585-226-5415
NYSDEC Regional HW Engineer	Bernette.Schilling@dec.ny.gov
Day Environmental, Inc.	585-454-0210 x104
Attn: David D. Day, President	
Environmental Consultant	dday@daymail.net

## **APPENDIX B**

#### **EXCAVATION WORK PLAN**

#### APPENDIX B: EXCAVATION WORK PLAN (EWP)

Note: This EWP describes the general procedures to be used for Site activities that may result in disturbance of subsurface soils and groundwater at the Site, but for which a separate work plan has not been approved by the NYSDEC. This EWP does not apply to the northern portion of the Site that is not subject to the ISMP (Refer to Figure 2).

#### **B-1 NOTIFICATION**

At least 15 days prior to the start of any activity that is anticipated to encounter remaining Site contamination, the Site owner or owner representative will notify the NYSDEC. Table B-1 includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information.

#### Table B-1: Notifications\*

Todd Caffoe, P.E.	585-226-5350
NYSDEC Project Manager	Todd.Caffoe@dec.ny.gov

\* Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

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

#### **B-2 SOIL SCREENING METHODS**

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

Soils will be segregated based on previous environmental data and screening results into material that requires off-Site disposal and material that requires testing to determine if the material can be reused on-Site as soil beneath a cover (e.g., in the Soil Re-Use Area) or if the material can be used as cover soil. Further discussion of off-Site disposal of materials and on-Site reuse is provided in Section B-6 and B-7 of this EWP.

#### **B-3 SOIL STAGING METHODS**

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

Subsurface materials that are suspected to be contaminated based on screening will be placed on minimum 10-millimeter plastic sheeting. Soil or fill stockpiles will be continuously encircled with a berm and/or silt fence. Stockpiles will be kept covered with appropriately anchored minimum 10-millimeter plastic sheeting. Stockpiles will be routinely observed, and damaged plastic sheeting covers will be promptly replaced.

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

#### **B-4 MATERIALS EXCAVATION AND LOAD-OUT**

A qualified environmental professional (QEP) or person under the QEP's supervision will oversee any invasive work, and the excavation and load-out of excavated material.

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of 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 ISMP 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 other applicable transportation requirements).

A truck wash will be operated on-Site, as appropriate. The qualified environmental professional will be responsible for ensuring that outbound trucks will be washed at the truck wash before leaving the Site until the activities performed under this section are complete. Truck wash waters will be collected and disposed in accordance with applicable regulations.

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 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.

#### **B-5 MATERIALS TRANSPORT OFF-SITE**

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.

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, construction/demolition recycling facility, etc). Actual disposal quantities and associated documentation will be reported to the NYSDEC. 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 6 NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted soil cleanup objectives (SCOs) is prohibited from being taken to a New York State recycling facility (6 NYCRR Part 360-16 Registration Facility).

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

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

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

#### **B-6 MATERIALS DISPOSAL OFF-SITE**

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

Off-Site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, (i.e.

hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc). Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

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

#### **B-7 MATERIALS REUSE ON-SITE**

Chemical criteria for on-Site re-use of material (e.g., soil) need to be approved by NYSDEC. The ROD specifies that if the upper one foot of exposed surface soil will exceed the applicable SCOs, then a Site cover, which may consist of either structures such as buildings, pavement, sidewalks or a minimum of one foot of soil, will be maintained. If a soil cover is needed, it will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer.

The qualified environmental professional will ensure that the procedures defined for materials reused on-Site will be followed, and that unacceptable material does not remain on-Site. Contaminated on-Site material, including historic fill and contaminated soil, that is acceptable for re-use on-Site will be placed below the demarcation layer or impervious surface, and will not be re-used within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for re-use on-Site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-Site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site will not be re-used on-Site.

#### **B-8 FLUIDS MANAGEMENT**

Any liquids to be removed from the Site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the Site, and will be managed off-Site, unless prior approval is obtained from NYSDEC.

If LNAPL is encountered during development related construction, excavation activities will be suspended until sufficient equipment is mobilized and used to address the condition. Consistent with the ROD, any collected LNAPL will be separated from the collected groundwater and be transported off-Site for disposal in accordance with applicable regulations.

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.

#### **B-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 Record of Decision. The existing cover system is comprised of a minimum of 12 inches of clean soil with the upper six inches of sufficient quality to maintain a vegetation layer; asphalt pavement; concrete covered sidewalks; and, concrete building.

Where a soil cover is required, it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the Site will meet the requirements for the identified Site use as set forth in 6 NYCRR Part 375-6.7(d).

Where a type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in any subsequent Periodic Review Report and in an updated SMP.

#### **B-10 BACKFILL FROM OFF-SITE SOURCES**

Materials proposed for import onto the Site will be approved by the qualified environmental professional and will be in compliance with provisions of this ISMP prior to receipt at the Site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC Project Manager allowing a minimum of 5 business days for review.

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

Imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d) for Commercial Restricted Use Soil Cleanup Objectives (CSCOs) as set forth in 6NYCRR 375 6.8(b). 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.

#### **B-11 STORMWATER POLLUTION PREVENTION**

This section describes activities to be used during excavation activities, as needed to control erosion and prevent off-Site transport of sediments. The activities described below will be implemented as required:

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

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

#### **B-12 EXCAVATION CONTINGENCY PLAN**

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

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the Site history and previous sampling results provide a sufficient justification to limit the list of analytes. In that 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 products will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

#### **B-13 COMMUNITY AIR MONITORING PLAN (CAMP)**

The CAMP is included in the HASP that has been developed for the Site (refer to Appendix E). CAMP continuous monitoring will be implemented for any ground intrusive activities at the Site. The locations of air sampling stations will be based on generally prevailing wind conditions, and also on where Site work is being performed. CAMP locations will be adjusted on a daily or more frequent basis dependent on actual wind direction to provide an upwind and at least one downwind monitoring station.

Exceedances of action levels listed in the CAMP will be documented on CAMP monitoring logs.

#### **B-14 ODOR CONTROL PLAN**

This odor control plan is capable of controlling emissions of nuisance odors off-Site. If nuisance odors are identified at the Site boundary, or if odor complaints are received, work will be halted and

Day Environmental, Inc.

the source of odors will be identified and corrected. Work will not resume until nuisance odors have been abated. NYSDEC and NYSDOH will be notified of any nuisance odors that halt work. Implementation of odor controls, including the halt of work, is the responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in subsequent reports.

Necessary means will be employed to prevent on- and off-Site nuisance odors. At a minimum, these measures will include: limiting the area of open excavations and size of soil stockpiles; shrouding open excavations with tarps and other covers; and, using foams to cover exposed odorous soil. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: direct load-out of soils to trucks for off-Site disposal; use of chemical odorants in spray or misting systems; and/or, 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.

#### **B-15 DUST CONTROL PLAN**

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

#### **B-16 OTHER NUISANCES**

As necessary, rodent control will be implemented by the contractor prior to and during any Site clearing and Site grubbing, and during remedial work activities.

As necessary, the contractor will ensure that remedial activities are in compliance with local noise control ordinances.

# APPENDIX C

### FIELD SAMPLING PLAN

# APPENDIX C – FIELD SAMPLING PLAN

Remedial actions associated with the Record of Decision have not yet been completed at the Site. The Final SMP will include a Field Sampling Plan.

#### **APPENDIX D**

# QUALITY ASSURANCE PROJECT PLAN

# **APPENDIX D – QUALITY ASSURANCE PROJECT PLAN**

Remedial actions associated with the Record of Decision have not yet been completed at the Site. The Final SMP will include a Quality Assurance Project Plan.

# **APPENDIX E**

#### HEALTH AND SAFETY PLAN

and

#### COMMUNITY AIR MONITORING PLAN

# APPENDIX E – HEALTH AND SAFETY PLAN (HASP) & COMMUNITY AIR MONITORING PLAN (CAMP)

Note: The following HASP and CAMP have been prepared previously for work completed at the Site. These may be revised based upon future Site activities.

#### HEALTH AND SAFETY PLAN PROPOSED EAST LOADING DOCKS PROJECT

#### 1555 LYELL AVENUE ROCHESTER, NEW YORK

NYSDEC SITE #828099

Prepared for:	Maguire Family Properties, Inc. 770 Rock Beach Road Rochester, New York 14617
Prepared by:	Day Environmental, Inc. 1563 Lyell Avenue Rochester, New York 14606
Project No.:	49358-14
Date:	March 2014
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# ATTACHMENTS

Attachment 1	Daily Air Monitoring Logs and Figure
Attachment 2	Figure 1 - Route for Emergency Services

# 1.0 INTRODUCTION

This Health and Safety Plan (HASP) outlines the policies and procedures to protect workers and the public from potential environmental hazards posed during construction of a loading dock addition and associated ramp on the east side of Building A between Buildings A1 and A2 in an area where there is a potential to disturb contaminated media (e.g., soil, fill, groundwater) associated with the Area of Review #1 (AOR #1) of 1555 Lyell Avenue, City of Rochester, County of Monroe, New York (Site), which is listed as Site #828099 in the Registry of Inactive Hazardous Waste Disposal Sites in New York State. Construction activities that entail the potential disturbance of AOR #1 contaminated media will be conducted in accordance with the site-specific Excavation Management Plan (EMP). In addition to the requirements outlined in the EMP and HASP, activities shall be conducted in a manner to reduce the probability of injury, accident, or incident occurrence.

# **1.1 SITE HISTORY/OVERVIEW**

The Site is an approximately one-hundred-fifteen (115) acre parcel on the western edge of the City of Rochester (refer to Figure 1 included in Appendix A). The Site was previously known as the Valeo/Former GM Delco Chassis Division Facility and is currently improved with an approximate 1.5 million square-foot former manufacturing facility. The remaining portions of the Site are largely paved parking areas. A small wooded area is located along the south western property line. A railroad line borders the eastern property line and the New York State Barge Canal is located at the western edge of the Site. The Abandoned Chemical Sales Site (#828105) is located on the opposite side of the railroad line on along the eastern boundary of the Site.

Based on the remedial investigations conducted at the Site, eight known and potential source areas of contamination have been identified and addressed under the New York State Department of Environmental Conservation's (NYSDEC)'s 2012 Record of Decision (ROD) for the Site. Because the proposed East Loading Dock project will be conducted in one of these areas (AOR #1), this HASP concentrates on the issues pertaining to AOR #1.

