Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision

Former Raeco Products Site
State Superfund Project
Rochester (C), Monroe County, New York
Site Number 828107

March 2010

New York State Department of Environmental Conservation
DAVID A. PATERSON, *Governor* ALEXANDER B. GRANNIS, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

Former Raeco Products
State Superfund Project
Rochester (C), Monroe County, New York
Site No. 828107

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Former Raeco Products site, a Class 2 inactive hazardous waste disposal site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law, 6 NYCRR Part 375, and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Former Raeco Products site and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Description of Selected Remedy

Based on the results of the remedial investigation and the feasibility study (RI/FS) for the Former Raeco Products site and the criteria identified for evaluation of alternatives, the Department has selected surface cleanup and/or a cover along with soil vapor extraction. The components of the remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.

2. Areas of surface contamination (top one foot of soil) will be addressed through either removal and/or clean soil backfill or the placement of a cover over the site (for the purposes of the cost estimate a one foot crushed stone cover has been assumed). Clean soil is soil that is tested and either meets the Division of Environmental Remediation's criteria for backfill or is consistent with local site background. If removal is to be performed the areas to be addressed will be based on results from additional soil samples. The determination of how to proceed (removal or cover) will be made early in design; additional site surface soil samples and background surface soil samples could be collected to support targeted removal or to place a cover over the site to prevent direct contact with surface contamination. If a cover is placed over the site it is anticipated it will be necessary to remove approximately one foot of soil adjacent to existing structures

prior to installation of the cover. If a cover is installed, a demarcation barrier will be in place over contaminated soil.

3. Installation of a soil vapor extraction (SVE) system to provide in-situ remediation of volatile organic compounds (VOCs) in the soil in the central part of the site. Approximately four SVE wells will be installed in the vadose zone and screened to a depth of approximately 20 feet. The air containing VOCs extracted from the SVE wells will be treated, as necessary, using activated carbon. If vinyl chloride is present at concentrations that will require treatment prior to discharge, the air will also be passed through a second unit for the treatment of vinyl chloride (e.g., catalytic oxidation or organic clay/permanganate units).

4. Installation of a vapor mitigation system in on-site Building A (as indicated in the body of this document, a recommendation has been made that the site property owner install a mitigation system in Building A).

5. The operation of the components of the remedy (SVE system) will continue until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible.

6. To maximize the net environmental benefit, Green remediation and sustainability efforts are considered in the design and implementation of the remedy to the extent practicable, including:

   - using renewable energy sources
   - reducing green house gas emissions
   - encouraging low carbon technologies
   - foster green and healthy communities
   - conserve natural resources
   - design storm water management systems to recharge aquifers

7. Imposition of an institutional control in the form of an environmental easement for the controlled property that:
   (a) requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).
   (b) land use is subject to local zoning laws, the remedy allows the use and development of the controlled property for commercial or industrial use.
   (c) restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the Department, NYSDOH or County DOH;
   (d) prohibits agriculture or vegetable gardens on the controlled property;
   (e) requires compliance with the Department approved Site Management Plan.

8. Since the remedy results in contamination remaining at the site that does not allow for unrestricted use, a Site Management Plan is required, which includes the following:

(a) a Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to assure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Paragraph 6 above.

Engineering Controls: The cover discussed in Paragraph 2 and the SVE system discussed in Paragraph 3 above.

This plan includes, but may not be limited to:

(i) Soil Management Plan which details the provisions for management of future excavations in areas of remaining contamination;
(ii) descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
(iii) provisions for the management and inspection of the identified engineering controls; and
(iv) the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls;

(b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but not be limited to:

(i) monitoring of the vapor extraction system and groundwater to assess the performance and effectiveness of the remedy;
(ii) a schedule of monitoring and frequency of submittals to the Department;
(iii) provision to evaluate the potential for vapor intrusion for any future buildings developed on the site, including provision for mitigation of any impacts identified;
(iv) provision to evaluate the potential for soil vapor intrusion for existing buildings if building use changes significantly or if a vacant building become occupied.

(c) an Operation and Maintenance Plan to assure continued operation, maintenance, monitoring, inspection, and reporting of for any mechanical or physical components of the remedy. The plan includes, but is not limited to:

(i) compliance monitoring of treatment systems to assure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting; and
(ii) providing the Department access to the site and O&M records.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

03/30/2010
Date

/s/
Dale A. Desnoyers, Director
Division of Environmental Remediation

TABLE OF CONTENTS

SECTION **PAGE**

RECORD OF DECISION
Former Raeco Products
State Superfund Project
Rochester (C), Monroe County, New York
Site No. 828107
March 2010

SECTION 1: SUMMARY AND PURPOSE OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected this remedy for the above referenced site. The disposal of hazardous waste at the site has resulted in threats to public health and the environment that are addressed by this remedy in this Record of Decision (ROD). The disposal of hazardous wastes at this site, as more fully described in Sections 5 of this document, have contaminated various environmental media. The remedy, discussed in detail in Section 8, is intended to attain the remedial action objectives identified for this site in Section 6 for the protection of public health and the environment. This ROD identifies the selected remedy, summarizes the other alternatives considered, and discusses the reasons for the selected remedy. The Department has selected a final remedy for the site after careful consideration of all comments received during the public comment period.

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

The Department has issued this ROD in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, 6 NYCRR Part 375.

SECTION 2: SITE DESCRIPTION AND HISTORY

2.1: Location and Description

The site is located at 24 Spencer Street, City of Rochester, New York (see Figure 1). The Site is located within a heavily developed light industrial and commercial area northwest of downtown Rochester. The 3.4 acre property is bordered by an abandoned railroad right of way to the north; Spencer Street to the south; the Genesee River to the east; and, Cliff Street to the west. The property is zoned as C-2, "community center district", or as a commercial area. The property is currently being used to store equipment (i.e., dumpsters) and vehicles. The main site features at the site are 4 buildings; the subsurface foundation/basement of Building E is still present at the site. Part of one building (Building A, see Figure 4) has been used for office space by the occupant in the past; the other three buildings have been used for equipment storage and/or

equipment maintenance. It is unclear whether the site buildings are being used in a similar manner by the current owner.

The Site is relatively flat with an elevation of approximately 460 ft above mean sea level (amsl). The terrain dips slightly to the east/northeast across the site. The eastern edge of the site slopes to a cliff face that forms the Genesee River gorge. The surface water of the Genesee River is approximately 70 feet below the ground surface at the site. The site consists of a few feet to over 49 feet of overburden on top of bedrock. During the RI bedrock was identified from a few feet below the ground surface (bgs) at the eastern side of the site to depths exceeding 49 feet at the west/southwest portion of the Site (possibly associated with historic sewer line installation and associated rock removal that may have occurred); over most of the site bedrock was encountered between 10 to 20 feet below the ground surface. The overburden is comprised primarily of fill material including silty sand and gravel with some miscellaneous construction and demolition debris (brick, concrete, wood, and ash fragments were noted during previous subsurface investigations). Deeper overburden consists primarily of silty clays and silty fine sands. Gravelly sands and clays were also noted at some areas of the Site. A clay layer of varying thickness exists just above the bedrock surface (bedrock at the Site is classified as dolomite with frequent fractures).

Groundwater at the site is typically not observed in the overburden, with some exceptions including gravelly intervals (where depth to bedrock exceeded 20 feet bgs) and at the non-confining clay layer situated immediately above the bedrock. The depth to groundwater in three bedrock monitoring wells ranged from approximately 20 to 42 feet bgs. During the RI it was observed that the first significant water producing fractures were encountered at approximately 40 to 50 feet bgs. Locally, the shallow bedrock groundwater appears to have a source of recharge centrally located at the Site, with groundwater flowing radially from the central area of the site to the Genesee River and surrounding area. This trend is also apparent in deeper groundwater monitored at the Site, but deeper groundwater appears to have a steeper gradient of flow to the Genesee River to the east and a strong component of flow to the south/southeast (see Figures 2 and 3). Groundwater at the site has a strong vertically downward gradient toward the adjacent Genesee River, which is situated approximately 70 feet below the ground surface of the site.

2.2: Operational/Disposal History

From the 1930s through 1987, the Site was reportedly owned and operated by John H. Rae, Inc. (Raeco) as a bulk storage, blending, packaging and distribution facility for chemicals and petroleum products. Poor practices over the years resulted in extensive site contamination.

In 1995, the Raeco property was sold to P&P Properties, Inc. At that point the property was reportedly leased by a construction contractor, through the Spring 2009, who used the property to store and repair heavy construction equipment. The current owner (Dance Hall Entertainment, LLC) purchased the property in April 2009 and utilizes the site for equipment and vehicle storage.

2.3: Remedial History

The remedial program at this site is being funded by New York State under the State Superfund Program. On, or about July 1998 the Department first identified the site as a Potential (P) site. A "P" site is a temporary classification assigned to a site that had inadequate and/or insufficient data for inclusion in any of the other classifications in the Registry of Inactive Hazardous Waste Disposal Sites in New York. As a result of identified hazardous waste disposal, the Department listed the site as a Class 2 site in the Registry of Inactive Hazardous Waste Disposal Sites in New York in January 2001. A Class 2 site is a site where hazardous waste presents a significant threat to the public health or the environment and action is required.

The site has been the subject of several regulatory investigations and inspections. Below is a brief summary of the regulatory activities at the site:

- Dye testing was conducted by Monroe County Health Department (MCHD) in 1970 to investigate three (3) pipe outlets that discharged into the gorge;
- The Rochester Police Department observed waste chemicals at the property in June 1994;
- NYSDEC, the Monroe County Health Department (MCHD), the United States Environmental Protection Agency (USEPA), and the City of Rochester completed follow-up inspections of the Site in 1994, 1995, and 1996;
- USEPA removed 553 containers (drums and 5-gallon pails) from the Site in 1997;
- NYSDEC completed a Preliminary Site Investigation (PSI) in 2001.

SECTION 3: LAND USE

The Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings when assessing the nature and extent of contamination. For this site alternatives that may restrict the use of the site to commercial criteria as described in Part 375-1.8 (g) are being evaluated in addition to unrestricted SCGs because the Former Raeco Products site was used as a commercial facility in the past, the site is presently zoned for commercial use, and the site is surrounded by other properties which are also zoned for commercial use. Therefore, the Department will evaluate the commercial SCGs found in Part 375-6.8 (b) in assessing the nature and extent of contamination.

A comparison of the appropriate SCGs for the identified land use against the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in section 5.1.2.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers. The PRPs for this site include:

- John H. Rae, Jr. is a responsible party in that he owned the site at the time hazardous waste was disposed at the site;

- Dance Hall Entertainment, LLC is a responsible party as current owner.

The PRPs for the site declined to implement a remedial program when requested by the Department. After the remedy is selected, the PRPs will again be contacted to assume responsibility for the remedial program. If an agreement cannot be reached with the PRPs, the Department will evaluate the site for further action under the State Superfund. The PRPs are subject to legal actions by the state for recovery of all response costs the state has incurred.

SECTION 5: SITE CONTAMINATION

A remedial investigation has been conducted to determine the nature and extent of contamination and to evaluate the alternatives for addressing the significant threats to human health and the environment.

5.1: Summary of the Remedial Investigation

The purpose of the Remedial Investigation (RI) was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted between March 2005 and February 2007. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,

- Soil borings and monitoring well installations,

- Sampling of waste, surface and subsurface soils, groundwater and soil vapor

- Sampling of surface water and sediment, groundwater,

- Ecological and Human Health Exposure Assessments.

5.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and surface and subsurface soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in the following Sections list the applicable SCG in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized in Section 5.1.2. More complete information can be found in the RI Report.

5.1.2: Nature and Extent of Contamination

This section describes the findings of the Remedial investigation. As described in the RI report, waste/ source materials were identified at the site and are impacting groundwater, soil, and soil vapor.

Waste/Source Areas

Source Areas are defined in 6 NYCRR Part 375-1.2 (au). Source areas are areas of concern at a site were substantial quantities of contaminants are found which can migrate and release significant levels of contaminants to another environmental medium. The source areas identified at the site includes the area in the middle of the property, near monitoring well 1D, and in the area between buildings A, B and D (approximate limits of AOCs 3, 4 and 5 on Figure 4). In this area of the site staining of soil has been seen; during the installation of the soils borings physical observations were made which included “dark staining”, “product saturated soil” and “free product.” Often these terms were used together to describe a soil sample that was clearly, visually contaminated. Also, a 0.07 - 0.08 foot (just under an inch) LNAPL layer was observed at MW-1D.

The source areas identified will be addressed in the remedy selection process.

This section describes the findings for all environmental media that were evaluated. As described in the RI report, groundwater, soil, surface water, sediment, and soil vapor intrusion samples were collected to characterize the nature and extent of contamination.

For each media, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants are arranged into four categories; volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides/ polychlorinated

biphenyls (PCBs), and inorganics (metals). For comparison purposes the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 3 are also presented.

Groundwater

Groundwater samples were collected from shallow bedrock (in the range of approximately 20 to 40 feet below the ground surface) and deep bedrock (in the range of approximately 60 to 75 feet below the ground surface) monitoring wells. The samples were collected to assess groundwater conditions at the site (downgradient groundwater monitoring wells were not installed because the eastern edge of the site is at the Genesee River gorge with the Genesee River at approximately 70 feet below the site). The results indicate that contamination in shallow bedrock groundwater at the site exceeds the SCGs for volatile organic compounds (see Figure 5), as well as isolated exceedances for certain inorganics and semi-volatile organic compounds. There is significant VOC contamination in MW-1D, located near the center of the site as well as relatively high VOC concentrations south/southeast of the central area of the site; contamination at MW-4D, located along the eastern edge of the southern part of the site, is relatively high, but it is approximately two orders of magnitude less than what is present at MW-1D. There are slight exceedances of certain VOC groundwater standards near the west edge of the central part of the site, but no exceedances at the north end of the site. Contamination in the deep bedrock is limited to MW-1DD, in the central portion of the site near the source area.

