

ENVIRONMENTAL MANAGEMENT PLAN

**400 & 420 EAST MAIN STREET, &
100 NORTH CHESTNUT STREET
ROCHESTER, NEW YORK**

Prepared for: The City of Rochester
Division of Environmental Quality
30 Church Street
Rochester, New York 14614

Prepared by: Day Environmental, Inc.
40 Commercial Street
Rochester, New York 14614

Project No.: 4026S-07

Date: October 16, 2009

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Statement of Purpose	1
1.2	Site Description.....	1
1.3	Anticipated Future Redevelopment	1
2.0	BACKGROUND	3
2.1	Previous Studies.....	3
2.2	Summary of Subsurface Conditions	4
2.2.1	Soil/Fill	4
2.2.2	Groundwater	6
2.2.3	Subsurface Conditions in the Former Gas Station Area	6
3.0	ENVIRONMENTAL MANAGEMENT PLAN	8
3.1	Potentially-Impacted Media.....	9
3.1.1	In-Field Identification	9
3.1.2	Handling.....	10
3.1.3	Analytical Laboratory Testing	11
3.1.4	Disposal of Impacted Media	12
3.1.5	Contingency Option for Re-Use of Impacted Soil/Fill	13
3.2	Health and Safety Plan and Air Monitoring	14
3.3	Dust Suppression	14
3.4	Site Controls.....	14
3.5	Management of Potential Future Disturbances.....	15
4.0	ENGINEERING CONTROLS	16
4.1	Site Cover.....	16
4.1	Vapor Intrusion Mitigation System	16
5.0	PROJECT DELIVERABLES	17
6.0	ABBREVIATIONS.....	18

FIGURES

Figure 1	Project Locus Map
Figure 2	Exploration Location Plan
Figure 3	Location of Removed USTs
Figure 4	Sample Locations for UST Excavation

TABLES

Table 1	Recommended Analytical Program
Table 2	Objectives for Re-Use of Impacted Soil/Fill

APPENDICES

Appendix A	Data Summary Tables – Previous Reports
Appendix B	Summary Flow Chart for EMP
Appendix C	Health and Safety Plan
Appendix D	List of Regulatory Guidance Documents

1.0 INTRODUCTION

This site-specific Environmental Management Plan (EMP) was developed for the property located at 400 & 420 East Main Street and 100 North Chestnut Street, City of Rochester, County of Monroe, New York (Site). The general location of the Site is depicted on the Project Locus Map included as Figure 1. An Exploration Location Plan is included as Figure 2. This EMP should be implemented when work performed at the Site has the potential to disturb subsurface impacted soil/fill and groundwater. The New York State Department of Environmental Conservation (NYSDEC) generated Spill File #0890494 after being notified by the City of Rochester of apparent petroleum contamination being encountered on a portion of the Site during investigation work. Further details regarding this EMP are provided below.

1.1 Statement of Purpose

The purpose of this EMP is to:

1. Manage soil/fill impacted with elevated concentrations of metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and other constituents of environmental concern (if encountered);
2. Manage groundwater impacted with elevated concentrations of VOCs and other constituents of environmental concern (if encountered);
3. Establish goals, procedures, and appropriate response actions to be used by on-site personnel should impacted material be encountered and disturbed; and,
4. Implement engineering controls to reduce potential environmental impacts, if warranted, depending upon the redevelopment plans.
5. Satisfy the NYSDEC requirements for closure of Spill File #0890494.

1.2 Site Description

The Site is an approximate 1.48-acre parcel that is currently used as an open asphalt-paved parking lot.

A review of historical Sanborn maps and City Directories indicates that the Site previously contained numerous buildings. Occupants included the following: a tire store, a photography studio, a furniture store, a printer, a machine company, an electric company, an auto repair shop, a parking garage, a fixtures manufacturer, a machinery manufacturer, a tin/sheet metal works facility, an oil and gas company and a gas station. Currently, a layer of fill material and rubble is present beneath the asphalt pavement throughout the Site. The specific source of the subsurface fill material is unknown. However, it is possible that the fill is associated with the demolition and backfilling of former structures at the Site. It is also possible that this fill could have been brought to the Site from one or more off-site sources.