AOR #1 includes the former underground storage tank (UST) area that contained USTs for storage of solvents, lubricating oils, hydraulic oil, gasoline and waste since 1952. Twelve tanks were installed in 1968 and replaced with four tanks in 1987. These four USTs were removed in 2005 by Valeo Electrical Systems, Inc. (Valeo). AOR #1 includes soil impacts associated with past releases from the USTs and from a former fill station and associated underground fill lines previously located east of the former USTs. Limited impacted soil was removed in 1987 and 1995 and impacted soil, groundwater and petroleum-related light non-aqueous phase liquid (LNAPL) remain in the area. Types of contaminants include petroleum hydrocarbon volatile organic compounds (VOCs), ketones, chlorinated VOCs, polyaromatic hydrocarbon (PAH) semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs).

# **1.2** PLANNED ACTIVITIES COVERED BY HASP

This HASP is to be implemented during the construction activities associated with the East Loading Dock project and it is intended to address contaminated soil, groundwater and LNAPL associated with AOR #1 that may potentially be disturbed during the project. This HASP is not intended to cover general health and safety regulations that are associated with normal construction activities. The owner of the property, its contractors, and other Site workers will be responsible for the development and/or implementation of health and safety provisions associated with normal construction activities or Site activities.

# 2.0 KEY PERSONNEL AND MANAGEMENT

The Project Manager (PM) and Site Safety Officer (SSO) are responsible for addressing health and safety requirements, and implementing the HASP.

# 2.1 **PROJECT MANAGER**

The PM has the overall responsibility for the project and will coordinate with the SSO to ensure that the goals of the project are attained in a manner consistent with the HASP requirements.

# 2.2 SITE SAFETY OFFICER

The SSO has responsibility for administering the HASP relative to Site activities, and will be in the field while activities are in progress. The SSO's operational responsibilities will be monitoring, including personal and environmental monitoring, ensuring personal protective equipment (PPE) maintenance and use, and identification of protection levels. The air monitoring data obtained by the SSO will be available in the field for review by the regulatory agencies, and other on-site personnel.

# 2.3 EMPLOYEE SAFETY RESPONSIBILITY

Each employee is responsible for personal safety as well as the safety of others in the area. Each employee will use the equipment provided in a safe and responsible manner as directed by the SSO.

## 2.4 KEY SAFETY PERSONNEL

The following individuals are anticipated to share responsibility for health and safety of Day Environmental, Inc. (DAY) representatives at the Site:

DAY Project Manager Jeffrey Danzinger

DAY Site Safety Officer William Battiste, Charles Hampton, or Christie Sobol

#### 3.0 SAFETY RESPONSIBILITY

DAY is required to implement its on-site work in accordance with the provisions set forth in this HASP for the protection of its personnel. Contractors, consultants, state or local agencies, or other parties, and their employees that enter the Site will be responsible for their own safety while on-site and must adopt this HASP to cover their own work, or prepare their own HASP that is as protective as this HASP and is approved by the NYSDEC and the New York State Department of Health (NYSDOH).

# 4.0 JOB HAZARD ANALYSIS

There are many hazards associated with construction work, and this HASP discusses some of the anticipated hazards for this Site. The hazards listed below deal specifically with those hazards associated with the management of the contaminated soil

# 4.1 CHEMICAL HAZARDS

Chemical substances can enter the unprotected body by inhalation, skin absorption, ingestion, or through a puncture wound (injection). A contaminant can cause damage to the point of contact or can act systemically, causing a toxic effect at a part of the body distant from the point of initial contact.

VOCs, PAH SVOCs, PCBs and LNAPL have been detected in soil and/or groundwater within AOR #1. A list of selected constituents that have been detected at the Site and exceed soil or groundwater standards, criteria and guidance (SCG) values are presented below. This list also presents the Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs), National Institute for Occupational Safety and Health (NIOSH) recommended exposure limits (RELs), and NIOSH immediately dangerous to life or health (IDLH) levels.

CONSTITUENT	OSHA PEL	NIOSH REL	IDLH		
Benzene	1 ppm	0.1 ppm	500 ppm		
Toluene	200 ppm	100 ppm	500 ppm		
Ethylbenzene	100 ppm	100 ppm	800 ppm		
Xylene	100 ppm	100 ppm	900 ppm		
1,1,1-Trichloroethane	350 ppm	350 ppm	700 ppm		
Benzo(a)anthracene <sup>1</sup>	$0.2 \text{ mg/m}^3$	$0.1 \text{ mg/m}^3$	$80 \text{ mg/m}^3$		
Benzo(a)pyrene <sup>1</sup>	$0.2 \text{ mg/m}^3$	$0.1 \text{ mg/m}^3$	$80 \text{ mg/m}^3$		
Benzo(b)fluoranthene <sup>1</sup>	$0.2 \text{ mg/m}^3$	$0.1 \text{ mg/m}^3$	$80 \text{ mg/m}^3$		
Dibenzo(a,h)anthracene	$0.2 \text{ mg/m}^3$	$0.1 \text{ mg/m}^3$	$80 \text{ mg/m}^3$		
PCBs	$0.5 \text{ mg/m}^3$	$0.001 \text{ mg/m}^3$	$5 \text{ mg/m}^3$		
NA = Not Available <sup>1</sup> As coal Tar Pitch ppm = parts per million $mg/m^3 = milligram$ per meter cubed					

The potential routes of exposure for these constituents include inhalation, ingestion, skin absorption and/or skin/eye contact, which are dependent on the activity being conducted. The most likely routes of exposure for the activities that are to be performed during environmental activities at the Site include inhalation and skin/eye contact.

# 4.2 PHYSICAL HAZARDS

There are physical hazards associated with this project, which might compound the chemical hazards. Hazard identification, training, adherence to the planned remedial measures and development plans, and careful housekeeping can prevent many problems or accidents arising

from physical hazards. Potential physical hazards associated with this project and suggested preventative measures include:

- <u>Slip/Trip/Fall Hazards</u> Some areas may have wet surfaces that will greatly increase the possibility of inadvertent slips. Caution must be exercised when using steps and stairs due to slippery surfaces in conjunction with the fall hazard. Good housekeeping practices are essential to minimize the trip hazards.
- <u>Small Quantity Flammable Liquids</u> If small quantities of flammable liquids are brought on-site, they will be stored in "safety" cans and labeled according to contents.
- <u>Electrical Hazards</u> Electrical devices and equipment shall be de-energized prior to working near them. Extension cords will be kept out of water, protected from crushing, and inspected regularly to ensure structural integrity. Temporary electrical circuits will be protected with ground fault circuit interrupters. Only qualified electricians are authorized to work on electrical circuits. Heavy equipment (e.g., backhoe, drill rig) shall not be operated within 10 feet of high voltage lines.
- <u>Noise</u> Work around large equipment often creates excessive noise. The effects of noise can include:
  - Workers being startled, annoyed, or distracted.
  - Physical damage to the ear resulting in pain, or temporary and/or permanent hearing loss.
  - Communication interference that may increase potential hazards due to the inability to warn of danger and proper safety precautions to be taken.

If employees are subjected to noise exceeding an 8-hour time weighted average sound level of 90 d(B)A (decibels on the A-weighted scale), feasible administrative or engineering controls shall be utilized. In addition, whenever employee noise exposures equal or exceed an 8-hour, time weighted average sound level of 85 d(B)A, employers shall administer a continuing, effective hearing conservation program as described in OSHA Regulation 29 CFR Part 1910.95.

<u>Heavy Equipment</u> - Each morning before start-up, heavy equipment will be inspected to ensure safety equipment and devices are operational and ready for immediate use.

<u>Subsurface and Overhead Hazards</u> - Before any excavation activity, efforts will be made to determine whether underground utilities and potential overhead hazards will be encountered. Underground utility clearance must be obtained prior to subsurface work.

# 4.3 ENVIRONMENTAL HAZARDS

Environmental factors such as weather, wild animals, insects, and irritant plants always pose a hazard when performing outdoor tasks. Reasonable efforts will be made to alleviate these hazards should they arise.

# 4.3.1 Heat Stress

The combination of warm ambient temperature and protective clothing increases the potential for heat stress. In particular:

- Heat rash
- Heat cramps
- Heat exhaustion
- Heat stroke

Site workers will be encouraged to increase consumption of water and electrolyte-containing beverages such as Gatorade when the potential for heat stress exists. In addition, workers are encouraged to take rests whenever they feel any adverse effects that may be heat-related. The frequency of breaks may need to be increased upon worker recommendation to the SSO.

# 4.3.2 Exposure to Cold

With outdoor work in the winter months, the potential exists for hypothermia and frostbite. Protective clothing greatly reduces the possibility of hypothermia in workers. However, personnel will be instructed to wear warm clothing and to stop work to obtain more clothing if they become too cold. Employees will also be advised to change into dry clothes if their clothing becomes wet from perspiration or from exposure to precipitation.

# 5.0 SITE CONTROLS

To prevent migration of potential contamination caused through tracking by personnel or equipment, work areas, and personal protective equipment staging/decontamination areas will be clearly specified prior to beginning operations.

# 5.1 SITE ZONES

In areas where contaminated soil and groundwater or LNAPL presents a potential for worker exposure (work zone), personnel entering the area must wear the mandated level of protection for the area. A "transition zone" shall be established where personnel can begin personal and equipment decontamination procedures. This can reduce potential off-site migration of contaminated soil or groundwater or LNAPL. If contaminated soil or groundwater or LNAPL is encountered and equipment or clothing become contaminated, they will not be allowed outside the transition zone (e.g., on clean portions of the Site). Operational support facilities will be located outside the transition zone (i.e., in a "support zone"), and normal work clothing and support equipment are appropriate in this area. If possible, the support zone should be located upwind of project activities.

## 5.2 GENERAL

The following items will be requirements to protect the health and safety of workers during implementation of project activities that disturb impacted soil or groundwater or LNAPL.

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand to mouth transfer and ingestion of contamination shall not occur in the work zone and/or transition zone during disturbance of contaminated soil or groundwater.
- Personnel admitted in the work zone shall be properly trained in health and safety techniques and equipment usage.
- No personnel shall be admitted in the work zone without the proper safety equipment.
- Proper decontamination procedures shall be followed before leaving the Site.

# 6.0 **PROTECTIVE EQUIPMENT**

This section addresses the various levels of PPE that are or may be required at this Site. Personnel entering the work zone and transition zone shall be trained in the use of the anticipated PPE to be utilized.

## 6.1 ANTICIPATED PROTECTION LEVELS

The following table summarizes the protection levels (refer to Section 6.2) anticipated for various tasks to be implemented during re-development activities.