[Notes: 1) LNAPL sample results are not included in this summary, 2) groundwater samples collected in February 2000, during the PSI, are included in this summary]

Table 1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
Vinyl chloride	ND – 22000	2	10 / 19
Chloroethane	ND – 54	5	5 / 19
1,1-Dichloroethene	ND – 150	5	3 / 19
Acetone	ND – 980	50	1 / 19
1,1-Dichloroethane	ND – 1600	5	10/ 19
1,2-Dichloroethene	ND – 81,000	5	9 / 19
2-Butanone	ND - 480	50	1 / 19
1,1,1-Trichloroethane	ND – 530	5	2 / 19
Benzene	ND – 64	1	7 / 19
1,2-Dichloroethane	ND – 2	0.6	1 / 19
Trichloroethene	ND – 96	5	3 / 19
Toluene	ND - 8300	5	4 / 19
Ethylbenzene	ND - 840	5	5 / 19

Xylene	ND - 2700	5	6 / 19
1,2-Dichlorobenzene	ND – 9	3	2 / 19
Isopropylbenzene	ND – 15	5	1 / 19
SVOCs			
2-Methylphenol	ND - 11	1	3 / 19
4-Methylphenol	ND - 40	1	3 / 19
2,4-Dimethylphenol	ND – 3	1	2 / 19
Naphthalene	ND – 42	10	1 / 19
Benzo(a)anthracene	ND – 2	0.002	2 / 19
Chrysene	ND - 2	0.002	2 / 19
Bis(2-ethylhexyl)phthalate	ND - 220	5	2 / 19
Benzo(b)fluoranthene	ND – 3	0.002	2 / 19
Benzo(k)fluoranthene	ND – 2	0.002	1 / 19
Benzo(a)pyrene	ND – 2	0.002	2 / 19
Indeno(1,2,3-cd)pyrene	ND – 2	0.002	1 / 19
Butylbenzylphthalate	ND - 74	50	1 / 19
Metals			
Cadmium	ND – 6.9	5	1 / 19
Lead	ND - 207	25	3 / 19
Manganese	17.8 – 1310	300	4 / 19
Zinc	ND - 4030	2000	2 / 19

ND = not detected
a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, 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).

The primary groundwater contaminants are VOCs, mainly trichloroethene and its breakdown products and 1,1,1-trichloroethane and its breakdown products. There are also a small number of SCG exceedances for certain SVOCs and metals. The presence of this groundwater contamination is associated with the poor handling practices at the former chemical re-packaging facility that operated at the site. As shown on Figure 5, the primary groundwater contamination (VOCs) is located on the central portion of the site (where most of the loading/unloading operations took place).

Based on the findings of the RI, the disposal of hazardous waste has resulted in the contamination of groundwater. The site contaminants that are considered to be the primary contaminants of concern which will drive the remediation of groundwater to be addressed by the remedy selection process are: vinyl chloride, chloroethane, 1,1-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethene, 1,1,1-trichloroethane, benzene, trichloroethene, toluene, ethylbenzene, and xylene.

Soil

Surface and subsurface soil samples were collected at the site during the RI and the PSI. Data gathered during the RI built upon the data gathered during the PSI; as an example, surface soil samples were collected during the PSI, but not during the RI. During the RI a decision not to collect additional surface soil samples was made, in part, due to the obvious presence of oil and grease contamination at the surface (see photographs included in Appendix A of the FS Report). Surface soil samples were collected (during the PSI) from a depth of 0-2 inches to assess direct human exposure. Subsurface soil samples were collected from a depth of 1 foot to as deep as 40 feet to assess soil contamination. The results indicate that soils at the site exceed the unrestricted SCGs for volatile and semi-volatile organics, metals and pesticides (see Figures 8, 9 and 10). In addition to the analytical results, during the installation of the soils borings physical observations were made which included "dark staining", "product saturated soil" and "free product." Often these terms were used together to describe a soil sample that was clearly, visually contaminated. Also, a 0.07 - 0.08 foot (just under an inch) LNAPL layer was observed and sampled at MW-1D.

[Note: data from soil samples collected in 2000, during the PSI, along with data from the RI soil samples, are summarized in Table 2]

Table 2 - Soil

Detected Constituents	Concentration Range Detected	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted SCG[c] (ppm)	Frequency Exceeding Restricted Commercial
SURFACE SOIL					
VOCs					
2-Butanone	1.9	0.12	1 / 4	500	0 / 4
SVOCs					
Benzo(a)anthracene	15	1	1 / 4	5.6	1 / 4
Benzo(a)pyrene	0.490 – 5.4	1	1 / 4	1	1 / 4
Benzo(b)fluoranthene	1.0 - 8.2	1	2 / 4	5.6	1 / 4
Chrysene	0.610 – 27	1	1 / 4	56	0 / 4
Pentachlorophenol	11	0.8	1 / 4	6.7	1 / 4
Metals					
Barium	80.1 – 976	350	1 / 4	400	1 / 4
Copper	24.7 – 92.4	50	1 / 4	270	0 / 4
Lead	77.9 – 2340	63	4 / 4	1,000	1 / 4
Mercury	0.031 – 1.2	0.18	1 / 4	2.8	0 / 4
Silver	3.5	2	1 / 4	1,500	0 / 4
Zinc	153 – 1630	109	4 / 4	10,000	0 / 4
Pesticides/PCBs					
4,4-DDD	0.16	0.0033	1 / 4	92	0 / 4

4,4-DDT	0.14	0.0033	1 / 4	47	0 / 4
Dieldrin	0.99	0.005	1 / 4	1.4	0 / 4
Endrin	0.12 – 0.380	0.014	3 / 4	89	0 / 4
SUBSURFACE SOIL					
VOCs					
Vinyl Chloride	0.002 – 4.4	0.02	6 / 105	13	0 / 105
Methylene Chloride	0.012 – 1.5	0.05	5 / 105	500	0 / 105
Acetone	0.007 – 44	0.05	24 / 105	500	0 / 105
1,1-Dichloroethane	0.002 – 4.5	0.27	3 / 105	240	0 / 105
2-Butanone	0.004 – 5.2	1.2	18 / 105	500	0 / 105
1,1,1-Trichloroethane	0.002 – 7.6	0.68	5 / 105	500	0 / 105
Trichloroethene	0.001 - 71	0.47	10 / 105	200	0 / 105
Benzene	0.0003 – 1.4	0.06	7 / 105	44	0 / 105
Tetrachloroethene	0.0003 – 18	1.3	4 / 105	150	0 / 105
Toluene	0.0005 – 1,000	0.7	13 / 105	500	2 / 105
Ethylbenzene	0.0003 – 130	1	10 / 105	390	0 / 105
Xylene (total)	0.0004 – 650	0.26	27 / 105	500	1 / 105
cis-1,2-Dichloroethene	0.00055 - 47	0.25	6 / 91	500	0 / 91
Trans-1,2-Dichloroethene	0.002 - 0.54	0.19	1 / 91	500	0 / 91
1,4-Dichlorobenzene	0.001 – 4.1	1.8	1 / 105	130	0 / 105
1,2-Dichlorobenzene	0.0004 - 95	1.1	4 / 105	500	0 / 105
SVOCs					
Naphthalene	0.041 – 13	12	1 / 105	500	0 / 105
Benzo(a)anthracene	0.043 – 28	1	29 / 105	5.6	5 / 105
Chrysene	0.041 – 36	1	31 / 105	56	0 / 105
Benzo(b)fluoranthene	0.21 - 20	1	31 / 105	5.6	6 / 105
Benzo(k)fluoranthene	0.04 - 30	0.8	24 / 105	56	0 / 105
Benzo(a)pyrene	0.045 – 29	1	26 / 105	1	26 / 105
Indeno(1,2,3-cd)pyrene	0.042 – 15	0.5	29 / 105	5.6	4 / 105
Dibenzo(a,h)anthracene	0.044 – 4.7	0.33	15 / 105	0.56	9 / 105
Metals					
Arsenic	ND – 88.4	13	7 / 105	16	3 / 105
Barium	10.5 – 2530	350	6 / 105	400	5 / 105
Beryllium	ND – 19.7	7.2	2 / 105	590	0 / 105
Cadmium	ND – 3.6	2.5	1 / 105	9.3	0 / 105
Chromium	4.2 – 40.8	30	3/105	1,500	0 / 105
Copper	4.7 – 824	50	28 / 105	270	4 / 105
Lead	3.6 – 3990	63	54 / 105	1,000	4 / 105
Manganese	99.5 - 2080	1600	3 / 105	10,000	0 / 105
Mercury	ND – 5.8	0.18	50 / 105	2.8	3 / 105
Nickel	1.8 – 150	30	2 / 105	310	0 / 105

Selenium	ND - 5.4	3.9	2 / 105	1,500	0 / 105
Silver	ND – 2.2	2	1 / 105	1,500	0 / 105
Zinc	5.1 - 806	109	38 / 105	10,000	0 / 105
Pesticides/PCBs					
4,4'-DDD	ND – 0.0055	0.0033	2 / 14	92	0 / 14
4,4'-DDT	ND – 0.064	0.0033	3 / 14	47	0 / 14
Dieldrin	ND – 0.019	0.005	6 / 14	1.4	0 / 14
Endrin	ND – 0.560	0.014	11 / 14	89	0 / 14

ND = not detected
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 Commercial Soil Cleanup Objectives.

The primary soil contaminants are VOCs, SVOCs, and isolated elevated detections of lead and mercury associated with the poor handling practices at the former chemical re-packaging facility that operated at the site; the presence of SVOCs and metals in shallow soils may also be associated with historic fill at the site. As noted on Figure 8, the primary VOC soil contamination is located in the central portion of the site (where most of the loading/unloading operations took place). During the PSI and RI only three samples exceeded commercial SCOs for a VOC; there are numerous VOC exceedances of unrestricted SCOs (see Table 2 and Figure 8). As indicated on Figure 9, there is SVOC soil contamination above both unrestricted and commercial SCOs, spread across the site, while the lead and mercury soil contamination is found in different, discrete areas as shown on Figure 10.

Based on the findings of the Remedial Investigation, the 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: trichloroethene and its breakdown products; 1,1,1-trichloroethane and its breakdown products; toluene; xylene; benzo(a)pyrene; and lead.

Surface Water

Surface water samples were collected in the Genesee River during the RI from upstream, adjacent to the site and downstream locations. The samples were collected to assess the surface water conditions near the site. The results indicate that contaminants in surface water near the site did not exceed the Department's SCGs.

No site-related surface water contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for surface water.

Sediments

Attempts were made to collect sediment samples at the same locations where surface water samples were collected in the Genesee River during the RI. However, after probing the bottom

of the River at several locations it was discovered that sediment was not present above bedrock in the river channel.

No site-related sediment contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for sediment.

Soil Vapor Intrusion

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, and indoor air inside structures. At this site, due to the presence of buildings in the impacted area, a full suite of samples were collected to evaluate whether soil vapor intrusion was occurring.

Soil vapor samples were collected from the sub-slab of one structure (Building A) located on the Former Raeco Products site. Building A was the only structure sampled because it is the only on-site building with office space; other on-site buildings are/were being used for storage or for vehicle maintenance. Indoor air and outdoor air samples were also collected at this time. The samples were collected to assess the potential for soil vapor intrusion. The results indicate cis-1,2-dichloroethene (cis-1,2-DCE), trichloroethylene (TCE), tetrachloroethene (PCE), 1,1,1-trichloroethane (1,1,1-TCA), ethanol, styrene, and 1,1-dichloroethane (1,1-DCA) were detected in on-site sub-slab vapor and on-site indoor air from the on-site building labeled as Building A.

The primary soil vapor contaminants are cis-1,2-DCE, TCE, and 1,1,1-TCA which are associated with the chemicals that were handled at the former chemical re-packaging facility. Soil vapor contamination is found under building A located on-site (see Figure 4). Soil vapor testing was not performed on adjacent, off-site properties because contamination originates at the site and moves east, to the Genesee River gorge. A recommendation has been made to the site property owner that mitigation is necessary for the on-site Building A.

Based on the findings of the Remedial Investigation, the disposal of hazardous waste has resulted in the contamination of soil vapor. The site contaminants that are considered to be the primary contaminants of concern are cis-1,2-DCE, TCE, and 1,1,1-TCA. As indicated above, the current owner has been notified of these results and it has been recommended that the current owner perform mitigation to address this situation.

5.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Record of Decision.

There were no IRMs performed at this site during the RI.

5.3: Summary of Human Exposure Pathways:

This section describes the current or potential human exposures (the way people may come in contact with contamination) that may result from the site contamination. A more detailed discussion of the human exposure pathways can be found in the RI report available at the document repository. An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

No complete exposure pathways exist at this time. People are not drinking the contaminated groundwater because the area is served by a public water supply that obtains its water from a different source. The potential exists for people to be exposed to site-related contaminants as follows:

- The potential for exposures associated with soil vapor intrusion has been investigated and it was determined that further action is required in the on-site building to minimize the potential for exposures related to soil vapor intrusion.

    - Contact with contaminated soil by the general public is unlikely because public access is limited, however there is a potential for trespassers to come into contact with contaminated surface soils. In addition, workers who dig or enter excavations on-site could potentially be exposed to contaminated soil through dermal contact and/or incidental ingestion.

5.4: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The Fish and Wildlife Impact Analysis (FWIA), which is included in the RI report, presents a detailed discussion of the existing and potential impacts from the site poses to fish and wildlife receptors.

Contamination at the Site is related to historical releases to the soil from deteriorating drums and leaking storage tanks and drums. There is evidence of soil contamination on the Site, but habitat for endangered, threatened, or special concern species is not present on the Site. There are no ecological habitats on the Site, and the surrounding area is primarily commercial/industrial which is characterized as a terrestrial cultural (upland) community type. The Site is bordered on the east by the Genesee River gorge and forested areas are present within a half mile radius of the Site. Based on shallow soils samples collected at the Site during the PSI and the RI, VOCs, SVOCs, and metals exceeded Department SCOs. Since there are no ecological habitats on the Site, there are no direct exposure pathways from these soils to wildlife populations. Contaminated soil at the Site could be eroded during storm events and enter storm drains discharging to the Genesee River. However, no bottom/sediments/soil were observed during ERM's sampling of the river. Therefore, soils were not addressed further in the FWIA.

The only potential contaminant migration pathway identified for the Site is the potential for groundwater to discharge to surface water. Based on previous investigations, groundwater flows towards the Genesee River. The VOCs that were detected in the groundwater samples above surface water protection screening levels were not detected in the surface water samples. The two VOCs that were detected in the surface water samples were very low estimated values; toluene was reported below the screening level and no screening level was available for chloromethane. The following three metals were detected in both the groundwater and surface water samples above screening levels: aluminum, barium and iron. The concentrations of these three metals are similar in all three surface water samples (samples collected from upstream, adjacent to, and downstream of the site). Thus, the Site does not appear to be the source of the detections in the surface water.