1.3 Anticipated Future Redevelopment

It is currently anticipated that future redevelopment of the Site may include mixed multi-family residential (i.e., townhouses or apartments) and commercial use. It is anticipated that there will be no sub-grade living space; however, redevelopment plans may include sub-grade parking. In addition, it is anticipated that the majority of the Site will be covered with buildings, asphalt, concrete, brick, etc. Furthermore, it is assumed that limited space will be used for landscaping or other “green” areas. It should be noted that at the time of preparation of this EMP, specific plans for redevelopment of the Site have not yet been prepared. Should the assumptions regarding the use of the Site change from those described above, environmental conditions should be reviewed, and the EMP should be modified, if necessary.

2.0 BACKGROUND

Site conditions have been characterized in studies completed by DAY and others over a period of time. The following sections describe the studies completed and provide a description of subsurface conditions.

2.1 Previous Studies

DAY is aware of various studies that have been completed at the Site since 1989. Studies by others included soil and foundation evaluation reports in May 1989 and April 1990 by Foundation Design, P.C., and a Phase I Environmental Site Assessment (ESA) in June 2005 by Larsen Engineers. In general, the previous studies identified historic uses of the Site and surrounding area as recognized environmental conditions (RECs) (Refer to Section 1.2). A layer of fill material and rubble was identified beneath the asphalt parking lot generally throughout the Site.

Additionally, DAY conducted the following studies:

- Phase II Environmental Site Assessment (ESA) (May 2007)

The objective of DAY's May 2007 Phase II ESA was to evaluate subsurface conditions at the Site (including soil and fill) for the presence of contamination in relation to the RECs identified in the previous studies for the Site. As part of the 2007 Phase II ESA, various tasks were performed on the Site including completion of: an EM-61 geophysical survey; a limited subsurface study consisting of 15 test borings; and analytical laboratory testing of selected fill material and soil samples.

- Supplemental Phase II ESA (June 2008)

As part of DAY's 2008 Supplemental Phase II ESA, the following activities were completed: excavation of 17 test pits in areas of magnetic anomalies identified during the 2007 geophysical survey; advancement of four test borings; installation of a groundwater monitoring well in each of the four borings; sampling of soil, fill material and groundwater; analytical laboratory analyses of selected samples; and a groundwater elevation survey.

- (UST) Tank Removal (September 2008)

Four USTs from the former gas station area were removed and soils from the tank excavation were sampled and analyzed as part of this project. The area of an additional suspect UST was also excavated [no UST was found at this location, just metal debris.] Additionally, two samples of fill material were analyzed to provide additional data on potential contaminants in fill materials at the Site.

2.2 Summary of Subsurface Conditions

The following is a brief summary of subsurface conditions identified during DAY's studies. Refer to the full reports for detailed descriptions of the scopes of work, sampling and analytical methods etc.

2.2.1 Soil/Fill

The subsurface conditions encountered during the various studies identified a significant quantity of fill material, including rubble fill beneath the asphalt parking lot throughout the Site. Glacial till soils underlie the rubble and fill materials. The fill material generally consists of reworked soil intermixed with lesser amounts of brick, cinders, rock, ash, and organics. Rubble, such as wood, concrete, metal pipe, rebar, brick, roofing slate, an air tank, a boiler, etc. was encountered in the subsurface explorations at the Site. The specific source of the subsurface fill material is unknown. However, it is possible that the fill is associated with the demolition and backfilling of former structures at the Site. It is also possible that this fill could have been brought to the Site from one or more off-site source. Based on the subsurface information from the reports described in Section 2.1, the average thickness of the fill layer across the Site is estimated to be approximately 7 feet. This indicates that the approximate volume of fill material beneath the 1.48-acre Site is about 17,000 cubic yards. Refer to Table 5 from DAY's 2008 Supplemental Phase II ESA report in Appendix A for data regarding the depth of fill material.

According to the 1990 Foundation Design geotechnical report, "the in-place rubble fill is not acceptable under [proposed] buildings or pavements." (i.e., for the development proposed for the Site in 1990). Thus, the handling of fill material is a key component for consideration in planning for redevelopment of the Site.

The distribution of contaminants in soil/fill material across the Site is variable. As part of DAY's studies (listed in Section 2.1) soil/fill samples were collected and analyzed for VOCs, SVOCs and/or metals. The analytical laboratory test results were compared to available Technical and Administrative Guidance Memorandum (TAGM) 4046 recommended soil cleanup objectives (RSCOs), TAGM 4046 typical background ranges (metals only) and Part 375 Soil Cleanup Objectives (SCOs) for unrestricted use and restricted residential use. The findings of each study are described below:

- During DAY's initial Phase II ESA (May 2007), SVOCs were not detected at concentrations above reported analytical laboratory detection limits in two soil/fill samples that were tested. Additionally, some of the soil and fill material samples tested contained the VOC acetone and the metals lead and mercury at concentrations exceeding one or more of these regulatory criteria in the four samples tested. Data tables summarizing analytical results from the 2007 Phase II ESA are included in Appendix A, and corresponding sample locations are shown on Figure 2.