TASK	PROTECTION LEVEL	COMMENTS/ MODIFICATIONS
Site mobilization	D	
Site preparation	D	
Extrusive work (e.g., surveying, etc.)	D	
Intrusive work (e.g., excavating, trenching, etc.)	C/Modified D/D	Based on air monitoring and SSO discretion
Support zone	D	
Site breakdown and demobilization	D	

During the project, air in the worker's breathing zone and on the Site (upwind, downwind, etc.) shall be monitored for dusts, aerosols, particulates, etc. using a real time air monitor (RTAM) and VOCs using a photoionization detector (PID). The air monitoring program will be used to assist in determining the level of PPE required (see Section 8.0).

It is anticipated that work conducted as part of this project will be performed in Level D or modified Level D PPE. If conditions are encountered that require higher levels of PPE (e.g., Level C, B, or A), the work will immediately be stopped. The appropriate regulatory authorities (e.g., NYSDEC, etc.) will be notified, and the proper health and safety measures will be implemented (e.g., develop and implement engineering controls, upgrade in PPE, etc.).

## 6.2 **PROTECTION LEVEL DESCRIPTIONS**

This section lists the minimum requirements for each protection level. Modifications to these requirements can be made upon approval of the SSO. If Level A, Level B, and/or Level C PPE are required, Site personnel that enter the work zone and/or transition zone must be properly trained in the use of those levels of PPE.

## 6.2.1 Level D

Level D consists of the following:

• Safety glasses with side shields

- Hard hat
- Hard-toed work boots
- Work gloves
- Work clothing as prescribed by weather

#### 6.2.2 Modified Level D

Modified Level D consists of the following:

- Safety glasses with side shields
- Hard hat
- Hard-toed work boots
- Work gloves
- Outer protective wear, such as Tyvek coverall [Tyveks (Sarans) and polyvinyl chloride (PVC) acid gear will be required when workers have a potential to be exposed to impacted liquids or particulates.]

#### 6.2.3 Level C

Level C consists of the following:

- Air-purifying respirator with appropriate cartridges
- Outer protective wear, such as Tyvek coverall [Tyveks (Sarans) and PVC acid gear will be required when workers have a potential to be exposed to impacted liquids or particulates.]
- Hard hat
- Hard-toed work boots
- Nitrile, neoprene, or PVC overboots, if appropriate
- Nitrile, neoprene, or PVC gloves, if appropriate
- Face shield (when projectiles or splashes pose a hazard)

## 6.2.4 Level B

Level B protection consists of the items required for Level C protection with the exception that an air-supplied respirator is used in place of the air-purifying respirator. Level B PPE is not anticipated to be required during this project. If the need for Level B PPE becomes evident, Site activities will be ceased until Site conditions are further evaluated, and any necessary modifications to the HASP have been approved by the PM and SSO. Subsequently, the appropriate safety measure (including Level B PPE) must be implemented prior to commencing Site activities.

# 6.2.5 Level A

Level A protection consists of the items required for Level B protection with the addition of a fully-encapsulating, vapor-proof suit capable of maintaining positive pressure. Level A PPE is not anticipated to be required during this project. If the need for Level A PPE becomes evident, Site activities will be ceased until Site conditions are further evaluated, and any necessary modifications to the HASP have been approved by the PM and SSO. Subsequently, the appropriate safety measures (including Level A PPE) must be implemented prior to commencing Site activities.

# 6.3 **RESPIRATORY PROTECTION**

Any respirator used will meet the requirements of OSHA 29 CFR 1910.134. Both the respirator and cartridges specified shall be fit-tested prior to use in accordance with OSHA regulations (29 CFR 1910). Air purifying respirators shall not be worn if contaminant levels exceed designated use concentrations. The workers will wear respirators with approval for: organic vapors <1,000 ppm; and dusts, fumes and mists with a time weighted average (TWA) <0.05 mg/m<sup>3.</sup>

No personnel who have facial hair, which interferes with the respirator's sealing surface, will be permitted to wear a respirator and will not be permitted to work in areas requiring respirator use.

Only workers who have been certified by a physician as being physically capable of respirator usage shall be issued a respirator. Personnel unable to pass a respiratory fit test or without medical clearance for respirator use will not be permitted to enter or work in areas on-site that require respirator protection.

# 7.0 DECONTAMINATION PROCEDURES

This section describes the procedures necessary to ensure that both personnel and equipment are free from potential contamination when they leave the work Site.

#### 7.1 PERSONNEL DECONTAMINATION

As deemed necessary by the SSO, personnel involved with activities that involve disturbing potentially impacted media (soil, fill material, etc.) will follow the decontamination procedures described herein to ensure that material which workers may have contacted in the work zone and/or transition zone does not result in personal exposure and is not spread to clean areas of the Site. This sequence describes the general decontamination procedure. The specific stages can vary depending on the Site, the task, and the protection level, etc.

- 1. Leave work zone and go to transition zone
- 2. Remove soil/debris from boots and gloves
- 3. Remove boots
- 4. Remove gloves
- 5. Remove Tyvek suit and discard, if applicable
- 6. Remove and wash respirator, if applicable
- 7. Go to support zone

#### 7.2 EQUIPMENT DECONTAMINATION

If equipment becomes contaminated, it shall be decontaminated in the transition zone before leaving the Site. Decontamination procedures can vary depending upon the contaminant involved, but may include sweeping, wiping, scraping, hosing, or steam cleaning the exterior of the equipment. Personnel performing this task will wear the proper PPE.

#### 7.3 DISPOSAL

Disposable clothing will be treated as contaminated waste or solid waste and be disposed of properly. Liquids (e.g., decontamination water, etc.), if generated by project activities, will be disposed of in accordance with applicable regulations.

# 8.0 AIR MONITORING

Air monitoring will be conducted in order to determine airborne particulate and potential contamination levels. This ensures that respiratory protection is adequate to protect personnel against the chemicals that may be encountered and that potential chemical contaminants are not migrating off-site. Additional air monitoring may be conducted at the discretion of the SSO.

The following chart describes the direct reading instrumentation that will be utilized and the currently anticipated action levels.

Monitoring Device	Action level	Response/Level of PPE	
	< 25 ppm in breathing zone	Level D	
PID Volatile Organic Compound Meter	25-100 ppm in breathing zone	Cease work, implement vapor suppression techniques such as application of BioSolve. If levels are not reduced below 25 ppm in the breathing zone, then upgrade PPE to <u>Level C</u> .	
	> 100 ppm in breathing zone	Stop work, evaluate the use of engineering controls, etc. If levels are not reduced below 100 ppm in the breathing zone, then upgrade PPE to <u>Level A</u> or <u>Level B</u> .	
DTAM Dortioulate	< 100 ug/m <sup>3</sup> (i.e., < 0.1 mg/m <sup>3</sup> ) over an integrated period not to exceed 15 minutes.	Continue working	
Meter	> 100 ug/m <sup>3</sup> over an integrated period not to exceed 15 minutes.	Cease work, implement dust suppression, changes in way work is performed, etc. If levels are not reduced below 150 $ug/m^3$ , then upgrade PPE to <u>Level C</u> .	

PID = Photoionization detector RTAM = Real Time Aerosol Monitor ug/m<sup>3</sup> = microgram per meter cubed

## 8.1 PARTICULATE MONITORING

During activities where contaminated materials (e.g., soil, fill, etc.) may be disturbed, real-time monitoring for particulates using a RTAM at the perimeter of the exclusion zone in accordance with the NYSDEC Final DER-10 Technical Guidance for Site Investigation and Remediation (DER-10) dated May 2010. DER-10 uses an action level of 100 ug/m<sup>3</sup> (0.10 mg/m<sup>3</sup>) over background conditions for an integrated period not to exceed 15 minutes. If the action level is exceeded, or if visible dust is encountered, then work shall be discontinued until corrective actions are implemented.

Levels of particulates will periodically be measured in the air at active work areas within the exclusion zone, and at the contaminant reduction zone when levels are detected above background in the exclusion zone. If the action level is exceeded, or if visible dust is observed leaving the work site, then work shall be discontinued until corrective actions are implemented. Corrective actions may include dust suppression, changes in the way work is performed, and/or upgrade of personal protective equipment.

# 8.2 VOLATILE ORGANIC COMPOUND MONITORING

A PID will be used to monitor total volatile organic content of the ambient air. The PID will prove useful as a direct reading instrument to aid in determining if current respiratory protection is adequate or needs to be upgraded. The SSO will take measurements before operations begin in an area to determine the amount of VOCs naturally occurring in the air. This is referred to as a background level. Levels of VOCs will periodically be measured in the air at active work sites, and at the transition zone when levels are detected above background in the work zone.

During activities where contaminated materials may be disturbed, a PID will be used to monitor total VOCs in the ambient air. The PID will prove useful as a direct reading instrument to aid in determining if current respiratory protection is adequate or needs to be upgraded. The SSO will take background measurements before operations begin in an area to determine the amount of VOCs naturally occurring in the air. Levels of VOCs will periodically be measured in the air at active work areas within the exclusion zone, and at the contaminant reduction zone when levels are detected above background at the perimeter of the exclusion zone.

# 8.3 COMMUNITY AIR MONITORING PLAN

During intrusive activities, activities that have the potential to disturb contaminated soil or fill material, this Community Air Monitoring Plan (CAMP) will be implemented. The CAMP includes real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when activities with the potential to release VOCs or dust are being conducted at the Site. This CAMP is based on the NYSDOH Generic CAMP included as Appendix 1A of the NYSDEC DER-10. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of project activities. CAMP monitoring locations will be selected based on wind direction and actual areas where work that requires monitoring is being conducted. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air. Reliance on the CAMP should not preclude simple, common sense measures to keep VOCs, dust, and odors at a minimum around, and downwind of, the work areas.

<u>Continuous monitoring</u> will be conducted during ground intrusive activities involving potentially contaminated soil, fill material or groundwater. Ground intrusive activities include excavation.

**<u>Periodic monitoring</u>** for VOCs will be conducted during non-intrusive activities involving potentially contaminated soil, fill material or groundwater where deemed appropriate (e.g., during baseline monitoring, performance monitoring, management of excavated soil or fill material, etc.).

VOC and particulate 15-minute readings, and instantaneous readings (if collected), will be recorded on daily air monitoring logs that are accompanied by a daily figure, copies of which are included in Attachment 1. This documentation will be available for NYSDEC and NYSDOH personnel to review.

# 8.3.1 VOC Monitoring, Response Levels, and Actions

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

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 ppm above background for the 15-minute average, work activities must be temporarily halted and monitoring must be continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source or vapors identified, corrective actions taken to abate emissions (e.g., application of BioSolve), and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less (but in no case less than 20 feet), is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the Site, activities must be shutdown.