Surface water resources at or near the site include the Genesee River. The Genesee River is located along the eastern side of the Site at the base of the Genesee River gorge. The Genesee River is classified as an Unconfined River. An Unconfined River is an aquatic community with a relatively large, quiet, base level section of streams with a very low gradient. As described above, no current or potential site-related surface water impacts have been identified.

The FWIA did not identify any current or potential impacts to ecological resources.

Generally, groundwater was not encountered in overburden at the site. However, some of the gravelly intervals and portions of the site where depths to bedrock exceeded 20 feet below the ground surface (bgs) were saturated above bedrock. The bedrock identified at the site is classified as dolomite and was observed to be fractured. The first significant water producing fractures were generally encountered at depths of approximately 40 to 50 feet bgs. At the site shallow groundwater appears to have a source of recharge centrally located at the site, which flows radially to the Genesee River and surrounding area. This trend is also apparent in deeper groundwater monitored at the site, but deeper groundwater appears to have a steeper gradient of flow to the Genesee River to the east and a strong component of flow to the south/southeast.

Site related contamination is impacting groundwater. The groundwater is not used as a source of potable water. Protection of the groundwater resource will be addressed in the remedy selection process.

SECTION 6: SUMMARY OF THE REMEDIATION OBJECTIVES

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial objectives for this site are:

Public Health Protection

Groundwater

- Prevent people from drinking groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with contaminated groundwater.
- Prevent inhalation of contaminants from groundwater.

Soil

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of contaminants volatilizing from the soil.

Soil Vapor

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into the indoor air of buildings at or near a site.

Environmental Protection

Groundwater

- Restore the groundwater aquifer to meet ambient groundwater quality criteria, to the extent feasible.

Soil

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

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

To be selected the remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Site were identified, screened and evaluated in the feasibility study report which is available at the document repositories established for this site.

A summary of the remedial alternatives that were considered for this site is presented below. Cost information is presented in the form of present worth, which represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved.

7.1: Description of Remedial Alternatives

The following alternatives were considered to address the contaminated media identified at the site as described in Section 5:

Alternative 1: No Action

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. This alternative leaves the site in its present condition and does not provide any additional protection to public health and the environment.

Alternative 2: Restoration to Pre-Disposal or Unrestricted Conditions

This alternative achieves all of the SCGs discussed in Section 5.1.1 and soil meets the unrestricted soil cleanup objectives listed in Part 375-6.8 (a). This alternative would include the demolition of the on-site buildings, excavation of the entire 3.4 acre site down to bedrock and site restoration. This alternative would remove the contaminated soil, preventing exposures and remove the source in the soil. This remedy could be designed in under a year, and once mobilized to the site implementation of the remedy would take approximately five months after the award of the contract.

Capital Cost:.....$ 28,900,000

Alternative 3: Asphalt Cover and Soil Vapor Extraction

This alternative achieves all of the SCGs discussed in Section 5.1.1 and soil meets the commercial soil clean objectives listed in Part 375-6.8 (b). This alternative would include an asphalt cover and soil vapor extraction. The asphalt cover would consist of approximately six inches of asphalt over approximately six inches of gravel and would be installed over exposed

soil on the entire site to prevent direct contact with the contaminated soil as well as reducing infiltration through contamination in the soil. A soil vapor extraction system would be installed to provide in-situ remediation of volatile organic compounds present in the central area of the site. Soil vapor extraction (SVE) is an in-situ technology used to treat volatile organic compounds (VOCs) in soil. The process physically removes contaminants from the soil by applying a vacuum to a SVE well that has been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOCs from the soil to the SVE well. The air extracted from the SVE wells is then run through an activated carbon treatment canister (the vapor may also be passed through a second unit, such as a catalytic oxidation unit, for treatment of vinyl chloride) to remove the VOCs before the air is discharged to the atmosphere. This remedy could be designed in under a year, and once mobilized to the site construction of the components of the remedy would take approximately three months. It is estimated that the SVE system would operate for approximately five years in order to achieve the remedial goals.

This alternative would also include post-remediation groundwater monitoring, institutional controls to prohibit the use of groundwater as a potable water source, and would require compliance with a Department approved Site Management Plan.

At this site approximately four SVE wells would be installed in the vadose zone and screened to a depth of approximately 20 feet below the ground. The air containing VOCs extracted from the SVE wells would be treated, as necessary, using activated carbon (the vapor may also be passed through a second unit, such as a catalytic oxidation unit, for treatment of vinyl chloride).

Present Worth:.....$1,570,000
Capital Cost:.....$882,000
Annual Costs (average):..... $44,800 (30 years)

Alternative 4: Surface Cleanup/Cover and Soil Vapor Extraction

This alternative achieves all of the SCGs discussed in Section 5.1.1 and soil meets the commercial soil clean objectives listed in Part 375-6.8 (b). This alternative would include addressing the soil contamination near the surface (top one foot) in addition to soil vapor extraction. Areas of obvious surface contamination would be addressed through either surface cleanup and clean backfill or the placement of a cover over the site (for purposes of the cost estimate a crushed stone cover is assumed). The determination of how to proceed would be made early in design; additional site surface soil samples and background surface soil samples could be collected to determine whether minimal surface removal is appropriate or whether a cover should be placed over the site to prevent direct contact with surface contamination.

In addition, a soil vapor extraction system would be installed to provide in-situ remediation of volatile organic compounds present in the central area of the site. Soil vapor extraction (SVE) is an in-situ technology used to treat volatile organic compounds (VOCs) in soil. The process physically removes contaminants from the soil by applying a vacuum to a SVE well that has been installed into the vadose zone (the area below the ground but above the water table). The

vacuum draws air through the soil matrix which carries the VOCs from the soil to the SVE well. The air extracted from the SVE wells is then run through an activated carbon treatment canister (the vapor may also be passed through a second unit, such as a catalytic oxidation unit, for treatment of vinyl chloride) to remove the VOCs before the air is discharged to the atmosphere.

This remedy could be designed in under a year, and once mobilized to the site construction of the components of the remedy would take approximately three months. It is estimated that the SVE system would operate for approximately five years in order to achieve the remedial goals.

This alternative would be used to reduce contamination in the soil via the SVE system, thus reducing the source present in the soil, as well as minimizing potential exposures through the implementation of the surface cleanup and/or covering of the site.

This alternative would also include post-remediation groundwater monitoring (for approximately 5 years), institutional controls to prohibit the use of groundwater as a potable water source, and would require compliance with a Department approved Site Management Plan. The cost estimate for this alternative includes five years of annual costs, compared to 30 years for most of the other alternatives. The difference in the durations is due to differences in site management for the alternatives; this site management timeframe difference is associated with the longer maintenance associated with an asphalt cover (which is not included for surface cleanup and/or a crushed stone cover) and/or a longer groundwater monitoring timeframe.

At this site approximately four SVE wells would be installed in the vadose zone and screened to a depth of approximately 20 feet below the ground. The air containing VOCs extracted from the SVE wells would be treated, as necessary, using activated carbon (the vapor may also be passed through a second unit, such as a catalytic oxidation unit, for treatment of vinyl chloride).

Present Worth:.....$1,220,000
Capital Cost:.....$870,000
Annual Costs (average):..... $79,900 (5 years)

Alternative 5: Asphalt Cover, Soil Vapor Extraction, and Excavation of Soil Contaminated with Free Product

This alternative achieves all of the SCGs discussed in Section 5.1.1 and soil meets the commercial soil clean objectives listed in Part 375-6.8 (b). This alternative would include an asphalt cover, soil vapor extraction and excavation and off-site disposal of soil containing free product as observed in subsurface soil samples collected during site investigations (Preliminary Site Investigation and Remedial Investigation). This alternative would also include post-remediation groundwater monitoring (for approximately 5 years), institutional controls to prohibit the use of groundwater as a potable water source, and would require compliance with a Department approved Site Management Plan. This alternative would be used to reduce contamination in the soil (SVE, and soil excavation and off-site disposal), as well as minimizing potential exposures through the placement of a cover over the site. This remedy could be designed in under a year, and once mobilized to the site implementation of the remedy would

take approximately five months. It is anticipated that the SVE system would operate for approximately three years in order to achieve the remedial goals.

The asphalt cover would consist of approximately six inches of asphalt over approximately six inches of gravel and would be installed over the entire site to prevent direct contact with the contaminated soil as well as reducing infiltration through residual contamination in the soil. A soil vapor extraction system would be installed to provide in-situ remediation of volatile organic compounds present in the central area of the site. Soil vapor extraction (SVE) is an in-situ technology used to treat volatile organic compounds (VOCs) in soil. The process physically removes contaminants from the soil by applying a vacuum to a SVE well that has been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOCs from the soil to the SVE well. The air extracted from the SVE wells is then run through an activated carbon treatment canister (the vapor may also be passed through a second unit, such as a catalytic oxidation unit, for treatment of vinyl chloride) to remove the VOCs before the air is discharged to the atmosphere. This alternative would also include the excavation and off-site disposal of approximately 2900 cubic yards of soil observed to have had free product in subsurface soils during past investigations; removal of the soil containing free product would also remove some of the soil impacted with VOCs.

At this site approximately four SVE wells would be installed in the vadose zone and screened to a depth of approximately 20 feet below the ground. The air containing VOCs extracted from the SVE wells would be treated, as necessary, using activated carbon (the vapor may also be passed through a second unit, such as a catalytic oxidation unit, for treatment of vinyl chloride).

Present Worth:.....*$2,520,000*
Capital Cost:.....*$1,880,000*
Annual Cost (average):.....*$41,700 (30 years)*

Alternative 6: Asphalt Cover, and Excavation of Soil Contaminated with VOCs and Free Product

This alternative achieves all of the SCGs discussed in Section 5.1.1 and soil meets the commercial soil clean objectives listed in Part 375-6.8 (b). This alternative would include an asphalt cover, and excavation and off-site disposal of soil containing VOC contamination exceeding the commercial soil cleanup objectives, as well as excavation and off-site disposal of soil containing free product as observed in subsurface soil samples collected during site investigations (Preliminary Site Investigation and Remedial Investigation). This alternative would also include post-remediation groundwater monitoring (for approximately 5 years), institutional controls to prohibit the use of groundwater as a potable water source, and would require compliance with a Department approved Site Management Plan. This alternative would be used to reduce contamination in the soil (soil excavation and off-site disposal), as well as minimizing potential exposures through the placement of a cover over the site. This remedy could be designed in under a year, and once mobilized to the site implementation of the remedy would take approximately five months.

The asphalt cover would consist of approximately six inches of asphalt over approximately six inches of gravel and would be installed over the entire site to prevent direct contact with the contaminated soil as well as reducing infiltration through residual contamination in the soil. This alternative would also include the excavation and off-site disposal of approximately 6000 cubic yards of soil containing VOC contamination above the soil cleanup objectives and soil observed to have had free product in subsurface soils during past investigations.

Present Worth:.....*$3,030,000*
Capital Cost:.....*$2,520,000*
Annual Costs:..... *$33,500 (30 years)*

Alternative 7: Asphalt Cover and Long Term Groundwater Monitoring

This alternative achieves all of the SCGs discussed in Section 5.1.1 and soil meets the commercial soil clean objectives listed in Part 375-6.8 (b). This alternative would include an asphalt cover and an estimated 30 years of long term monitoring of the groundwater to evaluate contaminant migration patterns and concentration trends over time. This alternative would also include institutional controls to prohibit the use of groundwater as a potable water source and would require compliance with a Department approved Site Management Plan. This alternative would be used to monitor the groundwater contamination and minimize potential exposures through the placement of a cover over the site. This remedy could be designed in under a year, and once mobilized to the site implementation of the remedy would take approximately three months.

The asphalt cover would consist of approximately six inches of asphalt over approximately six inches of gravel and would be installed over the entire site to prevent direct contact with the contaminated soil as well as reducing infiltration through the contaminated soil.

Present Worth:.....*$1,510,000*
Capital Cost:.....*$685,000*
Annual Costs:..... *$53,700 (30 years)*

Alternative 8: Asphalt Cover, Dual Phase Extraction and Long Term Groundwater Monitoring

This alternative achieves all of the SCGs discussed in Section 5.1.1 and soil meets the commercial soil clean objectives listed in Part 375-6.8 (b). This alternative would include an asphalt cover, dual phase extraction and long term monitoring of the groundwater to monitor contaminant migration patterns and concentration trends over time. This alternative would also include institutional controls to prohibit the use of groundwater as a potable water source and would require compliance with a Department approved Site Management Plan. This alternative would be used to reduce contamination in the soil via dual phase extraction, thus reducing the source present in the soil, as well as minimizing potential exposures through the placement of a

cover over the site. This remedy could be designed in under a year, and once mobilized to the site construction of the components of the remedy would take approximately five months. It is estimated that the dual phase extraction system would operate for approximately four years in order to achieve the remedial goals.

The asphalt cover would consist of approximately six inches of asphalt over approximately six inches of gravel and would be installed over the entire site to prevent direct contact with the contaminated soil as well as reducing infiltration through residual contamination in the soil.

For this alternative an SVE system would be coupled with groundwater extraction (commonly called dual phase extraction) to remove and treat contaminated groundwater as well as to expose the vadose zone in the capillary fringe by groundwater pumping while simultaneously volatilizing the residual contamination in the vadose zone with SVE.

Soil vapor extraction (SVE) is an in-situ technology used to treat volatile organic compounds (VOCs) in soil. The process physically removes contaminants from the soil by applying a vacuum to a SVE well that has been installed into the vadose zone (the area below the ground but above the water table). The vacuum draws air through the soil matrix which carries the VOCs from the soil to the SVE well. The air containing VOCs extracted from the SVE wells would be treated, as necessary, using activated carbon (the vapor may also be passed through a second unit, such as a catalytic oxidation unit, for treatment of vinyl chloride).

Present Worth: *$2,000,000*
Capital Cost: *$944,000*
Annual Costs (average): ..... *$68,700 (30 years)*

7.2 Evaluation of Remedial Alternatives

The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375, which sets forth the requirements for the remediation of inactive hazardous waste disposal sites in New York. A detailed discussion of the evaluation criteria and comparative analysis is included in feasibility study report.