## 8.3.2 Particulate Monitoring, Response Levels, and Actions

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

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (ug/m<sup>3</sup>) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 ug/m<sup>3</sup> above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 ug/m<sup>3</sup> above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 ug/m<sup>3</sup> of the upwind level and in preventing visible dust migration.

The following chart summarizes the direct reading instrumentation and appropriate action levels that will be utilized during CAMP monitoring.

Monitoring Device	CAMP Action level	<b>Response/Level of PPE</b>	
	< 5 ppm above background at Site perimeter, over an integrated period not to exceed 15 minutes.	Continue work.	
PID Volatile Organic Compound Meter	5-25 ppm at Site perimeter over an integrated period not to exceed 15 minutes.	Stop work, identify vapor source, take corrective actions, and continue monitoring. Resume work if < 5ppm for 15- minute average at 200 feet downwind or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less (but in no case < 20 feet).	
	> 25 ppm at Site perimeter.	Stop work, further evaluate the use of engineering controls, etc.	
	< 100 ug/m <sup>3</sup> above background over an integrated period not to exceed 15 minutes, and no observable dust leaving the work area.	Continue working.	
RTAM Particulate Meter	> 100 ug/m <sup>3</sup> above background over an integrated period not to exceed 15 minutes, or if observable dust leaving the work area.	Cease work, implement dust suppression, change in way work performed, etc. Resume work if levels brought below 150 ug/m <sup>3</sup> above background and no visible dust leaving the work area.	

#### 9.0 **EMERGENCY RESPONSE**

To provide first-line assistance to field personnel in the case of illness or injury, the following items will be made immediately available on the Site:

- First-aid kit
- Portable emergency eye wash
- Supply of clean water •

#### 9.1 **EMERGENCY TELEPHONE NUMBERS**

The following telephone numbers are listed in case there is an emergency at the Site:

Fire/Police Department:	911
Poison Control Center:	800-222-1222
NYSDEC Spills	800-457-7362
NYSDEC Contact Todd Caffoe	585-226-5350
Day Environmental, Inc. Jeffery A. Danzinger	585-454-0210
Nearest Hospital:	Unity Hospital 1555 Long Pond Road Rochester, New York
Hospital Phone Number: Emergency Dept:	585-723-7000 585-723-7070
	Directions to the Hospital (refer to map in Attachment 2): Exit Site and turn left onto Lyell Avenue. Follow Lyell Avenue for approximately 1.8 miles. Turn right onto Long Pond Road and travel approximately 1.5 miles. Unity Hospital is on the left. Follow signs to the Emergency Room.

#### 9.2 **EVACUATION**

Although unlikely, it is possible that a project area emergency could require evacuating personnel from the Site. If required, the SSO will give the appropriate signal for evacuation (See also Section 8.0 of this HASP).

Personnel shall exit the project area and shall congregate in an area designated by the SSO. The SSO shall ensure that personnel are accounted for. If someone is missing, the SSO will alert emergency personnel. The appropriate regulatory authorities will be notified as soon as possible regarding the evacuation, and any necessary measures that may be required to mitigate the reason for the evacuation.

# 9.3 MEDICAL EMERGENCY

In the event of a medical emergency involving illness or injury to one of the on-site personnel, the project area should be shut-down and immediately secured. The appropriate regulatory authorities should be notified immediately. The area in which the injury or illness occurred should not be entered until the cause of the illness or injury is known. The nature of injury or illness should be assessed. If the victim appears to be critically injured, administer first aid and/or CPR as needed. Instantaneous real-time air monitoring should be done in accordance with air monitoring outlined in Section 8.0 of this HASP.

## 9.4 CONTAMINATION EMERGENCY

It is unlikely that a contamination emergency will occur; however, if such a emergency does occur, the project area, and any other potentially affected areas of the Site, should be shut-down and immediately secured. If an emergency rescue is needed, notify, Police, Fire Department and EMS Units immediately. Advise them of the situation and request an expedient response. The appropriate regulatory authorities should be notified immediately. The area in which the contamination occurred should not be entered until the arrival of trained personnel who are properly equipped with the appropriate PPE and monitoring instrumentation (See also Section 8.0 of this HASP).

## 9.5 FIRE EMERGENCY

In the event of a fire on-site, the project area, and any other potentially affected areas of the Site, should be shut-down and immediately secured. The area in which the fire occurred should not be entered until the cause can be determined. Non-essential personnel should be evacuated from the project area to a safe, secure area. Notify the Fire Department immediately. Advise the Fire Department of the situation and identify any hazardous material involved. The appropriate regulatory authorities should be notified as soon as possible.

The four classes of fire along with their constituents are as follows:

- Class A: Wood, cloth, paper, rubber, many plastics, and ordinary combustible materials.
- Class B: Flammable liquids, gases and greases.
- Class C: Energized electrical equipment.

Class D: Combustible metals such as magnesium, titanium, sodium, potassium.

Small fires on-site may be actively extinguished; however, extreme care should be taken while in this operation. Approaches to the fire should be done from the upwind side if possible. Distance

from on-site personnel to the fire should be close enough to ensure proper application of the extinguishing material, but far enough away to ensure that the personnel are safe. The proper extinguisher should be utilized for the Class(s) of fire present on the Site. If possible, the fuel source should be cut off or separated from the fire. Care must be taken when performing operations involving the shut-off values and manifolds, if present.

Examples of proper extinguishing agent as follows:

Class A:	Water Water with 1% aqueous film-forming foam (AFFF) Foam (Wet Water) Water with 6% AFFF or Fluorprotein Foam ABC Dry Chemical
Class B:	ABC Dry Chemical Purple K Carbon Dioxide Water with 6% AFFF Foam
Class C:	ABC Dry Chemical Carbon Dioxide
Class D:	Metal-X Dry Powder

No attempt should be made against large fires. These should be handled by the Fire Department.

## 9.6 Spill, Air Release or Unknown Waste

In the event of encountering a spill or air release of hazardous materials, or encountering an unknown material on-site, the project area, and any other potentially affected areas of the Site, should be shut-down and immediately secured. The area in which the spill or release occurred should not be entered until the cause can be determined and area safety can be evaluated. Non-essential personnel should be evacuated from the project area to a safe, secure area. The appropriate regulatory authorities should be notified as soon as possible. The spilled or released material should be immediately identified and appropriate containment measures should be implemented, if possible. Real-time air monitoring should be implemented as outlined in Section 8.0 of this HASP. If the material is unknown, Level B protection is mandatory. Samples of the material should be acquired to facilitate identification of the material. If the material needs to be disturbed, it will be characterized, handled, transported and disposed of in accordance with applicable regulations.

## 9.7 LOCATING CONTAINERIZED WASTE AND/OR UNDERGROUND STORAGE TANKS

In the event that unanticipated containerized waste (e.g., drums) or USTs are encountered during construction activities, the project area should be shut-down and immediately secured. The area in which containerized wastes and/or USTs are discovered should not be entered until area safety can be evaluated. Non-essential personnel should be evacuated from the work zone to a safe,

secure area. The appropriate regulatory authorities should be notified as soon as possible. The SSO shall monitor the area as outlined in Section 8.0 of this HASP.

Prior to any handling, containers and/or USTs will be visually assessed by the SSO to gain as much information as possible about their contents. As a precautionary measure, personnel shall assume that unlabeled containers contain hazardous materials until their contents are characterized. If the material is unknown, Level B protection is mandatory. To the extent possible based upon the nature of the containers encountered, actions may be taken to stabilize the area and prevent migration (e.g., placement of berms, etc.). Subsequent to initial visual assessment and any required stabilization, an environmental contractor will sample, test, remove, transport, and dispose of any containers, USTs, and their contents in accordance with applicable regulations.

# **ATTACHMENT 1**

Daily Air Monitoring Logs and Figure



#### **AIR MONITORING REPORT SHEET**

DATE:	PAGE: OF
JOB #: <u>4935S-14</u>	
SITE: 1555 Lyell Avenue	
BY:	
ON-SITE: OFF-SITE:	
WEATHER CONDITIONS:	PREVAILING WIND DIRECTION:
PERSONNEL ON-SITE:	
NOTES:	

DESCRIPTION	TIME	LOCATION	PID (ppm)	PARTICULATES (mg/m3)

**DESCRIPTION: BZ** = **Breathing Zone, BG** = **Upwind Background, CAMP** = **Outside work area/at property boundary** S:/fieldforms/Air Monitoring



\_\_\_\_

#### AIR MONITORING REPORT SHEET (Continued)

DATE:

PAGE:\_\_\_\_\_OF \_\_\_\_\_

JOB #: <u>4935S-14</u>

DESCRIPTION	TIME	LOCATION	PID (ppm)	PARTICULATES (mg/m3)

**DESCRIPTION:** BZ = Breathing Zone, BG = Upwind Background, CAMP = Outside work area/at property boundary S:/fieldforms/Air Monitoring



Note: Base figure from 2012 Record of Decision for NYSDEC Site No. 828099.

# ATTACHMENT 2

Figure 1 – Route to Emergency Services



DRAFT

# **APPENDIX F**

# SITE MANAGEMENT FORMS

# Maguire Family Properties / Former GM Delco Chassis Division Facility SSDS Suction Pipe Vacuum Readings Monthly Readings

<sup>≫</sup> Date	Time	Initials	Normal Range	Fan 1 (SP-2) (Col Q-16)	Fan 2 (SP-5) (Col Q-19)	Fan 3 (SP-8) (Col Q-22)	Visual Inspection of Piping	COMMENTS
			>1.0 in.w.c. <4.0 in.w.c.					ay y
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					e -
			>1.0 in.w.c. <4.0 in.w.c.				Ĩ.	
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					

Notes:

\* Document readings at least monthly.

\* Email results monthly to Site Contact.

\* Readings are in Inches of Water Column (in.w.c.).

\* If reading is out of range email or call Contacts within one business day.

\* See Figure for suction points and fan locations.

Site Contact:

 Dennis Maguire Maguire Family Properties, Inc. 585-338-2269 dext@rochester.rr.com

# Maguire Family Properties / Former GM Delco Chassis Division Facility SSD System

# Annual Inspection

Date	Time	Initials	Fan 1	Fan 2	Fan 3	Comments

Date	Time	Initials	PT-1	PT-2	PT-3	PT-4	РТ-5	PT-6	PT-7	PT-8	Comments
										_	

Visual Inspection of System:	
Recommendation Actions:	
Description of Past Year Activities:	
Notes:	Site Contact:
* Readings are in Inches of Water Column (in.w.c.)	1) Dennis Maguire

\* See Figure for monitoring points and fan locations

\* Email results to Site Contact

 Site Contact:
 Dennis Maguire Maguire Family Properties, Inc. 585-338-2269 dext@rochester.rr.com

#### DRAFT

#### Summary of Green Remediation Metrics for Site Management

Site Name:		Site Code:	
Address:		City:	
State:	Zip Code:	County:	

**Initial Report Period (Start Date of period covered by the Initial Report submittal)** Start Date:\_\_\_\_\_\_

#### **Current Reporting Period**

Reporting Period From:	То:
<b>Contact Information</b>	

 Preparer's Name:
 Phone No.:

 Preparer's Affiliation:
 Phone No.:

**I. Energy Usage:** Quantify the amount of energy used directly on-Site and the portion of that derived from renewable energy sources.

	Current Reporting	Total to Date
	Period	
Fuel Type 1 (e.g., natural gas (c.f.))		
Fuel Type 2 (e.g., fuel oil, propane (gals))		
Electricity (kWh)		
Of that Electric usage, provide quantity:		
Derived from renewable sources (e.g., solar, wind)		
Other energy sources (e.g., geothermal, solar thermal		
(BTU))		

Provide a description of all energy usage reduction programs for the Site in the space provided on Page 3.

**II. Solid Waste Generation:** Quantify the management of solid waste generated on-Site.

	Current Reporting Period (tons)	Total to Date (tons)
Total waste generated on-Site		
OM&M generated waste		
Of that total amount, provide quantity:		
Transported off-Site to landfills		
Transported off-Site to other disposal facilities		
Transported off-Site for recycling/reuse		
Reused on-Site		

*Provide a description of any implemented waste reduction programs for the Site in the space provided on Page 3.* 

**III. Transportation/Shipping:** Quantify the distances travelled for delivery of supplies, shipping of laboratory samples, and the removal of waste.

	Current Reporting Period (miles)	Total to Date (miles)
Standby Engineer/Contractor		
Laboratory Courier/Delivery Service		
Waste Removal/Hauling		

*Provide a description of all mileage reduction programs for the Site in the space provided on Page 3. Include specifically any local vendor/services utilized that are within 50 miles of the Site.* 

IV. Water Usage: Quantify the volume of water used on-Site from various sources.

	Current Reporting Period (gallons)	Total to Date (gallons)
Total Quantity of water used on-Site		
Of that total amount, provide quantity:		
Public potable water supply usage		
Surface water usage		
On-Site groundwater usage		
Collected or diverted storm water usage		

Provide a description of any implemented water consumption reduction programs for the Site in the space provided on Page 3.

**V. Land Use and Ecosystems:** Quantify the amount of land and/or ecosystems disturbed and the area of land and/or ecosystems restored to a pre-development condition (i.e. Green Infrastructure).

	Current Reporting Period (acres)	Total to Date (acres)
Land disturbed		
Land restored		

*Provide a description of any implemented land restoration/green infrastructure programs for the Site in the space provided on Page 3.* 

#### DRAFT

Description of green remediation programs reported above
(attach additional sheets if needed)
Energy Usage:
Waste Generation:
Transportation/Shipping:
Transportation/Simpping.
waste Usage:
Land Use and Ecosystems:
Other:

# **CERTIFICATION BY CONTRACTOR**

I, \_\_\_\_\_\_\_(Name) do hereby certify that I am \_\_\_\_\_\_(Title) of the Company/Corporation herein referenced and contractor for the work described in the foregoing application for payment. According to my knowledge and belief, all items and amounts shown on the face of this application for payment are correct, all work has been performed and/or materials supplied, the foregoing is a true and correct statement of the contract account up to and including that last day of the period covered by this application.

Date

Contractor

DRAFT

# **APPENDIX G**

#### **O&M MANUAL**

### SUB-SLAB DEPRESSURIZATION SYSTEM

OPERATION, MAINTENANCE & MONITORING PLAN SUB-SLAB DEPRESSURIZATION SYSTEM MAGUIRE FAMILY PROPERTIES INC. FORMER VALEO/FORMER GM-DELCO CHASSIS DIVISION FACILITY NYS IHWD SITE #8-28-099 1555 LYELL AVENUE ROCHESTER, NEW YORK

by

Haley & Aldrich of New York Rochester, New York

for

Remediation and Liability Management Company, Inc Warren, Michigan

File No. 70436-300 May 2009
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**APPENDIX C** – Monitoring Forms

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1	Sub-Slab Depressurization System Plan – As Built

#### 1. INTRODUCTION

This Operation, Maintenance & Monitoring (OM&M) plan was prepared for a sub-slab depressurization system (SSDS) installed for soil vapor intrusion (SVI) mitigation at the Maguire Family Properties Inc./ Former Valeo/Former General Motors Corporation (GM) Delco Chassis Division Facility site (the site) located at 1555 Lyell Avenue in Rochester, New York.

#### 1.1 Purpose

The SSDS addresses an area of the site where volatile organic compounds (VOCs) are present in soil vapor beneath the floor slab of the facility building. The system is intended to mitigate the potential for intrusion of soil vapor through the facility floor slab and into indoor air.

Installation of the SSDS was completed, and demonstration of sub-slab depressurization in the area affected by sub-slab VOC vapors was confirmed, in April 2009. Ongoing system operation, maintenance and monitoring and periodic certification of continuing system function and related administrative controls will be performed in accordance with this plan.

#### **1.2 Background Information**

GM manufactured automotive components at the facility from 1951 through 1994, and automotive manufacturing by subsequent owners continued at the facility until 2008. The facility is currently owned by Maguire Family Properties, and is used by multiple tenants for a variety of commercial and industrial purposes. The area addressed by the SSDS is currently not in use, but plans call for occupancy by one or more commercial or industrial operations in the future.

This OM&M Plan was prepared in accordance with the terms of a 30 July 2002 Order on Consent agreed to by GM and the New York State Department of Environmental Conservation (NYSDEC) for a Remedial Investigation and Feasibility Study (RI/FS) of the site. The former GM facility is listed as New York State Inactive Hazardous Waste Disposal Site #8-28-099.

During GM's remedial investigation, soil vapor contaminated with VOCs was identified beneath the building floor in the area surrounding building column Q-19. The VOCs present in soil vapor included trichloroethene (TCE), a chlorinated solvent, and dichloroethene (DCE) and vinyl chloride, two products of the breakdown of TCE in the environment.

The location of the affected area is shown on attached Figure 1. The affected area lies within the area bounded by building columns N-13 on the northeast, S-13 on the southeast, S-25 on the southwest, and N-25 on the northwest. The affected area is approximately 160 feet wide (north-south dimension) by 220 feet long (east-west dimension). The highest soil vapor concentrations occur between columns Q-16 and R-19 in the center of the affected area. The central area is approximately 60 feet wide and 60 feet long.

During soil vapor intrusion assessment activities, concentrations of the TCE, DCE, and vinyl chloride in soil vapor were found to be above 250 micrograms per cubic meter (ug/m3) in the affected area. The highest soil vapor concentrations were found in the 60- by 60-ft central area, where concentrations of up to 330 milligrams per cubic meter (mg/m3) of TCE and up to 5,000 mg/m3 of DCE were detected in sub-slab soil vapor.

Contaminant levels in soil samples from the central area were found to be below NYSDEC's soil cleanup objectives for protection of public health. Indoor air samples collected in the affected area did not contain DCE, TCE, or vinyl chloride. However, the concentrations of TCE, DCE, and vinyl chloride detected in

sub-slab soil vapor were above levels established by the New York Sate Department of Health (NYSDOH) as generic guidance for determining whether mitigation may be needed to protect against the potential for soil vapor intrusion. The NYSDOH guidance is specified in its "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 ( $^1$ ).

The NYSDOH guidance has one set of generic criteria and does not differentiate between building occupancy or use conditions. The current guidance therefore applies criteria appropriate for single family homes to the entire range of occupancy settings. Since typical residential basement or floor slab conditions have a greater potential for communication between the sub-slab and indoor atmospheres than the conditions at the Former GM site (with its industrial floor slab), and since residential exposure models involve full-time occupancy by residents rather than the 8-hour shift and 5-day work week typical for occupants in a commercial setting, application of the NYSDOH guidance criteria for evaluation of the sub-slab VOC concentrations at the former GM site is likely to be conservatively overprotective. As indicated above, indoor air samples collected in the affected area did not contain DCE, TCE, or vinyl chloride.

Nevertheless, GM installed an SSDS to mitigate the potential for SVI in the affected area. The system was designed and installed in general accordance with the NYSDOH guidance, and was installed in accordance with the NYSDEC-approved Interim Remedial Measure (IRM) Work Plan dated 7 August 2007.

<sup>&</sup>lt;sup>1</sup> A list of references is presented at the end of the OM&M plan.

#### 2. SUB-SLAB DEPRESSURIZATION SYSTEM

#### 2.1 System Description

The SSD system was installed and tested from 19 March to 21 April 2009 and has been operating continuously since 9 April 2009. The SSD system uses three continuously operating vacuum fans connected by a network of pipes to nine suction points in the floor in the affected area. Operation of the system creates a negative pressure zone beneath the concrete floor slab of the affected area. The negative pressure zone, where the sub-slab vapor pressure is lower than the air pressure in the building above the floor slab, mitigates the potential risks of soil vapor intrusion by preventing the vapors that collect beneath the building from infiltrating into the building. Vapors that are pulled from the subsurface by the vacuum fans are transferred through the piping network and vented to the atmosphere above the roof of the building.

Vacuum monitoring gauges and an electronic alarm system are present on the piping network to allow for monitoring of the operation of the system and to alert site management personnel if the system operation is interrupted. Vacuum monitoring and vapor sampling points are installed in the floor of the affected area and in the surrounding building interior space to allow for periodic testing and confirmation of sub-slab depressurization in the affected area and for confirmation that soil vapor conditions in the surrounding area do not present a potential risk of soil vapor intrusion.

The layout of the SSDS is shown on Figure 1. The SSDS components are described below.

#### 2.1.1 Suction Pits

There are nine suction pits located adjacent to the nine building columns within the interior of the affected area (columns P-, Q- and R-16, P-, Q- and R-19, and P-, Q- and R-22). Each suction pit was constructed with a 3.5 inch hole cored through the concrete slab adjacent to the column and a suction cavity excavated below the slab from which approximately 1 cubic foot of sub-slab base material (stone or sand and gravel) was removed.

#### 2.1.2 Pipe Installation

The piping network for the SSDS is constructed of 3-inch diameter PVC pipes. Pipe ends were installed to approximately 1 inch below the bottom of the floor slab, and the suction cavity opening was sealed around the pipe with newly poured concrete. The piping from each suction point is routed up along the column into the truss space. As shown on Figure 1, the piping from the three suction pits located along each north-south column line connect to a single 3-inch pipe leading to an SSDS fan located on the roof of the building. The horizontal piping runs in the truss space are sloped down back towards the suction pits to minimize any water buildup from condensation.