The first two evaluation criteria are termed “threshold criteria” and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative’s ability to protect public health and the environment.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

The next six “primary balancing criteria” are used to compare the positive and negative aspects of each of the remedial strategies.

3. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

4. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

5. Short-term Impacts and Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision. The costs for each alternative are presented in the Remedial Alternatives Cost Table {#.}

Table 3
Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
1. No Action	0	0	0
2. Restoration to Pre-Disposal/Unrestricted Conditions	28,900,000	0	28,900,000
3. Asphalt Cover and Soil Vapor Extraction (SVE)	882,000	44,800	1,570,000

4. Surface Cleanup/Cover and SVE	870,000	79,900	1,220,000
5. Asphalt Cover, SVE and Excavation of Soil Contaminated with Free Product	1,880,000	41,700	2,520,000
6. Asphalt Cover and Excavation of Soil Contaminated with VOCs & Free Product	2,520,000	33,500	3,030,000
7. Asphalt Cover and Long Term Groundwater Monitoring	685,000	53,700	1,510,000
8. Asphalt Cover, Dual Phase Extraction (DPE) and Long Term Groundwater Monitoring	944,000	68,700	2,000,000

8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

The final criterion, Community Acceptance, is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

9. Community Acceptance. Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP have been evaluated. The responsiveness summary (Appendix A) presents the public comments received and the manner in which the Department addressed the concerns raised. In general, the public comments received were supportive of the selected remedy.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based on the Administrative Record (Appendix B) and the discussion presented below, the Department has selected Alternative 4, Surface Cleanup/Cover and Soil Vapor Extraction, as the remedy for this site. The elements of this remedy are described at the end of this section.

8.1 **Basis for Selection**

The selected remedy is based on the results of the RI and the evaluation of alternatives.

Alternative 4 is selected because, as described below, it satisfies the threshold criteria and provides the best balance of the balancing criterion described in Section 7.2. It will achieve the remediation goals for the site by treating soil contamination in-place by implementing SVE, thus improving the groundwater quality over time, as well as minimizing the potential for contact with contamination present in the surface soil by performing targeted cleanup of surface soils and/or installing a cover over the site. Alternative 4 will address the contaminant source area, to the extent practicable, as well as be protective of public health and the environment.

Alternative 1 (No Action) does not provide any protection to public health and the environment and will not be evaluated further. Alternative 2 (Unrestricted), by removing all soil contaminated above the "Unrestricted" soil cleanup objective, meets the threshold criteria. Alternatives 3 (asphalt cover/SVE), 4 (surface cleanup &/or cover/SVE), 5 (asphalt cover/SVE/excavate free product soil), 6 (asphalt cover/excavate VOC and free product impacted soil), 7 (asphalt cover/long-term monitoring), and 8 (asphalt cover/DPE/LTM) also comply with this criteria but to a lesser degree or with lower certainty. Because Alternatives 2, 3, 4, 5, 6, 7 and 8 satisfy the threshold criteria, the remaining criteria are particularly important in selecting a final remedy for the site.

Alternatives 2 through 8 all have short-term impacts which could be controlled, however, Alternative 7 would have the smallest impact. The time to implement the remedy is the shortest for Alternative 7 and longer for Alternatives 6 and 2, respectively. Alternatives 3, 4, 5 and 8 would take longer than the other alternatives to implement the remedy.

Long-term effectiveness is best accomplished by those alternatives involving excavation of contaminated soils (Alternatives 2, 5 and 6). Alternative 2 results in removal of almost all of the chemical contamination at the site and removes the need for property use restrictions and long-term monitoring (the only alternative that would not require use restrictions and monitoring). Alternatives 5 and 6 would result in the removal of VOC contaminated soil and VOC/free product contaminated soil, respectively, but they would also require an environmental easement and post-remediation monitoring. For Alternatives 3, 4, 5, and 8, the operation of the SVE system (or DPE system for alternative 8) would effectively remove and treat a significant amount of the VOC contamination, and for these four alternatives the timeframe for the active part of site management (e.g., operating SVE system, collecting groundwater samples) is five years or less. Alternative 7 would not include active remediation of the source area and would provide the least long-term effectiveness of the alternatives (other than Alternative 1).

Alternative 7 would control potential exposures with containment and institutional controls only and would not reduce the toxicity, mobility or volume of contaminants remaining. Alternatives 2, 5 and 6 all include excavation and off-site disposal to varying degrees, which reduces the toxicity, mobility and volume of on-site waste by transferring the material to an approved off-site location. However, depending on the disposal facility, the volume of the material would not

be reduced. Alternatives 3, 4, 5 and 8 would permanently reduce the toxicity, mobility and volume of contaminants by removing and treating the contaminants from the subsurface.

Alternatives 3, 4, 7, and 8 are favorable in that they are readily implementable. Alternatives 2, 5, and 6 are also implementable, but would involve increased truck traffic on local roads for several weeks to several months, with Alternative 2 taking the longest time to complete the excavation of soil.

There is a relatively significant difference in costs between some of the alternatives. Alternative 7 has a relatively low cost, but the contaminated soil would not be addressed other than by installing a cover and the use of institutional controls. With its large volume of soil to be handled, Alternative 2 (excavation to unrestricted soil cleanup objectives and off-site disposal) would have the highest present worth cost. Alternatives 5 and 6 include excavation and off-site disposal of significant volumes of soil, and thus the costs are relatively high. Alternatives 3, 4 and 8 would provide similar levels of protection, but Alternative 4 would be the least expensive of those three alternatives.

The anticipated use of the site is commercial. There would be residual contamination with Alternatives 3 through 8. Groundwater contamination is not migrating off-site; once the source area is addressed the presence of residual waste will be controllable with implementation of a Site Management Plan.

The estimated present worth cost to implement the remedy is $1,220,000. The cost to construct the remedy is estimated to be $870,000 and the estimated average annual cost for five years is $79,900.

8.2 **Elements of the Selected Remedy**

The elements of the selected restricted use remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.

2. Areas of surface contamination (top one foot of soil) will be addressed through either removal and/or clean soil backfill or the placement of a cover over the site (for the purposes of the cost estimate a one foot crushed stone cover has been assumed). Clean soil is soil that is tested and either meets the Division of Environmental Remediation's criteria for backfill or is consistent with local site background. If removal is to be performed the areas to be addressed will be based on results from additional soil samples. The determination of how to proceed (removal or cover) will be made early in design; additional site surface soil samples and background surface soil samples could be collected to support targeted removal or to place a cover over the site to prevent direct contact with surface contamination. If a cover is placed over the site it is anticipated it will be necessary to remove approximately one foot of soil adjacent to existing structures

prior to installation of the cover. If a cover is installed, a demarcation barrier will be in place over contaminated soil.

3. Installation of a soil vapor extraction (SVE) system to provide in-situ remediation of volatile organic compounds (VOCs) in the soil in the central part of the site. Approximately four SVE wells will be installed in the vadose zone and screened to a depth of approximately 20 feet. The air containing VOCs extracted from the SVE wells will be treated, as necessary, using activated carbon. If vinyl chloride is present at concentrations that will require treatment prior to discharge, the air will also be passed through a second unit for the treatment of vinyl chloride (e.g., catalytic oxidation or organic clay/permanganate units).

4. Installation of a vapor mitigation system in on-site Building A (as indicated in the body of this document, a recommendation has been made that the site property owner install a mitigation system in Building A).

5. The operation of the components of the remedy (SVE system) will continue until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible.

6. To maximize the net environmental benefit, Green remediation and sustainability efforts are considered in the design and implementation of the remedy to the extent practicable, including;
   - using renewable energy sources
   - reducing green house gas emissions
   - encouraging low carbon technologies
   - foster green and healthy communities
   - conserve natural resources
   - design storm water management systems to recharge aquifers

7. Imposition of an institutional control in the form of an environmental easement for the controlled property that:
   (a) requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).
   (b) land use is subject to local zoning laws, the remedy allows the use and development of the controlled property for commercial or industrial use.
   (c) restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the Department, NYSDOH or County DOH;
   (d) prohibits agriculture or vegetable gardens on the controlled property;
   (e) requires compliance with the Department approved Site Management Plan.

8. Since the remedy results in contamination remaining at the site that does not allow for unrestricted use, a Site Management Plan is required, which includes the following:

(a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to assure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Paragraph 6 above.

Engineering Controls: The cover discussed in Paragraph 2 and the SVE system discussed in Paragraph 3 above.

This plan includes, but may not be limited to:

(i) Soil Management Plan which details the provisions for management of future excavations in areas of remaining contamination;
(ii) descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
(iii) provisions for the management and inspection of the identified engineering controls; and
(iv) the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls;

(b) a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but not be limited to:

(i) monitoring of the vapor extraction system and groundwater to assess the performance and effectiveness of the remedy;
(ii) a schedule of monitoring and frequency of submittals to the Department;
(iii) provision to evaluate the potential for vapor intrusion for any future buildings developed on the site, including provision for mitigation of any impacts identified;
(iv) provision to evaluate the potential for soil vapor intrusion for existing buildings if building use changes significantly or if a vacant building become occupied.

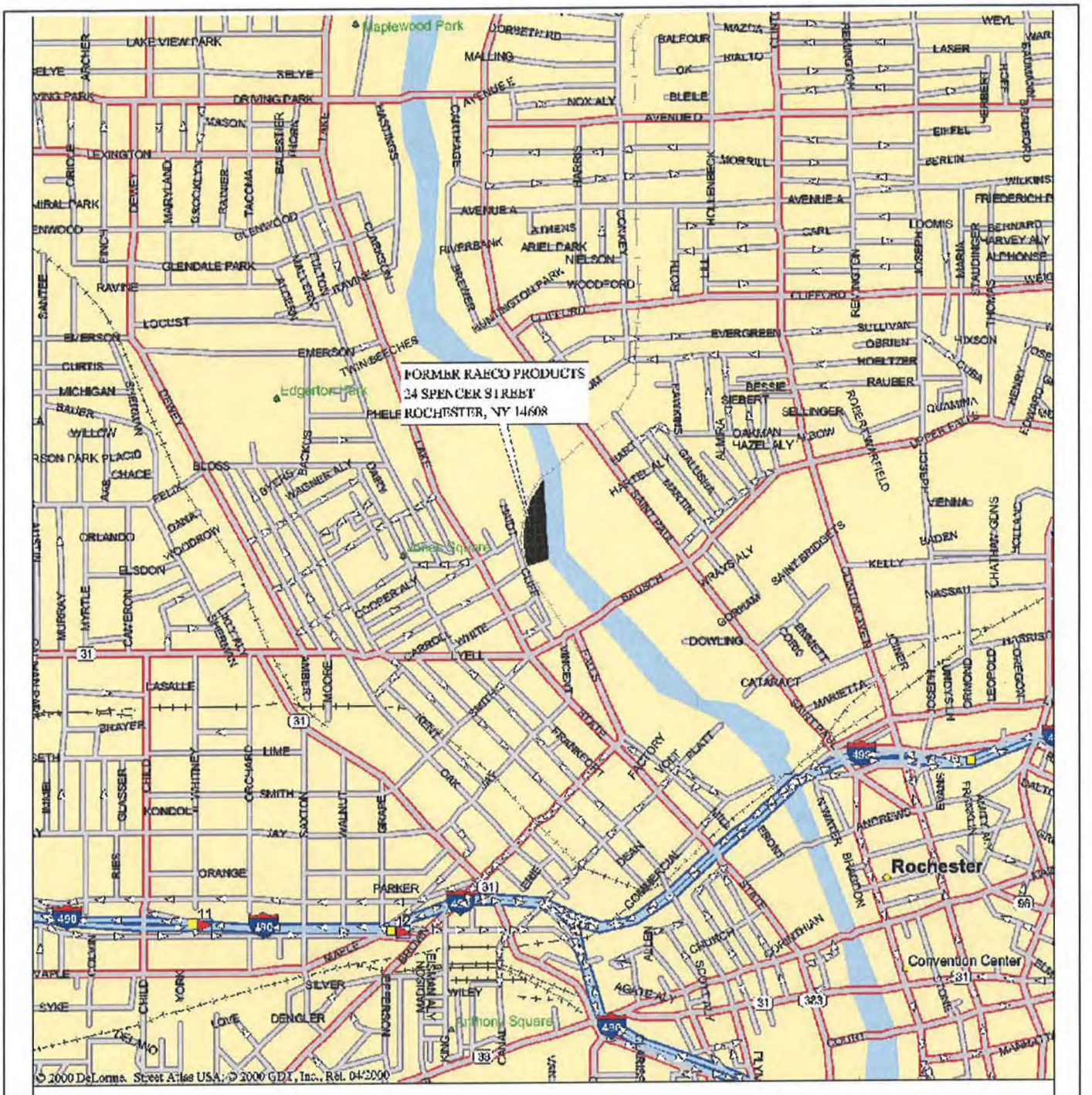
(c) an Operation and Maintenance Plan to assure continued operation, maintenance, monitoring, inspection, and reporting of for any mechanical or physical components of the remedy. The plan includes, but is not limited to:

(i) compliance monitoring of treatment systems to assure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting; and
(ii) providing the Department access to the site and O&M records.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