#### 2.1.3 Miscellaneous Sealing

Installation of SSD systems typically involves sealing of cracks and penetrations in a building floor slab to prevent leaks between the sub-slab atmosphere and indoor air. However, smoke testing of cracks, floor joints and other floor penetrations performed during the SSDS installation indicated that sealing was not required in the affected area. The condition of the concrete floor slab in the affected area has been shown to be sound at each of the sampling locations installed

during the various phases of RI investigative and SSDS construction and testing activities, and the thickness of concrete has been found to range from 8 to 18 inches.

#### 2.1.4 Fans and Stacks

The three SSDS fans (F1, F2 and F3, as shown on Figure 1) are mounted on the roof of the building. The fans are RadonAway Model GP501, rated for 4.2 inches water column (in.w.c) maximum pressure and 95 cubic feet per minute (CFM) maximum flow. The fans are low wattage and suitable for continuous operation. Pictures of the system fans are presented in Appendix A. The fan manufacturer's data sheet for the fan model used in the SSDS is presented in Appendix B.

#### 2.1.5 Visual Vacuum Indicator

Each fan system (the three suction points and piping leading to each fan) has one visual vacuum (negative pressure) indicator on the vertical pipe leading from the center suction point (the Q-column suction point). The visual indicator is a flex-tube manometer that depicts the actual operating vacuum in the piping leading to each fan. A picture of a manometer is presented in Appendix A. Periodic reading and recording of the vacuum pressure at each manometer is the monitoring activity that will be performed to document continuous operation of the fans and confirm the effectiveness of the SSDS. The schedule and scope of monitoring to be performed is specified in Section 4 of this plan.

#### 2.1.6 Electrical

120-volt electrical service for the SSDS fans comes from the facility electrical bus duct located in the ceiling truss space along the #16 column line. The main switch for the SSD system is located approximately 10 feet west of column Q-16. This main switch is labeled accordingly. Electrical service runs to each fan, and each fan system has an individual switch located at the fan (outside on the roof) that can be turned off for servicing of the fan. The SSDS electrical service lines are installed on a dedicated circuit separate from the rest of the building electrical requirements. In the event of a power outage, the fans will automatically restart once power has been restored.

#### 2.1.7 Warning Devices

There are three low pressure sensors installed on the riser stack from the Q-column suction point for each fan system. A picture of one of the sensors is presented in Appendix A. These devices will send an alarm to the main building security system in the event that pressure drops below 0.25 inches of water column (in.w.c.) of negative pressure (vacuum). When the sensors are triggered by a drop in vacuum, an automatic dial-out device will continuously call out to four on-call site management personnel of the owner's site management and security departments until the call is answered. Site management personnel will then notify the contacts listed in Section 4.4 within one business day.

#### 2.1.8 Permanent Monitoring Points

There are eight permanent monitoring points installed to permit periodic monitoring of sub-slab vacuum pressure and occasional sampling of soil vapor. The permanent monitoring points are labeled PT-1 through PT-8 on the attached Figure 1. These monitoring points consist of a hole drilled through the slab and a short length of tubing sealed in the hole. The points are completed with a removable cap.

Four of the points are installed within the affected area. Annual monitoring of vacuum levels at these four points will be used to confirm the continued effectiveness of the SSDS operation. The remaining four permanent points are installed at locations that were outside the zone of vacuum influence apparent in late April 2009 during initial post-installation testing of the SSDS operation. The four points located outside the zone of vacuum influence will be used for initial and subsequent occasional vacuum monitoring and sub-slab vapor sampling to confirm that the area affected by the potential for SVI does not extend beyond the limits of the SSDS zone of influence.

The schedule and scope of monitoring to be performed is specified in Section 4 of this plan.

#### 3. START UP AND INITIAL TESTING

The installation of the SSDS was performed using a performance-based design standard. The initial construction/design phase of the installation involved construction of suction pits at the nine columns located in the interior of the affected area. A vacuum blower and a Radonaway Model GP501 fan were used to test the initial suction pits. Numerous temporary test points were installed in the floor and sub-slab vacuum levels were measured to confirm that the spacing of the suction pits on the building column grid was sufficient to achieve the vacuum coverage required to address the entire affected area. In addition, vacuum and flow were measured to determine that the GP501 was the appropriate fan.

When the initial phase results indicated that the conceptual design and the GP501 fan were appropriate, installation of the nine suction pits and a three-fan system was completed. Additional temporary test points were installed to determine the vacuum coverage of the complete system. Refer to Figure 1 for test point locations and the initial post-installation vacuum readings.

Eight of the temporary test points were converted to permanent points PT-1 through PT-8 for use in future sampling and vacuum monitoring activities.

#### 4. OPERATION, MAINTENANCE, & MONITORING

The goal of the OM&M is to ensure that the SSDS fans are operating continuously and providing effective vacuum coverage to minimize the potential for vapor intrusion. Minimum requirements for OM&M activities are provided in the following subsections.

#### 4.1 **Periodic Monitoring**

Routine monitoring shall occur periodically (at a maximum interval of monthly) to confirm system operation and performance. The building security personnel will conduct this periodic monitoring. This routine monitoring shall include the following activities (at a minimum):

- 1. A visual inspection of the system piping;
- 2. Recording of vacuum readings at each fan system manometer;
- 3. Notation of any observation concerning the SSDS that is out of the ordinary.

The vacuum readings shall be recorded on the periodic monitoring forms presented in Appendix C. The monitoring sheets shall be maintained on site by the facility security or management staff. Copies will be provided to the SSD Engineer (contact information listed in Section 4.4 below) for review and inclusion in the annual monitoring report (described in Section 4.2).

If results of a periodic monitoring event indicate the system is damaged or is not operational, or if observations of out of the ordinary conditions indicate that maintenance may be needed, the SSD Engineer must be notified within one business day so that the situation can be investigated and a remedy can be initiated if needed. A temporary fix may be considered to keep the system operating until a more permanent repair or remedy is installed.

#### 4.2 Annual Monitoring

Annual monitoring shall occur every year to ensure system performance. This annual monitoring shall include the following activities (at a minimum):

- 1. A visual inspection of the complete system (i.e. fan, piping, labeling system, seals, etc.).
- 2. Recording of vacuum readings at each fan system manometer.
- 3. Recording of vacuum readings from permanent vacuum monitoring points installed in the floor slabs.
- 4. Identification of potential leaks.
- 5. Inspection of exhaust points to verify that air intakes have not been located nearby.
- 6. Audible inspection to verify a fan's operational performance.
- 7. Test of warning alarm non-acknowledgement and automatic system dial out.
- 8. Review of all contact information listed in section 4.4.
- 9. Recording of any system maintenance activities that have occurred during the past year.
- 10. Review of renovations or changes of use in the affected area and/or surrounding area of the building that may affect the effectiveness of the SSD system.

Vacuum monitoring to confirm that a lower pressure is being maintained in the sub-slab shall be performed by measuring the differential pressure between the indoor air and sub-slab at the permanent monitoring points. The operational target is a minimum differential pressure of 0.004 inches between the interior space and the sub-slab depressurized space on all accessible permanent monitoring points in the affected area. Monitoring will be conducted by a competent environmental professional and recorded on

the standard monitoring forms included in Appendix C. In the event that the target minimum differential pressure is not achieved, non-routine maintenance may be required as described in Section 4.3 below.

Letter reports documenting the results of the annual monitoring will be prepared for submittal to NYSDEC and the site owner (currently Maguire Family Properties). The report will be prepared by June 1st of each year or within 2 months of the anniversary of system start-up, should a system shutdown and restart be necessary in the future.

#### 4.3 Maintenance

The need for preventative maintenance will depend upon the life expectancy and warranty for the specific part (fan life is generally between three and five years), as well as visual observations over time. The need for repairs and/or adjustments will depend upon the observation of system operation compared to observation obtained when system operations were initiated.

Non-routine maintenance may be required during the long-term operation of the SSD system. Examples of situations requiring maintenance include the following:

- 1. The need to replace a fan;
- 2. The building's owners or occupants report that the periodic visual vacuum device monitoring indicates the SSD system is not operating properly;
- 3. The SSD system becomes damaged; or
- 4. The affected area and/or surrounding area of the building have undergone renovations or changes of use that may reduce the effectiveness of the SSD system.

Activities conducted during non-routine maintenance will vary depending upon which of these situations was the reason for the maintenance. In general, non-routine maintenance activities may include examining the building for structural or HVAC system changes, or other changes that may affect the performance of the SSD system (e.g. new combustion appliances or deterioration of the concrete slab). The non-routine maintenance may also include examining the operation of the visual vacuum device and the vent fan, or the extent of sub-slab depressurization. Repairs or adjustments should be made to the system as appropriate. If necessary, the system should be redesigned and restarted. Refer to Section 4.4 below for appropriate contact information for non-routine maintenance.

#### 4.4 Contact Information

In the occurrence of changes that would require routine or non-routine maintenance as described above, the owner or tenants of the facility should contact the following individuals:

SSD Engineer: Mark Ramsdell Haley & Aldrich of New York 200 Town Centre Drive, Suite 2 Rochester, NY 14623 Phone: 585.359.9000 <u>Consultant:</u> Tom Wells Stantec Consulting Services Inc. 2250 Brighton-Henrietta Town Line Road Rochester, NY 14623-2706 Phone: 585.413.5625

SVI System Owner's Representative: Marilyn Dedyne Remediation and Liability Management Company Inc. 30200 Mound Road, MC 480-111-W60 Warren, MI 48090 Phone: 313.506.9461 Contact information for the SSDS design and construction contracting firm that performed the installation of the SSDS is presented below. The SSDS contractor may be a source for replacement parts or repair services, if needed. However, in general, the SSDS contractor should be contacted indirectly through one of the contacts listed on the previous page.

SSDS Installation Contractor: Mitigation Tech 55 Shumway Road Brockport, NY 14420 Phone: 585.637.7430

#### 5. SYSTEM SHUTDOWN

The SSDS will remain in operation for at least five years unless prior approval has been obtained from NYSDEC to discontinue its operation and dismantle and close the system sooner than five years.

To determine whether a request for NYSDEC approval to terminate operation of the SSDS is in order, supplemental sub-slab vapor sampling in the affected area may occasionally be performed. The sampling may occur as part of an annual monitoring event. Sampling will be performed by no later than the fifth year of operation. The purpose of the supplemental sampling would be to determine whether VOC concentrations in sub-slab vapor have declined to levels below applicable NYSDOH SVI mitigation guidance criteria. The supplemental sampling would involve a short-term shutdown of the SSDS of approximately one week duration, and the sampling would be performed in accordance with procedures specified in then-current, applicable NYSDOH SVI Assessment Guidance.

Supplemental sampling activities and results would be reported in the annual SSDS monitoring report. Should results of the sampling indicate that VOC concentrations in sub-slab vapor are below applicable guidance criteria, a work plan detailing a proposed program of additional pre-closure monitoring will be prepared and submitted to NYSDEC. Once implemented, results of the pre-closure monitoring would be presented in a report to NYSDEC, and if results indicate that closure of the SSDS is appropriate, the report would include details of a program of closure and, if necessary, post-closure activities.

#### REFERENCES

- 1. Remedial Investigation, Valeo/Former GM Delco Chassis Division Facility, Rochester, New York. Haley & Aldrich of New York, April 15, 2005.
- 2. RI/FS Progress Report #14, Valeo Former GM Delco Chassis Facility Site, Rochester, New York. Haley & Aldrich of New York, May 10, 2006.
- 3. RI/FS Progress Report #15, Valeo Former GM Delco Chassis Facility Site, Rochester, New York. Haley & Aldrich of New York, August 8, 2006.
- 4. Addendum to Human Health Risk Assessment, Former GM Delco Chassis Facility, 1555 Lyell Avenue, Rochester, New York. ENVIRON International Corporation, November 2006.
- 5. IRM Work Plan, Valeo/Former GM Delco Chassis Facility, 1555 Lyell Avenue, Rochester, New York. Haley & Aldrich of New York, August 7, 2007.
- 6. Letter of approval Re: Sub-Slab Depressurization IRM Work Plan, Valeo Site (#828099), Rochester(C), Monroe(C), NYSDEC Division of Environmental Remediation, Region 8, May 7, 2009



#### LEGEND:

 $\diamond$ 

DEPRESSURIZATION SYSTEM PIPING

SUCTION POINT

TEMPORARY TEST POINT LOCATION

PERMANENT TEST POINT LOCATION



FAN LOCATION

Test Point	Initial Vacuum				
TP-1	-0.015				
TP-2	-0.046				
TP-3	-0.075				
TP-4	-0.102				
TP-5	-0.039				
TP-8	-0.011				
TP-9	(+)0.001				
TP-10	(+)0.002				
TP-11	-0.028				
TP-14	-0.004				
TP-17	-0.019				
TP-18	-0.019				
TP-19	-0.01				
TP-20	(+)0.017				
PT-1 (TP-12)	-0.029				
PT-2 (TP-13)	-0.001				
PT-3 (TP-16)	-0.004				
PT-4 (TP-21)	(+)0.003				
PT-5 (TP-22)	(+)0.001				
PT-6 (TP-15)	-0.022				
PT-7 (TP-7)	-0.018				
PT-8 (TP-6)	-0.035				
Note: ND -non-detect					





SCALE IN FEET



HALEY& VALEO/FORMER GM DELCO CHASSIS DIVISION FACILITY GENERAL MOTORS CORPORATION ROCHESTER, NEW YORK

#### AS-BUILT SUB-SLAB DEPRESSURIZATION SYSTEM PLAN

SCALE: AS SHOWN APRIL 2009

FIGURE 1

#### APPENDIX A

**SSDS** Photographs



Suction pipe at column Q-19



SSDS suction pipe at floor



Manometer on suction pipe at column Q-19



Alarm system sensor relay on suction pipe at column Q-19



SSDS Fan F2



SSDS fan showing electrical switch



Permanent Monitoring Point

#### **APPENDIX B**

Manufacturer's Cut Sheets SSD Fan Visual Vacuum Indicator Pressure Sensor



# **GP** Series



### **Radon Mitigation Fans**

All RadonAway fans are specifically designed for radon mitigation. GP Series Fans provide a wide range of performance that makes them ideal for most sub-slab radon mitigation systems.

#### **Features:**

- Five-year hassle-free warranty
- Mounts on duct pipe or with integral flange
- 3.5" diameter ducts for use with 3" or 4" pipe
- Electrical box for hard wire or plug in
- ETL Listed for indoor or outdoor use
- Meets all electrical code requirements
- Thermally protected
- Rated for commercial and residential use.

ja	<b>1</b>	ten .	Sure WC	÷	St	Typical ( atic Pre	CFM vs. essure WC			
Moo	Wat	1	1.0"	/ 1.5"	2.0'	' 2.5"	3.0"	3.5"	4.0"	
GP201	40-60	2.0	82	58	5		-	-	-	
GP301	55-90	2.6	92	77	45	10	-	-	-	
GP401	60-110	3.4	93	82	60	40	15	-	-	
GP501	70-140	4.2	95	87	80	70	57	30	10	

Choice of model is dependent on building characteristics including sub-slab materials and should be made by a radon professional.

#### For Further Information Contact:

Ð.





#### Flex-Tube® Manometer

**Installation & Operating Instructions** 





Fig. 1

With both ends of the tube open, the liquid is at the same height in each leg.



Fig. 2

The difference in height, "h", which is the sum of the readings above and below zero, indicates pressure.



Fig. 3

The difference in height, "h", which is the sum of the readings above and below zero, indicates the amount of vacuum.

#### Measuring Pressure, Vacuum and Differential Pressure with Dwyer Manometers

Dwyer manometers are available in two different styles. The W/M models use either water for readings in inches of water or mercury for readings in inches of mercury. The D models use Dwyer .826 specific gravity red gage oil for readings in inches of water. The scales on the two styles have different lengths, so it is important to use the correct fluid.

#### Mounting Dwyer U-Tube Manometers

**1221** - Mount to a vertical surface through holes in the scale.

**1222** - Attach magnets to steel surface or remove magnets and mount through holes in scale.

**1223** - Attach magnets to steel surface or through the hole in safety trap housing.

**1227** - Because of angled connections, 1227 must be filled with indicating tube at an angle. After filling, check zero in vertical position. Clean all oil from the exterior of the unit to prevent cracking of the backplate.

**Note:** Read vertical range on the right leg with the manometer vertical. Incline the manometer to zero for low range reading.

#### Mounting Dwyer Well Manometers

**1230** - Mount to a vertical surface with flat-head screws through the holes in the scale.

**1235** - Mount behind panel cutout to show only the tube and scale. Attach by drilling holes through the manometer's back-plate and panels. Make the panel cutout for the length and width of the tube and scale.

**DWYER INSTRUMENTS, INC.** P.O. BOX 373 • MICHIGAN CITY, IN 46361, U.S.A.

Phone: 219/879-8000 www.dwyer-inst.com Fax: 219/872-9057 e-mail: info@dwyer-inst.com

### Filling U-Tube Manometers 1221 - 1222

Open both fittings to atmosphere. Slide scale to mid-point of travel. Add liquid to zero on scale. Clean all oil from the exterior of the unit to prevent cracking of the backplate.

#### Filling 1223 - 1230 and 1235 Manometers

Remove large fitting from well using a 3/4" open-end wrench. Also remove cork, disc, and O-ring. Be sure the other side is vented to atmosphere. Adjust zero to middle of travel. Add fluid to well up to the zero on scale. Replace cork, disc, and O-ring before replacing fitting. Clean all oil from the exterior of the unit to prevent cracking of the back-plate on 1223 models. To order red gage oil, order part # A-101 (3/4 oz.) To order fluorescein green color concentrate, order part # A-126 (3/4 oz.)

### Operation of 1221, 1222 and 1223 Manometers

Connect either side to pressure or vacuum, leaving the other side open to atmosphere. Add together the readings above and below zero.

It is normal for the two sides to have different readings and has no effect on accuracy. For differential pressure, connect both the high and low fittings. Add the readings above and below zero on the scale.

### Operation of 1230 and 1235 Manometers

**Positive Pressure:** Connect the well reservoir fitting to the pressure source, leaving the other side open to atmosphere.

**Negative Pressure:** Connect the top fitting to vacuum source, leaving well side open to atmosphere.

**Differential Pressure:** Connect higher pressure to well reservoir fitting and lower pressure to upper fitting.

**Note:** When finished, close fitting to prevent spilling or evaporation.

#### Maintenance

With proper care, Dwyer Flex-Tube® Manometers will continue to give accurate readings. If cleaning is needed, remove fittings, drain fluid, and rinse with mild soap and water. A cleaning brush (part #A-366) may be used to remove oxidation.

Avoid harsh soaps and solvents which may damage manometer and void warranty.

When replacing O-rings, apply a thin coat of petroleum jelly to assure a good seal. Do not coat O-ring used in the overpressure safety trap.

Avoid using fluids other than those specified. Corrosive fluids may damage the manometer.

If return is needed contact customer service to receive a return goods authorization number before shipping.

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#### INSTALLATION & OPERATING INSTRUCTIONS Instruction P/N IN015 Rev E FOR CHECKPOINT IIa TM P/N 28001-2 & 28001-3 RADON SYSTEM ALARM

### **INSTALLATION INSTRUCTIONS** (WALL MOUNTING)

Select a suitable wall location near a vertical section of the suction pipe. The unit should be mounted about four or five feet above the floor and as close to the suction pipe as possible. Keep in mind that with the plug-in transformer provided, the unit must also be within six feet of a 120V receptacle. **NOTE: The Checkpoint IIa is calibrated for vertical mounting, horizontal mounting will affect switchpoint calibration.** 

Drill two  $\frac{1}{4}$ " holes 4" apart horizontally where the unit is to be mounted.

Install the two 1/4" wall anchors provided.

Hang the CHECKPOINT IIa from the two mouting holes located on the mounting bracket. Tighten the mounting screws so the unit

fits snugly and securely against the wall.

Drill a 5/16" hole into the side of the vent pipe about 6" higher than the top of the unit.

Insert the vinyl tubing provided about 1" inside the suction pipe.



Cut a suitable length of vinyl tubing and attach it to the pressure switch connector on the CHECKPOINT IIa.

#### CALIBRATION AND OPERATION.

The CHECKPOINT IIa units are calibrated and sealed at the factory to alarm when the vacuum pressure falls below the factory setting and should not normally require field calibration. Factory Settings are: **28001-2** -.25" WC Vacuum **28001-3** -.10" WC Vacuum

#### **To Verify Operation:**

With the exhaust fan off or the pressure tubing disconnected and the CHECKPOINT IIa plugged in, both the red indicator light and the audible alarm should be on.