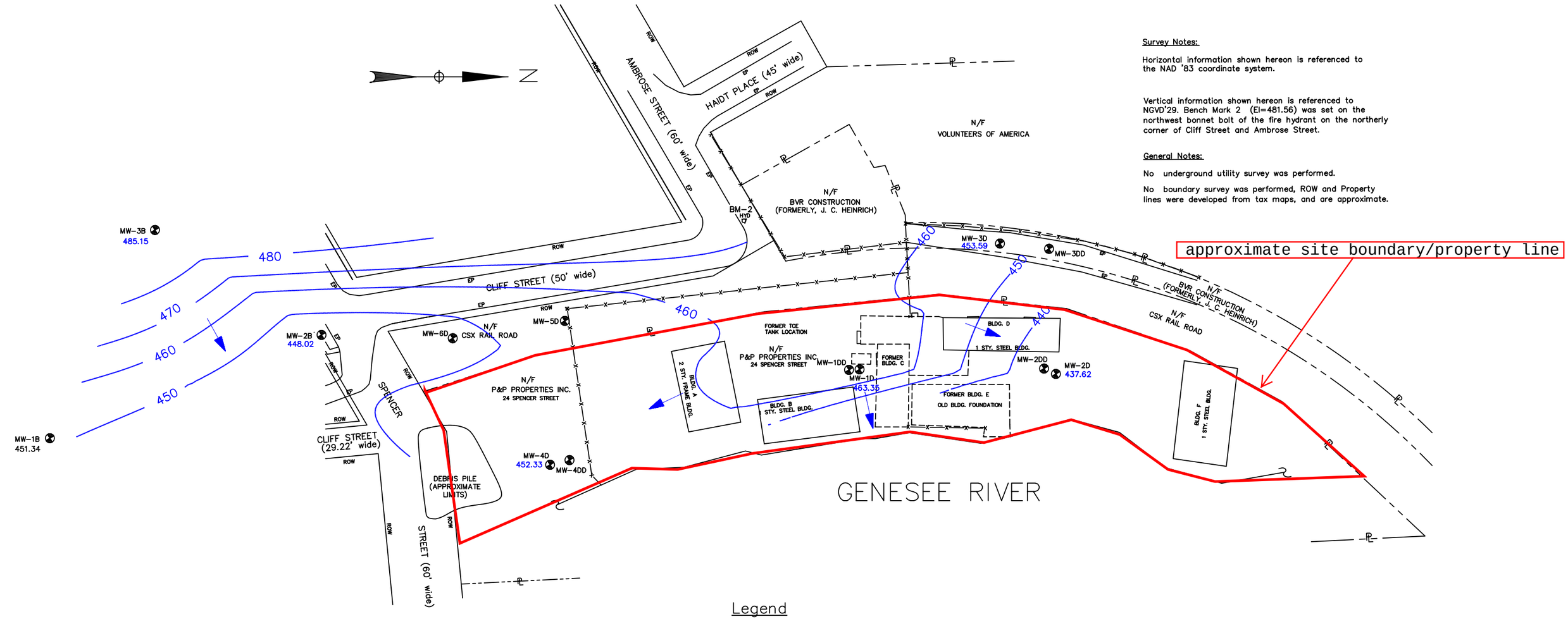
As part of the remedial investigation process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- Repositories for documents pertaining to the site were established.
- A public contact list, which included nearby property owners, elected officials, local media and other interested parties, was established.
- A Fact Sheet was sent to the public contact list in April 2005 to announce the initiation of the Remedial Investigation.
- A Fact Sheet was sent to the public contact list in February 2010 to announce the availability of the PRAP and to announce the March 16, 2010 public meeting.
- A public meeting was held on March 16, 2010 to present and receive comment on the PRAP.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.



HDR	SITE LOCATION MAP	Job No.	Date	Figure
		107489	09-24-09	2-1

FIGURE 1



Survey Notes:

Horizontal information shown hereon is referenced to the NAD '83 coordinate system.

Vertical information shown hereon is referenced to NGVD'29. Bench Mark 2 (El=481.56) was set on the northwest bonnet bolt of the fire hydrant on the northerly corner of Cliff Street and Ambrose Street.

General Notes:

No underground utility survey was performed.

No boundary survey was performed, ROW and Property lines were developed from tax maps, and are approximate.

Legend

- Monitoring Well
- N/F Now or Formerly
- 460 Groundwater Level Contour
- 452.33 Groundwater Elevation
- Groundwater Flow

30 0 30 60 120

SCALE IN FEET

SOURCE: LARSEN ENGINEERS
700 WEST METRO PARK, ROCHESTER, NEW YORK 14623-2678
(716)272-7310 FAX (716)272-0159
SAMPLE POINT LOCATION MAP, FILE:5388-1.DWG, PROJECT #29-4-5388
PROJECT #29-4-5388, DATED 12/29/99

FIGURE 2

NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

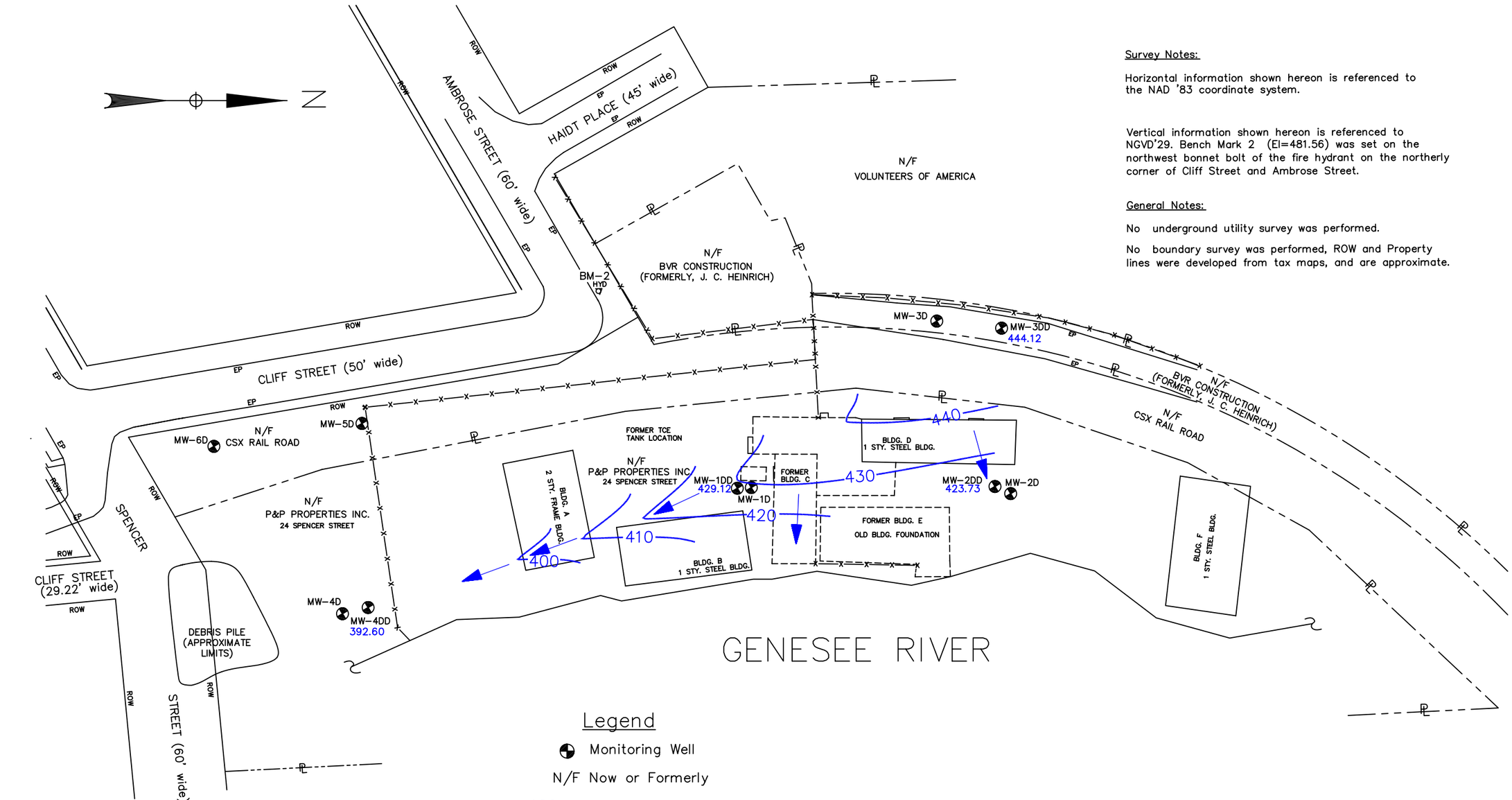
NYSDEC WA-D003970-22

SITE NUMBER 8-28-107

Environmental Resources Management

ERM

CHECKED	DATE	GROUNDWATER LEVEL CONTOUR MAP SHALLOW WELLS - 2006 MARCH 24 SPENCER STREET ROCHESTER, NEW YORK	DRAWING NO. 2-8
DESIGN ENGINEER			REV. NO.
PROJECT ENGINEER			
PROJECT MANAGER			
APPROVED		DRAWN EFR/EMF / DATE 12/29/06 / REVISION DATE:	
APPROVED		SCALE AS NOTED / JOB NO. 0021427.04 / FILE NAME: 0021427-04-009	SHEET OF



Survey Notes:

Horizontal information shown hereon is referenced to the NAD '83 coordinate system.

Vertical information shown hereon is referenced to NGVD'29. Bench Mark 2 (El=481.56) was set on the northwest bonnet bolt of the fire hydrant on the northerly corner of Cliff Street and Ambrose Street.

General Notes:

No underground utility survey was performed.

No boundary survey was performed, ROW and Property lines were developed from tax maps, and are approximate.

Legend

- Monitoring Well
- N/F Now or Formerly
- 400 — Groundwater Level Contour
- 392.60 Groundwater Elevation
- Groundwater Flow

30 0 30 60 120

SCALE IN FEET

SOURCE: LARSEN ENGINEERS
700 WEST METRO PARK, ROCHESTER, NEW YORK 14623-2678
(716)272-7310 FAX (716)272-0159
SAMPLE POINT LOCATION MAP, FILE:5388-1.DWG, PROJECT #29-4-5388
PROJECT #29-4-5388, DATED 12/29/99

FIGURE 3

NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

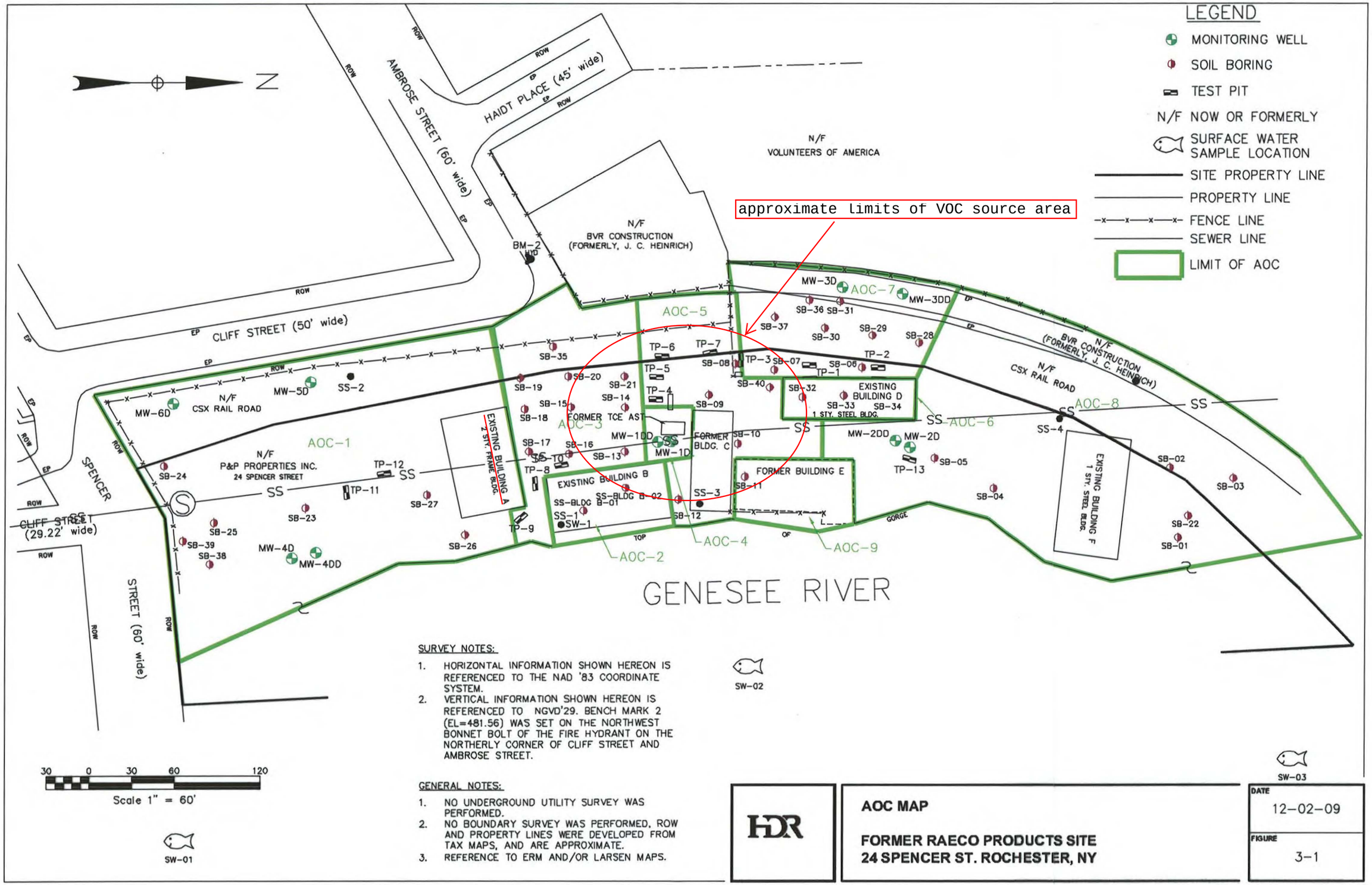
NYSDEC WA-D003970-22

SITE NUMBER 8-28-107

Environmental Resources Management

ERM

CHECKED	DATE	GROUNDWATER LEVEL CONTOUR MAP DEEP WELLS - 2006 MARCH 24 SPENCER STREET ROCHESTER, NEW YORK	DRAWING NO. 2-9
DESIGN ENGINEER			REV. NO.
PROJECT ENGINEER			
PROJECT MANAGER			
APPROVED		DRAWN: EFR/EMF; DATE: 12/29/06; REVISION DATE:	
APPROVED		SCALE: AS NOTED; JOB NO.: 0021427.04; FILE NAME: 0021427-04-008	SHEET OF



SURVEY NOTES:

1. HORIZONTAL INFORMATION SHOWN HEREON IS REFERENCED TO THE NAD '83 COORDINATE SYSTEM.
2. VERTICAL INFORMATION SHOWN HEREON IS REFERENCED TO NGVD'29. BENCH MARK 2 (EL=481.56) WAS SET ON THE NORTHWEST BONNET BOLT OF THE FIRE HYDRANT ON THE NORTHERLY CORNER OF CLIFF STREET AND AMBROSE STREET.

GENERAL NOTES:

1. NO UNDERGROUND UTILITY SURVEY WAS PERFORMED.
2. NO BOUNDARY SURVEY WAS PERFORMED, ROW AND PROPERTY LINES WERE DEVELOPED FROM TAX MAPS, AND ARE APPROXIMATE.
3. REFERENCE TO ERM AND/OR LARSEN MAPS.

HDR

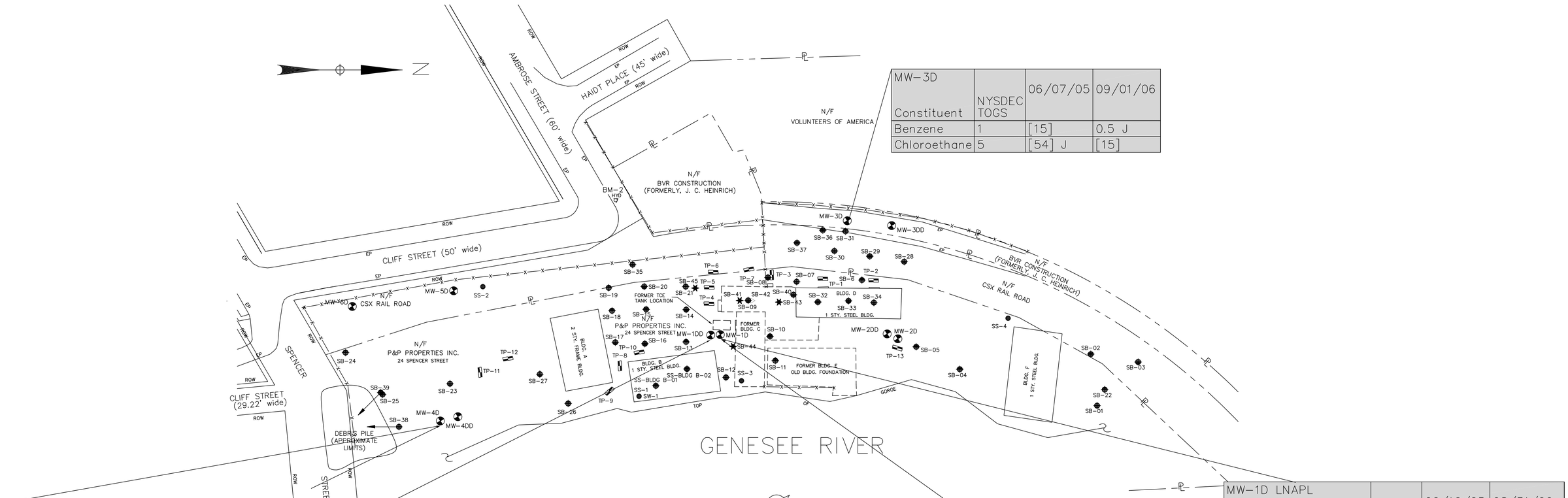
AOC MAP

FORMER RAECO PRODUCTS SITE
24 SPENCER ST. ROCHESTER, NY

DATE 12-02-09

FIGURE 3-1

FIGURE 4



MW-3D Constituent	NYSDEC TOGS	06/07/05	09/01/06
Benzene	1	[15]	0.5 J
Chloroethane	5	[54] J	[15]

MW-4D Constituent	NYSDEC TOGS	06/09/05	09/01/06
1,1-Dichloroethane	5	[10] J	[11]
Benzene	1	10 U	[2]
cis-1,2-Dichloroethene	5	[890]	[780]
trans-1,2-Dichloroethene	5	100 U	[5]
Trichloroethene	5	[16] J	[96]
Vinyl chloride	2	[2400]	[760] J

MW-1DD Constituent	NYSDEC TOGS	06/13/05	06/13/05	08/31/06	08/31/06
1,1-Dichloroethane	5	[130]	[130]	[390]	[410]
1,1-Dichloroethene	5	50 U	50 U	[6]	[5]
Benzene	1	50 U	50 U	[3]	[3]
Chloroethane	5	50 U	50 U	[22] J	[18] J
cis-1,2-Dichloroethene	5	[840]	[850]	[1900]	[1900]
trans-1,2-Dichloroethene	5	50 U	50 U	[15]	[11]
Vinyl chloride	2	[990]	[930]	[2600] J	[2600] J
Xylene (total)	5	[9] J	50 U	[75]	[70] J

MW-1D Constituent	NYSDEC TOGS	06/13/05	08/31/06
1,1,1-Trichloroethane	5	5000 U	[170] J
1,1-Dichloroethane	5	[1600] J	[1300] J
1,1-Dichloroethene	5	5000 U	[150] J
1,2-Dichlorobenzene	3	5000 U	[6]
1,2-Dichloroethane	0.6	5000 U	[2]
Benzene	1	5000 U	[32] J
cis-1,2-Dichloroethene	5	[81000]	[42000]
Ethylbenzene	5	[750] J	[610] J
Isopropylbenzene	5	NA	[15]
Toluene	5	7600 U	[4200]
trans-1,2-Dichloroethene	5	5000 U	[130] J
Trichloroethene	5	5000 U	[12]
Vinyl chloride	2	[9400]	[22000] J
Xylene (total)	5	[1900] J	[1700] J

MW-1D LNAPL Constituent	NYSDEC TOGS	06/10/05	08/31/06
cis-1,2-Dichloroethene	5	[1800000]	[8400000]
Ethylbenzene	5	[200000]	[1100000]
Toluene	5	[1400000]	[7100000]
Trichloroethene	5	[170000]	[360000] J
Xylene (total)	5	[520000]	[2400000]

Legend

- Monitoring Well
- Test Pit
- Soil Boring
- N/F Now or Formerly
- Surface Water Sample Location
- SVE Pilot Test Extraction Well
- SVE Observation Well

Note: Arrows at SB-38 & SB-39 Indicate Approximate Direction of Bore.

30' 0 30' 60' 120'
SCALE IN FEET

Survey Notes:

Horizontal information shown hereon is referenced to the NAD '83 coordinate system.

Vertical information shown hereon is referenced to NGVD'29. Bench Mark 2 (El=481.56) was set on the northwest bonnet bolt of the fire hydrant on the northerly corner of Cliff Street and Ambrose Street.

General Notes:

No underground utility survey was performed.

No boundary survey was performed, ROW and Property lines were developed from tax maps, and are approximate.

SOURCE: LARSEN ENGINEERS
700 WEST METRO PARK, ROCHESTER, NEW YORK 14623-2678
(716)272-7310 FAX (716)272-0159
SAMPLE POINT LOCATION MAP, FILE:5388-1.DWG, PROJECT #29-4-5388
PROJECT #29-4-5388, DATED 12/29/99

NO.	DATE	APPR.	REVISION

NO.	DATE	APPR.	REVISION

NYSDEC WA-D003970-22

SITE NUMBER 8-28-107

Environmental Resources Management

ERM

	CHECKED	DATE
	DESIGN ENGINEER	
	PROJECT ENGINEER	
	PROJECT MANAGER	
	APPROVED	
	APPROVED	

DETECTIONS OF VOLATILE ORGANIC COMPOUNDS THAT EXCEED GROUNDWATER STANDARDS AND GUIDANCE VALUES FORMER RAECO PRODUCTS SITE

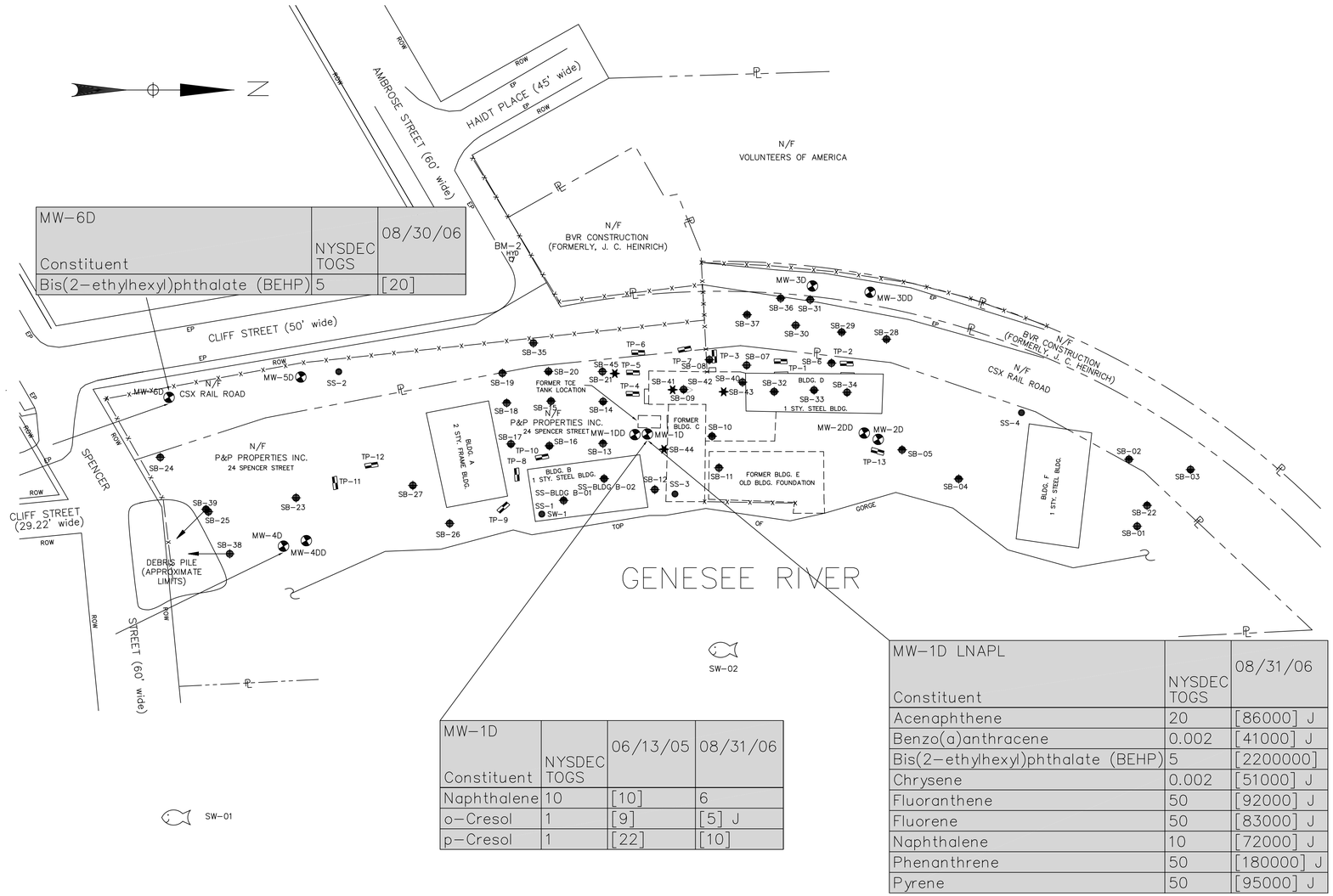
DRAWN	DATE	REVISION DATE:
EFR/EMF	1/23/07	
SCALE	JOB NO.	FILE NAME:
AS NOTED	0021427.04	0021427-04-014

DRAWING NO. 2-5

REV. NO.

SHEET OF

FIGURE 5



MW-6D Constituent	NYSDEC TOGS	08/30/06
Bis(2-ethylhexyl)phthalate (BEHP)	5	[20]

MW-1D Constituent	NYSDEC TOGS	06/13/05	08/31/06
Naphthalene	10	[10]	6
o-Cresol	1	[9]	[5] J
p-Cresol	1	[22]	[10]

MW-1D LNAPL Constituent	NYSDEC TOGS	08/31/06
Acenaphthene	20	[86000] J
Benzo(a)anthracene	0.002	[41000] J
Bis(2-ethylhexyl)phthalate (BEHP)	5	[2200000]
Chrysene	0.002	[51000] J
Fluoranthene	50	[92000] J
Fluorene	50	[83000] J
Naphthalene	10	[72000] J
Phenanthrene	50	[180000] J
Pyrene	50	[95000] J

Legend

- Monitoring Well
- Test Pit
- Soil Boring
- N/F Now or Formerly
- Surface Water Sample Location
- SVE Pilot Test Extraction Well
- SVE Observation Well

Note: Arrows at SB-38 & SB-39 Indicate Approximate Direction of Bore.

30' 0 30' 60' 120'

SCALE IN FEET

Survey Notes:

Horizontal information shown hereon is referenced to the NAD '83 coordinate system.

Vertical information shown hereon is referenced to NGVD'29. Bench Mark 2 (El=481.56) was set on the northwest bonnet bolt of the fire hydrant on the northerly corner of Cliff Street and Ambrose Street.

General Notes:

No underground utility survey was performed.

No boundary survey was performed, ROW and Property lines were developed from tax maps, and are approximate.