Turn the fan system on or connect the pressure tubing to the fan piping. The red light and the audible alarm should go off. The green light should come on.

Now turn the fan off. The red light and audible alarm should come on in about two or three seconds and the green light should go out.

#### WARRANTY INFORMATION

Subject to applicable consumer protection legislation, RadonAway warrants that the CHECKPOINT IIa will be free from defective material and workmanship for a period of (1) year from the date of purchase. Warranty is contingent on installation in accordance with the instructions provided. This warranty does not apply where repairs or alterations have been made or attempted by others; or the unit has been abused or misused. Warranty does not include damage in shipment unless the damage is due to the negligence of RadonAway. All other warranties, expressed or written, are not valid. To make a claim under these limited warranties, you must return the defective item to RadonAway with a copy of the purchase receipt. RadonAway is not responsible for installation or removal cost associated with this warranty. In no case is RadonAway liable beyond the repair or replacement of the defective product FOB RadonAway.

#### THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THERE IS NO WARRANTY OF MERCHANTIBILITY. ALL OTHER WARRANTIES, EXPRESSED OR WRITTEN, ARE NOT VALID.

For service under these warranties, 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 costs to and from factory.

> Manufactured by: RadonAway Ward Hill, MA (978)-521-3703

#### **APPENDIX C**

Monitoring Forms SSD Suction Pipe Vacuum Readings (Periodic Monitoring Form) SSD Annual Inspection

### Maguire Family Properties / Former GM Delco Chassis Division Facility SSDS Suction Pipe Vacuum Readings Monthly Readings

<sup>≫</sup> Date	Time	Initials	Normal Range	Fan 1 (SP-2) (Col Q-16)	Fan 2 (SP-5) (Col Q-19)	Fan 3 (SP-8) (Col Q-22)	Visual Inspection of Piping	COMMENTS
			>1.0 in.w.c. <4.0 in.w.c.					ay Y
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					ю.
			>1.0 in.w.c. <4.0 in.w.c.				Ĩ.	
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					
			>1.0 in.w.c. <4.0 in.w.c.					

Notes:

\* Document readings at least monthly.

\* Email results monthly to Site Contact.

\* Readings are in Inches of Water Column (in.w.c.).

\* If reading is out of range email or call Contacts within one business day.

\* See Figure for suction points and fan locations.

Site Contact:

 Dennis Maguire Maguire Family Properties, Inc. 585-338-2269 dext@rochester.rr.com

### Maguire Family Properties / Former GM Delco Chassis Division Facility SSD System

### Annual Inspection

Date	Time	Initials	Fan 1	Fan 2	Fan 3	Comments
			·			

Date	Time	Initials	PT-1	PT-2	PT-3	PT-4	PT-5	PT-6	PT-7	PT-8	Comments
										_	

Visual Inspection of System:	
Recommendation Actions:	
Description of Past Year Activities:	
Notes:	Site Contact:
* Readings are in Inches of Water Column (in.w.c.)	1) Dennis Maguire

\* See Figure for monitoring points and fan locations

\* Email results to Site Contact

 Site Contact:
Dennis Maguire Maguire Family Properties, Inc. 585-338-2269 dext@rochester.rr.com DRAFT

#### **APPENDIX H**

#### DRAFT ENVIRONMENTAL EASEMENT

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

**THIS INDENTURE** made this \_\_\_\_\_day of \_\_\_\_\_, 20\_\_, between Owner(s) Maguire Family Properties, Inc., having an office at 770 Rock Beach Road, Rochester, New York 14617, County of Monroe, State of New York (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

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

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

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

WHEREAS, Grantor, is the owner of real property located at the address of 1525-1685 Lyell Avenue (f/k/a 1555 Lyell Avenue) in the City of Rochester, County of Monroe and State of New York, known and designated on the tax map of the County Clerk of Monroe as tax map parcel numbers: Section 104.76 Block 1 Lot 3.006, being the same as that property conveyed to Grantor by deed dated December 20, 2005 and recorded in the Monroe County Clerk's Office in Liber and Page 10233/0008. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 122.137 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 21, 1994 and last revised November 16, 2016 prepared by Thomas A. Rodak, P.L.S. of O'Neill-Rodak Land Surveying Associates, P.C., which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

**WHEREAS**, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation

established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

**NOW THEREFORE**, in consideration of the mutual covenants contained herein and the terms and conditions of Order on Consent Index Number: B8-0543-98-08, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

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

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

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

## Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

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

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

(4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Monroe County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

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

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

(7) All future activities on the property that will disturb remaining

contaminated material must be conducted in accordance with the SMP;

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

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

(10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

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

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

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

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

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

### This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation

### pursuant to Title 36 of Article 71 of the Environmental Conservation

#### Law.

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

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

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

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

(i) are in-place;

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

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

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

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

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

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

(7) the information presented is accurate and complete.

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

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

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

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

#### 5. <u>Enforcement</u>

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

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

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

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

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

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

Parties shall address correspondence to:	Site Number: 828099 Office of General Counsel NYSDEC 625 Broadway Albany New York 12233-5500
With a copy to:	Site Control Section Division of Environmental Remediation NYSDEC 625 Broadway Albany, NY 12233

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

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

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

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

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

**Remainder of Page Intentionally Left Blank**
**IN WITNESS WHEREOF,** Grantor has caused this instrument to be signed in its name.

Maguire Family Properties, Inc.:

By: \_\_\_\_\_

Print Name: \_\_\_\_\_\_ Dennis P. Maguire

Title: President and Director Date:\_\_\_\_\_

## **Grantor's Acknowledgment**

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

On the \_\_\_\_\_ day of <u>February</u>, in the year 20 <u>17</u>, before me, the undersigned, personally appeared <u>Dennis P. Maguire</u>, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (arce) subscribed to the within instrument and acknowledged to me that he/shex/threase executed the same in his/her/threase capacity(ies), and that by his/her/threase signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public - State of New York

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

By:

Robert W. Schick, Director Division of Environmental Remediation

## Grantee's Acknowledgment

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

On the \_\_\_\_\_ day of \_\_\_\_\_, in the year 20<u>17</u>, before me, the undersigned, personally appeared Robert W. Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public - State of New York

## **SCHEDULE "A" PROPERTY DESCRIPTION**

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

Beginning at a point being the southerly highway boundary line of Lyell Avenue (variable width) and the westerly highway boundary line of Gates Street (50 feet wide);

thence (1) South 00°-17'-05" East along the westerly highway boundary line of Gates Street a distance of 198.00 feet to a point;

thence (2) North 89°-55'-55" East along the southerly termination of said Gates Street and the south lines of now or formerly Rochester Recreation Club and now or formerly Mattiacio & Lester LLC a distance of 322.97 feet to a point;

thence (3) South  $00^{\circ}$ -24'-05" East along the west line of reputedly Buffalo, Rochester and Pittsburgh Railroad and the westerly termination of Jay Street a distance of 2,220.87 feet to a point;

thence (4) South 89°-56'-35" West along the northerly highway boundary line of the western expressway Interstate 490 a distance of 2,021.19 feet to an angle point;

thence (5) North 68°-59'-34" West along said western expressway Interstate 490 a distance of 322.17 feet to a point;

thence (6) North 14°-19'-10" West along the east line of reputedly The New York State Barge Canal a distance of 924.86 feet to a point;

thence (7) North 76°-09'-45" East along the south line of reputedly Robert F. & Richard Vleck and the southerly termination of Alvanar Road (50 feet wide) a distance of 310.00 feet to a point;

thence (8) North 13°-50'-15" West along the easterly highway boundary line of said Alvanar Road a distance of 443.00 feet to a point;

thence (9) North 89°-56'-50" East along the south line of reputedly Rotmans Lloyd & Walker a distance of 151.18 feet to a point;

thence (10) North 00°-15'-30" West along the east line of said Rotmans Lloyd & Walker a distance of 160.00 feet to a point;

thence (11) South  $89^{\circ}-56'-50''$  West along the north line of said Rotmans Lloyd & Walker a distance of 189.86 feet to a point;

thence (12) North 13°-50'-15" West along the easterly highway boundary line of Alvanar Road a distance of 433.44 feet to a point;

thence (13) North 89°-56'-50" East along the south line of reputedly Maguire Family Properties Inc. and the southerly termination of Harcourt Road a distance of 451.16 feet to a point;

thence (14) North  $00^{\circ}$ -05'-34" West along the easterly highway boundary line of Harcourt Road a distance of 18.08 feet to a point;

thence (15) North 89°-56'-51" East along the south line of reputedly Honest Properties LLC a distance of 200.00 feet to a point;

thence (16) South  $00^{\circ}-05'-35''$  East along the west line of reputedly City of Rochester a distance of 80.00 feet to a point;

thence (17) North 89°-56'-51" East along the south lines of said City of Rochester and the southerly termination of Gloster Street a distance of 300.00 feet to a point;

thence (18) North  $00^{\circ}$ -05'-35" West along the easterly highway boundary line of said Gloster Street a distance of 383.60 feet to a point;

thence (19) South 89°-53'-45" East along the southerly highway boundary line of Lyell Avenue a distance of 94.00 feet to an angle point;

thence (20) North 89°-55'-55" East along said southerly highway boundary line a distance of 105.40 feet to a point;

thence (21) South  $00^{\circ}$ -17'-05" East along the west line of reputedly Maguire Family Properties Inc. a distance of 151.36 feet to a point;

thence (22) North 89°-55'-55" East along the south line of said Maguire Family Properties Inc. a distance of 50.00 feet to a point;

thence (23) North  $00^{\circ}$ -17'-05" West along the east line of said Maguire Family Properties Inc. a distance of 151.36 feet to a point;

thence (24) North 89°-55'-55" East along the southerly highway boundary line of Lyell Avenue a distance of 69.88 feet to a point;

thence (25) South  $00^{\circ}$ -17'-05" East along the west line of reputedly Tim Donut US Limited Inc. a distance of 287.70 feet to a point;

thence (26) North 89°-55'-55" East along the south line of said Tim Donut US Limited Inc. a distance of 129.30 feet to a point;

thence (27) South  $00^{\circ}$ -17'-05" East along the westerly highway boundary line of Adirondack Street a distance of 95.66 feet to a point;

thence (28) North 89°-55'-55" East along the southerly termination of said Adirondack Street a distance of 50.00 feet to a point;

thence (29) North 00°-17'-05" West along the easterly highway boundary line of said Adirondack Street a distance of 383.36 feet to a point;

thence (30) North 89°-55'-55" East along the southerly highway boundary line of Lyell Avenue a distance of 710.00 feet to the point of beginning.

Parcel contains 5,320,300 square feet which equals 122.137 acres.