SOURCE: LARSEN ENGINEERS
700 WEST METRO PARK, ROCHESTER, NEW YORK 14623-2678
(716)272-7310 FAX (716)272-0159
SAMPLE POINT LOCATION MAP, FILE:5388-1.DWG, PROJECT #29-4-5388
PROJECT #29-4-5388, DATED 12/29/99

NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

NYSDEC WA-D003970-22

SITE NUMBER 8-28-107

ERM Environmental Resources Management

CHECKED	DATE
DESIGN ENGINEER	
PROJECT ENGINEER	
PROJECT MANAGER	
APPROVED	
APPROVED	

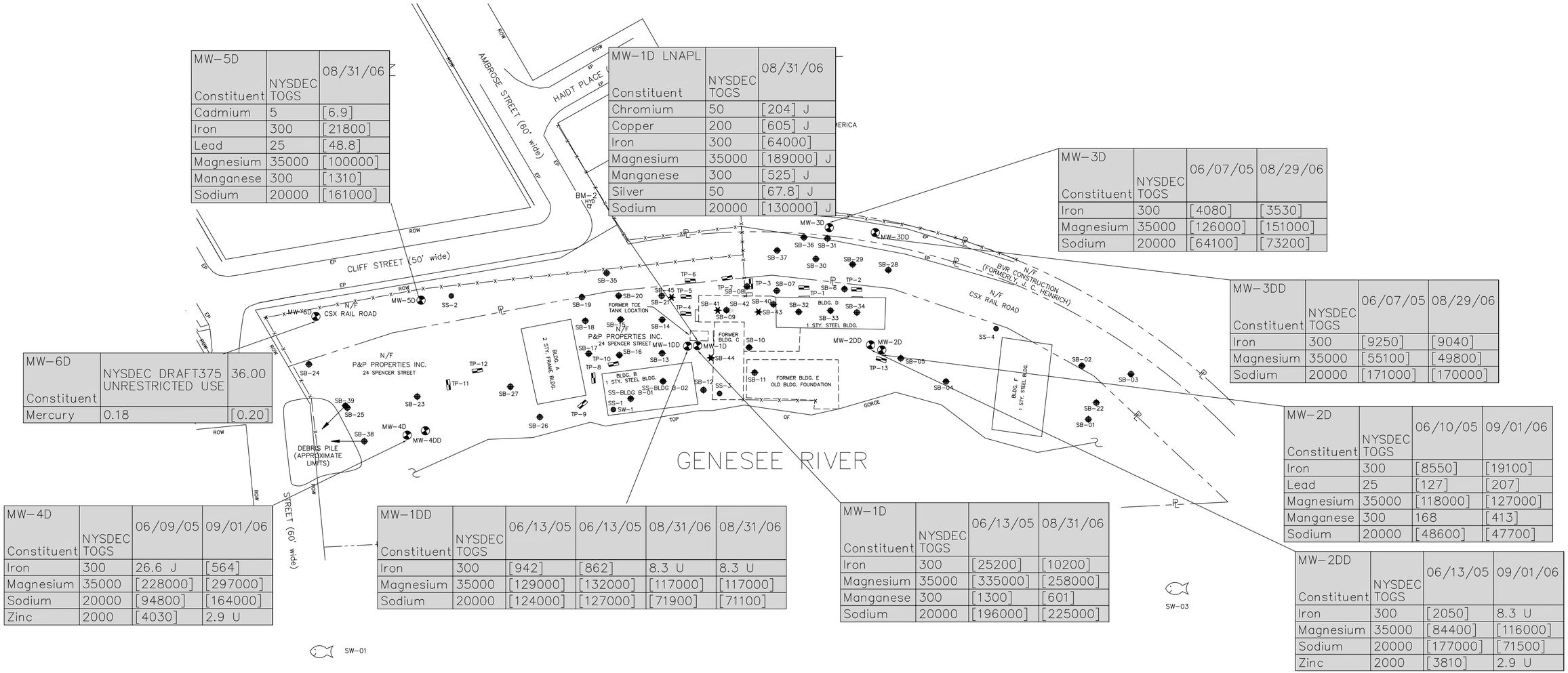
DETECTIONS OF SEMIVOLATILE ORGANIC COMPOUNDS THAT EXCEED GROUNDWATER STANDARDS AND GUIDANCE VALUES FORMER RAECO PRODUCTS SITE

DRAWN	DATE	REVISION DATE:
EFR/EMF	1/23/07	
SCALE	JOB NO.	FILE NAME:
AS NOTED	0021427.04	0021427-04-013

DRAWING NO. 2-6 REV. NO.

SHEET OF

FIGURE 6



MW-5D Constituent	NYSDEC TOGS	08/31/06
Cadmium	5	[6.9]
Iron	300	[21800]
Lead	25	[48.8]
Magnesium	35000	[100000]
Manganese	300	[1310]
Sodium	20000	[161000]

MW-1D LNAPL Constituent	NYSDEC TOGS	08/31/06
Chromium	50	[204] J
Copper	200	[605] J
Iron	300	[64000]
Magnesium	35000	[189000] J
Manganese	300	[525] J
Silver	50	[67.8] J
Sodium	20000	[130000] J

MW-3D Constituent	NYSDEC TOGS	06/07/05	08/29/06
Iron	300	[4080]	[3530]
Magnesium	35000	[126000]	[151000]
Sodium	20000	[64100]	[73200]

MW-3DD Constituent	NYSDEC TOGS	06/07/05	08/29/06
Iron	300	[9250]	[9040]
Magnesium	35000	[55100]	[49800]
Sodium	20000	[171000]	[170000]

MW-6D Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	36.00
Mercury	0.18	[0.20]

MW-2D Constituent	NYSDEC TOGS	06/10/05	09/01/06
Iron	300	[8550]	[19100]
Lead	25	[127]	[207]
Magnesium	35000	[118000]	[127000]
Manganese	300	168	[413]
Sodium	20000	[48600]	[47700]

MW-4D Constituent	NYSDEC TOGS	06/09/05	09/01/06
Iron	300	26.6 J	[564]
Magnesium	35000	[228000]	[297000]
Sodium	20000	[94800]	[164000]
Zinc	2000	[4030]	2.9 U

MW-1DD Constituent	NYSDEC TOGS	06/13/05	06/13/05	08/31/06	08/31/06
Iron	300	[942]	[862]	8.3 U	8.3 U
Magnesium	35000	[129000]	[132000]	[117000]	[117000]
Sodium	20000	[124000]	[127000]	[71900]	[71100]

MW-1D Constituent	NYSDEC TOGS	06/13/05	08/31/06
Iron	300	[25200]	[10200]
Magnesium	35000	[335000]	[258000]
Manganese	300	[1300]	[601]
Sodium	20000	[196000]	[225000]

MW-2DD Constituent	NYSDEC TOGS	06/13/05	09/01/06
Iron	300	[2050]	8.3 U
Magnesium	35000	[84400]	[116000]
Sodium	20000	[177000]	[71500]
Zinc	2000	[3810]	2.9 U

Legend

- Monitoring Well
- Test Pit
- Soil Boring
- N/F Now or Formerly
- Surface Water Sample Location
- SVE Pilot Test Extraction Well
- SVE Observation Well

Note: Arrows at SB-38 & SB-39 Indicate Approximate Direction of Bore.

30' 0 30' 60' 120'
SCALE IN FEET

Survey Notes:

Horizontal information shown hereon is referenced to the NAD '83 coordinate system.

Vertical information shown hereon is referenced to NGVD'29. Bench Mark 2 (El=481.56) was set on the northwest bonnet bolt of the fire hydrant on the northerly corner of Cliff Street and Ambrose Street.

General Notes:

No underground utility survey was performed.

No boundary survey was performed, ROW and Property lines were developed from tax maps, and are approximate.

SOURCE: LARSEN ENGINEERS
700 WEST METRO PARK, ROCHESTER, NEW YORK 14623-2678
(716)272-7310 FAX (716)272-0159
SAMPLE POINT LOCATION MAP, FILE:5388-1.DWG, PROJECT #29-4-5388
PROJECT #29-4-5388, DATED 12/29/99

NO.	DATE	APPR.	REVISION

NO.	DATE	APPR.	REVISION

NYSDEC WA-D003970-22

SITE NUMBER 8-28-107

Environmental Resources Management

ERM

CHECKED	DATE
DESIGN ENGINEER	
PROJECT ENGINEER	
PROJECT MANAGER	
APPROVED	
APPROVED	

DETECTIONS OF METALS THAT EXCEED GROUNDWATER STANDARDS AND GUIDANCE VALUES FORMER RAECO PRODUCTS SITE

DRAWN	DATE	REVISION DATE:
EFR/EMF	1/23/07	
SCALE	JOB NO.	FILE NAME:
AS NOTED	0021427.04	0021427-04-012

DRAWING NO. 2-7
REV. NO.
SHEET OF

FIGURE 7

COMMERCIAL SCOs (ppb)

VC= 13,000
Benzene= 44,000
toluene= 500,000
ethylbenzene= 390,000
xylene= 500,000
DCA= 240,000
TCA= 500,000
DCE= 500,000
PCE= 150,000
TCE= 200,000

SB-09 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	8.00 04/26/05	11.50 04/26/05	4.00 04/26/05	4.00 04/26/05
Vinyl chloride	20	88000 U	55 U	[2400] J	[4400] J
Acetone	50	88000 U	[490]	[28000]	[44000]
1,1-Dichloroethane	270	88000 U	55 U	[2100] J	[4500] J
1,1,1-Trichloroethane	680	88000 U	55 U	[930] J	[1600] J
Trichloroethene	470	88000 U	55 U	[7900] J	[5900] J
Tetrachloroethene	1300	88000 U	55 U	[16000]	[18000]
Toluene	700	[750000]	76	[150000]	[230000]
Ethylbenzene	1000	[48000] J	51 J	[34000]	[52000]
Xylene (total)	260	[300000]	[530]	[220000]	[350000]
cis-1,2-Dichloroethene	250	88000 U	55 U	[29000]	[47000]
1,2-Dichlorobenzene	1100	[19000] J	110	[8700] J	[16000] J

SB-21 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	8.00 04/27/05
2-Butanone	120	[580] J

SB-35 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	20.00 08/04/06
Ethylbenzene	1000	[1900]
Xylene (total)	260	[6200]

SB-20 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	15.00 04/27/05
2-Butanone	120	[760] J
Ethylbenzene	1000	[4100]
Xylene (total)	260	[7100]

SB-19 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	16.00 04/27/05	20.00 04/27/05
Acetone	50	[340] J	[210] J
Trichloroethene	470	[800] J	65 U
cis-1,2-Dichloroethene	250	[270] J	5 J

SB-15 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	19.00 04/26/05
2-Butanone	120	[940] J
Benzene	60	[270] J
Xylene (total)	260	[810] J

SB-18 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	20.00 04/27/05
Acetone	50	[70] J

SB-17 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	6.00 04/27/05
Trichloroethene	470	[71000]
cis-1,2-Dichloroethene	250	[11000]

SB-16 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	12.00 04/26/05	16.00 04/26/05
2-Butanone	120	[610] J	[550] J
Toluene	700	[30000]	240 J
Ethylbenzene	1000	[2400]	1700 U
Xylene (total)	260	[13000]	[660] J

SB-14 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	13.00 04/26/05
Vinyl chloride	20	[79] J
Xylene (total)	260	[290]
cis-1,2-Dichloroethene	250	[410]

SB-10 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	4.00 04/26/05
Xylene (total)	260	[320]

SB-08 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	4.00 04/26/05
Vinyl chloride	20	[3700] J
Benzene	60	[1200] J
Toluene	700	[4100] J
Ethylbenzene	1000	[3200] J
Xylene (total)	260	[16000]
cis-1,2-Dichloroethene	250	[3700] J
trans-1,2-Dichloroethene	190	[540] J

SB-31 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	18.00 08/04/06
Methylene Chloride	50	[83] J
Acetone	50	[110] J

SB-30 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	14.00 08/02/06
Acetone	50	[71] J

SB-29 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	10.00 08/01/06
Acetone	50	[58] J

SB-28 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	12.00 07/31/06
Acetone	50	[79] J

SB-06 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	10.50 04/25/05	10.50 04/25/05
2-Butanone	120	[750] J	[710] J

SB-33 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	4.00 08/04/06
2-Butanone	120	[140] J

SB-34 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	8.00 08/04/06
Acetone	50	[79] J

SB-03 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	22.00 04/25/05
Acetone	50	[200] J

SB-04 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	12.00 04/25/05
Trichloroethene	470	[690]

SB-32 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	4.00 08/04/06	4.00 08/04/06	8.00 08/04/06
Methylene Chloride	50	1800 U	[92] J	2000 U
Xylene (total)	260	[59000]	[3500]	[20000]

SB-07 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	8.00 04/26/05	11.00 04/26/05
Acetone	50	1900 U	[58]
2-Butanone	120	[680] J	13 UJ
Xylene (total)	260	[1600] J	0.9 J

Survey Notes:

Horizontal information shown hereon is referenced to the NAD '83 coordinate system.

Vertical information shown hereon is referenced to NGVD'29. Bench Mark 2 (El=481.56) was set on the northwest bonnet bolt of the fire hydrant on the northerly corner of Cliff Street and Ambrose Street.

General Notes:

No underground utility survey was performed.

No boundary survey was performed, ROW and Property lines were developed from tax maps, and are approximate.

= EXCEEDS COMMERCIAL SCOs

= EXCEEDS UNRESTRICTED SCO

Legend

- Monitoring Well
- Test Pit
- Soil Boring
- N/F Now or Formerly
- Surface Water Sample Location
- SVE Pilot Test Extraction Well
- SVE Observation Well

30' 0 30' 60' 120'

SCALE IN FEET

SOURCE: LARSEN ENGINEERS
700 WEST METRO PARK, ROCHESTER, NEW YORK 14623-2678
(716)272-7310 FAX (716)272-0159
SAMPLE POINT LOCATION MAP, FILE:5388-1.DWG, PROJECT #29-4-5388
PROJECT #29-4-5388, DATED 12/29/99

NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

NYSDEC WA-D003970-22

SITE NUMBER 8-28-107

Environmental Resources Management

CHECKED	DATE
DESIGN ENGINEER	
PROJECT ENGINEER	
PROJECT MANAGER	
APPROVED	
APPROVED	

DETECTIONS OF VOLATILE ORGANIC COMPOUNDS THAT EXCEED SOIL CLEANUP OBJECTIVES FORMER RAECO PRODUCTS SITE ROCHESTER, NEW YORK

DRAWN	DATE	REVISION DATE:
ETG	1/22/07	
SCALE	JOB NO.	FILE NAME:
AS NOTED	0021427.04	0021427-04-017

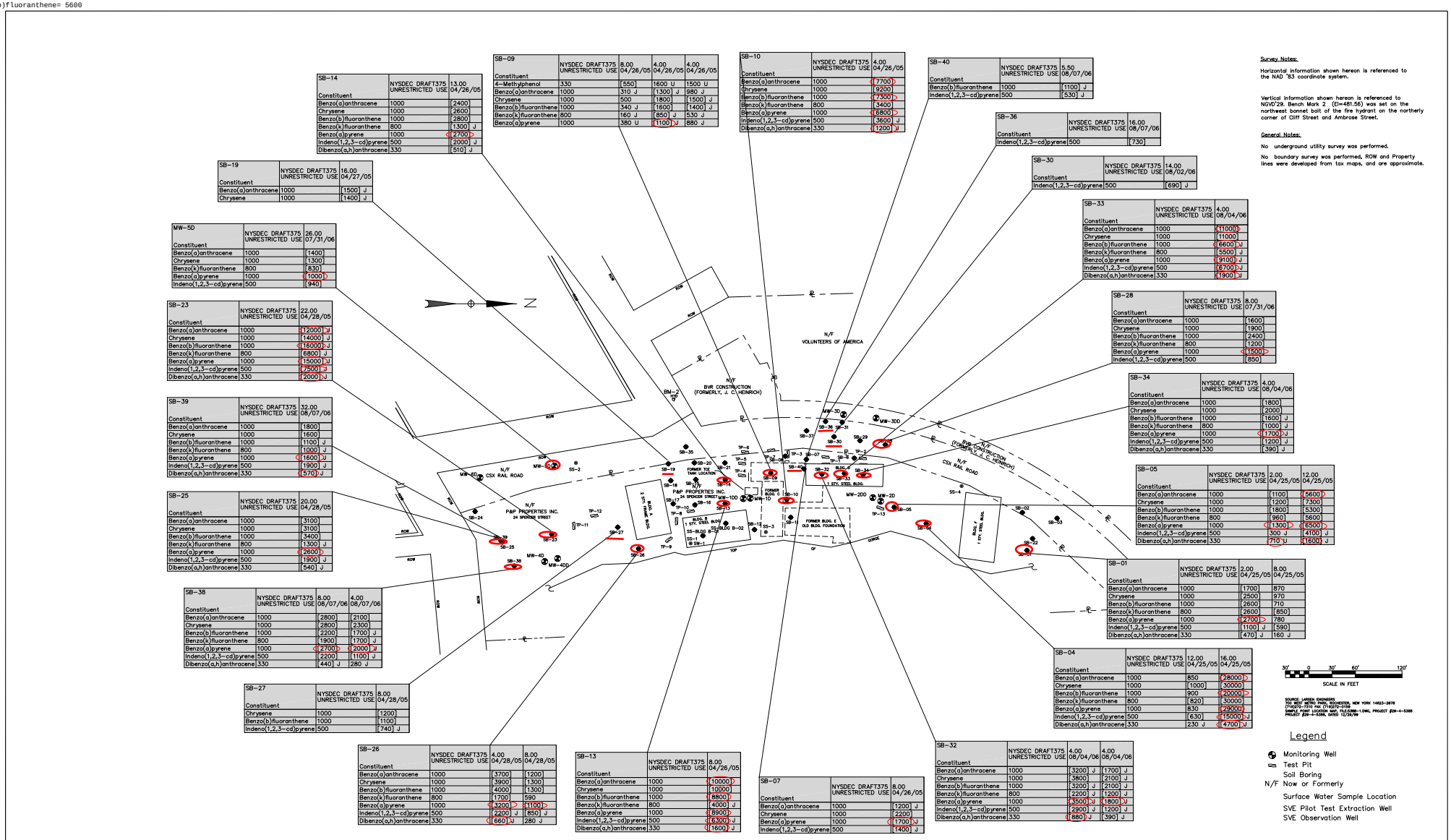
DRAWING NO. 2-2 REV. NO.

SHEET OF

FIGURE 8

COMMERCIAL SCOs (ppb)

benzo(a)anthracene=5600
benzo(a)pyrene= 1000
benzo(b)fluoranthene= 5600
dibenz(a,h)anthracene= 560
indeno(1,2,3-cd)pyrene= 5600



NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

NYSDEC WA-D003970-22

SITE NUMBER 8-28-107

Environmental Resources Management

ERM

CHECKED	DATE
DESIGN ENGINEER	
PROJECT ENGINEER	
PROJECT MANAGER	
APPROVED	
APPROVED	

DETECTIONS OF SEMIVOLATILE ORGANIC COMPOUNDS THAT EXCEED SOIL CLEANUP OBJECTIVES
FORMER RAECO PRODUCTS SITE

DRAWN: ETG	DATE: 1/22/07	REVISION DATE:	
SCALE: AS NOTED	JOB NO.: 0021427.04	FILE NAME: 0021427-04-016	

DRAWING NO. 2-3 REV. NO.

SHEET OF

○ = EXCEEDS COMMERCIAL SCO

— = EXCEEDS UNRESTRICTED SCO

FIGURE 9

COMMERCIAL SCOs (ppm)
Mercury= 2.8
Lead= 1000

SB-09 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	8.00	4.00	4.00
Arsenic	13	5.6 [15] J		4.9 J
Barium	350	[398]	118	56.3
Copper	50	26.2 [228] J		37.8 J
Lead	63	[112]	[350] J	[86.1] J
Mercury	0.18	[5.8]	[0.34] J	0.05 J
Zinc	109	81.1	[138]	90.6

SB-21 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	8.00
Lead	63	[68.9] J

SB-08 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	4.00
Barium	350	[1160]
Beryllium	7.2	[14.6]
Copper	50	[362]
Lead	63	[274]
Manganese	1600	[1620]
Selenium	3.9	[5.4]
Zinc	109	[183]

SB-40 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	5.50
Lead	63	[159]
Mercury	0.18	[0.28]
Zinc	109	[150]

SB-07 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	8.00
Copper	50	[50.6]
Lead	63	[400]
Mercury	0.18	[0.32]
Zinc	109	[229]

SB-36 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	16.00
Copper	50	[59.9]
Lead	63	[125]
Mercury	0.18	[0.18]

SB-31 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	14.00
Lead	63	[91.9]
Mercury	0.18	[0.69]

SB-20 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	15.00
Copper	50	[66.7]
Lead	63	[78.1] J
Mercury	0.18	[0.26] J

SB-32 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	4.00	4.00	8.00
Copper	50	[196]	[135]	26.7
Lead	63	[428]	[433]	[84.5]
Mercury	0.18	[0.97]	[0.48]	[0.39]
Zinc	109	[204]	[186]	45.9

SB-19 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	16.00	20.00
Copper	50	40.3	[96.8]
Lead	63	[261] J	[147] J
Mercury	0.18	[0.81] J	[0.32] J
Zinc	109	[139]	81

SB-06 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	8.00	10.50	10.50
Lead	63	[829]	[620]	[589]
Mercury	0.18	[0.38]	[3.4]	[3.5]
Zinc	109	79.2	[134]	[132]

SB-15 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	19.00
Copper	50	[62.8]
Lead	63	[382]
Mercury	0.18	[1.5]
Zinc	109	[149]

SB-33 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	4.00
Lead	63	[132]
Mercury	0.18	[0.61]

SB-18 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	20.00
Lead	63	[136] J
Mercury	0.18	[0.2] J

SB-34 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	4.00
Arsenic	13	[22.3] J
Copper	50	[73.1]
Lead	63	[567]
Mercury	0.18	[0.30]
Zinc	109	[307]

MW-6D Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	36.00
Mercury	0.18	[0.20]

SB-05 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	2.00	12.00
Barium	350	[535]	[2530]
Copper	50	[83.9]	[122]
Lead	63	[301]	[374]
Mercury	0.18	[0.46]	[0.45]
Zinc	109	[306]	[456]

SB-17 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	6.00
Arsenic	13	[88.4]
Copper	50	[824]
Lead	63	[135] J
Mercury	0.18	[0.85] J
Zinc	109	[178]

SB-22 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	4.00	12.00
Copper	50	[158]	4.9 J
Lead	63	[169] J	50.8 J
Mercury	0.18	[0.38] J	[0.27] J
Zinc	109	[167]	[256]

SB-24 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	12.00
Arsenic	13	[13.1]
Copper	50	[57.9]
Lead	63	[957] J
Mercury	0.18	[2.1] J
Zinc	109	[116]

SB-01 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	2.00	8.00
Copper	50	34.7	[155]
Lead	63	[77.2]	[121]
Mercury	0.18	0.12	[0.18]
Zinc	109	[114]	[144]

SB-39 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	32.00
Cadmium	2.5	[3.6]
Copper	50	[129] J
Lead	63	[1770]
Mercury	0.18	[0.42]
Zinc	109	[601]

SB-04 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	12.00	16.00
Lead	63	[122]	[133]
Mercury	0.18	[0.19]	[0.29]
Zinc	109	[140]	99.2

SB-25 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	20.00	24.00
Copper	50	[52.2]	[150]
Lead	63	[584]	[189]
Mercury	0.18	[0.44] J	[0.42] J

SB-10 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	4.00
Lead	63	[136]
Mercury	0.18	[0.26]

SB-27 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	8.00	11.00
Lead	63	[153]	39
Manganese	1600	333	[1610]
Mercury	0.18	[0.88] J	.29 J
Nickel	30	[150] J	11.8 J

SB-13 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	8.00
Copper	50	[53.4]
Lead	63	[3990]
Mercury	0.18	[0.53]
Zinc	109	[259]

SB-11 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	2.00
Zinc	109	[372]

SB-38 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	8.00	4.00
Copper	50	[480]	27.3
Lead	63	[187]	62.4
Mercury	0.18	[1.3]	[0.21]
Silver	2	[2.2] J	0.084 UJ
Zinc	109	[155]	[207]

SB-23 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	22.00
Lead	63	[99.4] J
Mercury	0.18	[0.21] J
Zinc	109	[126]

SB-26 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	4.00	8.00
Copper	50	[55.5]	[76.5]
Lead	63	[181]	[201]
Mercury	0.18	[0.45] J	[0.81] J

SS-BLDGB-02 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	0.00
Barium	350	[501]
Lead	63	[150]
Zinc	109	[282] J

SB-14 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	13.00
Copper	50	[60]
Lead	63	[138]
Mercury	0.18	[0.46]
Zinc	109	[419]

SB-12 Constituent	NYSDEC DRAFT375 UNRESTRICTED USE	3.00
Lead	63	[94.1]
Mercury	0.18	[1.3]

Survey Notes:

Horizontal information shown hereon is referenced to the NAD '83 coordinate system.

Vertical information shown hereon is referenced to NGVD'29. Bench Mark 2 (El=481.58) was set on the northwest bonnet bolt of the fire hydrant on the nort corner of Cliff Street and Ambrose Street.

General Notes:

No underground utility survey was performed.

No boundary survey was performed, ROW and Property lines were developed from tax maps, and are approximate.

Legend

- Monitoring Well
- Test Pit
- Soil Boring
- N/F Now or Formerly
- Surface Water Sample Location
- SVE Pilot Test Extraction Well
- SVE Observation Well
- = EXCEEDANCE OF COMMERCIAL SCO
- = EXCEEDANCE OF UNRESTRICTED SCO

30' 0 30' 60' 120'
SCALE IN FEET

SOURCE: LARSEN ENGINEERS
700 WEST METRO PARK, ROCHESTER, NEW YORK 14623-2678
(716)272-7310 FAX (716)272-0158
SAMPLE POINT LOCATION MAP, FILE:5388-1.DWG, PROJECT #29-4-5388
PROJECT #29-4-5388, DATED 12/29/99

NO.	DATE	APPR.	REVISION	NO.	DATE	APPR.	REVISION

NYSDEC WA-D003970-22

SITE NUMBER 8-28-107

Environmental Resources Management

CHECKED	DATE
DESIGN ENGINEER	
PROJECT ENGINEER	
PROJECT MANAGER	
APPROVED	
APPROVED	

DETECTIONS OF METALS THAT EXCEED SOIL CLEANUP OBJECTIVES FORMER RAECO PRODUCTS SITE ROCHESTER, NEW YORK

DRAWN	DATE	REVISION DATE:
ETG	1/22/07	
SCALE	JOB NO.	FILE NAME:
AS NOTED	0021427.04	0021427-04-015

DRAWING NO. 2-4 REV. NO.

SHEET OF

FIGURE 10

APPENDIX A

Responsiveness Summary

APPENDIX A

Responsiveness Summary
RESPONSIVENESS SUMMARY

Former Raeco Products
State Superfund Project
Rochester (C), Monroe County, New York
Site No. 828107

The Proposed Remedial Action Plan (PRAP) for the Former Raeco Products site, was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 25, 2010. The PRAP outlined the remedial measure proposed for the contaminated soil and groundwater at the Former Raeco Products site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on March 16, 2010, which included a presentation of the remedial investigation and feasibility study (RI/FS) for the Former Raeco Products site as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 29, 2010.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

COMMENT 1: A gentleman who owns property adjacent to the Former Raeco Products site was asking general questions about what was found at the site, as well as asking about the components of the proposed plan.

RESPONSE 1: The findings of the RI were summarized, going through the site figures to illustrate what was found where, along with an integrated discussion of the components of the remedy and how they would address the contamination found in the different media.

COMMENT 2: Part of Response #1 included some discussion on an old City sewer project, part of which involved work at the southern end of the site. The gentleman from Comment #1 offered some of his experiences with a sewer rehabilitation project, part of which was performed

through a vertical sewer access point at the southern portion of the site, conducted in the early 1990's.

RESPONSE 2: No response necessary.

COMMENT 3: The former CSX right-of-way (ROW), which runs along the entire western edge of the site from the old Genesee River railroad bridge to the southwestern corner of the site, was recently purchased by the City of Rochester. The City is considering using this property as part of a pedestrian path. Representatives from the City of Rochester asked what potential issues (both logistical and financial) the City may encounter due to the presence of the Former Raeco Products site immediately adjacent to the property which they may develop into a pedestrian path.

RESPONSE 3: Some of the samples taken from the former CSX ROW did contain elevated concentrations of site related contamination. As a result, there is the potential that components of the remedy (i.e., cover and/or placement of elements of the SVE system) may be installed just across the property line onto the former CSX ROW. If implementation of the remedy requires some work to be performed on the property currently owned by the City of Rochester (the former CSX ROW) the Department will coordinate those activities with the City. All remedial work, including complete restoration in kind, on the former CSX ROW will be paid for by the responsible party or the State, as appropriate.

APPENDIX B

Administrative Record

Administrative Record

Former Raeco Products Site
State Superfund Project
Rochester (C), Monroe County, New York
Site No. 828107

1. Proposed Remedial Action Plan for the Former Raeco Products site, dated February 2010, prepared by the Department.

2. "Preliminary Site Investigation Report", dated April 2001, prepared by the Department.

3. Referral Memorandum dated October 25, 2001 to perform the State funded Remedial Investigation/Feasibility Study (RI/FS).

4. "Remedial Investigation/Feasibility Study Work Plan", dated February 2005, prepared by Environmental Resources Management (ERM).

5. "Citizen Participation Plan", dated April 2005, prepared by the Department.

6. "Remedial Investigation Report", dated February 2007, prepared by Environmental Resources Management (ERM).

7. "Feasibility Study Report", dated March 2010, prepared by HDR.