- During DAY's Supplemental Phase II ESA (June 2008), one to four target VOCs were detected at concentrations below SCOs and RSCOs in each of the 12 soil/fill samples submitted for analysis. The detected VOCs included: acetone, methylene chloride, tetrachloroethene, toluene, and naphthalene. For the 12 soil or fill samples submitted for VOC analysis, target VOC concentrations were below the SCOs for Unrestricted Use, Restricted Residential Use, as well as below the TAGM 4046 RSCOs. [Note: The concentration and frequency of acetone and methylene chloride suggested that these compounds may have been present due to laboratory, sampling, or delivery artifacts. Additionally, naphthalene appeared to be a laboratory artifact in sample TBDAY-4 (6-8'), as this compound was reported in the laboratory blank.] The metals lead and mercury were also detected at concentrations exceeding one or more SCOs or TAGM 4046 background concentrations in five of the 12 samples analyzed. In one of the 12 samples analyzed, a single metal, mercury, was detected in excess of the applicable SCOs. The highest concentrations of metals were detected in the sample collected from TP-DAY-9 (2'). In this sample, the metals arsenic, barium, lead, chromium and mercury were detected in excess of one or both of the applicable SCOs. The elevated metals concentrations in these samples may be representative of fill material components, such as slag and ash. SVOC analyses were not included in the scope of work for this Supplemental Phase II ESA. Data tables summarizing analytical results from the 2008 Supplemental Phase II ESA are included in Appendix A, and sample locations are shown on Figure 2.

To further evaluate the potential presence of SVOCs in fill material at the Site, two additional samples of fill material were analyzed for SVOCs as part of the tank removal report in September 2008. Two to three SVOCs (benzo(a)anthracene, benzo(a)pyrene, and/or dibenzo(a,h)anthracene) were detected in excess of RSCOs in each of these fill samples. The detected concentrations did not exceed the Unrestricted Use SCOs or the Restricted Residential SCOs.

It should be noted that elevated concentrations of SVOCs above regulatory soil cleanup objectives are often encountered at sites containing fill/rubble, and the distribution of these contaminants can be variable within the heterogeneous fill material. The SVOC analyses completed to date provide limited characterization of the nature and distribution of SVOCs in the fill material (i.e., analysis of 10 samples of fill material: three distributed throughout the site and seven collected from the UST removal excavation in the former gas station area.) Therefore, DAY's 2008 Supplemental Phase II ESA report included a recommendation that further evaluation of the distribution and concentration of SVOCs be performed at the Site. Such a characterization, if completed prior to development activities, may assist in streamlining and expediting the staging, transportation and disposal of fill materials that cannot be re-used on Site.

Note: Refer to Section 2.2.3 for a separate discussion of subsurface conditions in the vicinity of the former gas station on the Site.

2.2.2 Groundwater

The Supplemental Phase II ESA (June 2008) included the installation of four monitoring wells, sampling/analysis of groundwater, and measurement of groundwater depth/elevation. The depth to groundwater at the site ranged from 4.6 feet below ground surface (bgs) (MW-2) to 11.3 feet bgs (MW-4). Based on measurements made on April 2, 2008, the groundwater flow direction at the Site is estimated to be toward the southeast.

A groundwater sample from each of the wells was analyzed for Target Compound List (TCL)/STARS-list VOCs. Analytical results are included in Appendix A.

- No target VOCs exceeding groundwater standards or guidance values were detected in groundwater samples from MW-1, MW-2 or MW-3. Four to five VOCs were detected in each of these groundwater samples at concentrations which are below New York State Department of Environmental Conservation (NYSDEC) TOGS 1.1.1 groundwater standards or guidance values ranging from 0.2 to 14 parts per billion (ppb). The VOCs detected included: 1,2,4-trichlorobenzene, 2-butanone, acetone and carbon disulfide. Naphthalene was also detected in MW-1 and MW-2 at concentrations of 2 ppb, which are below its standard or guidance value. However, this compound was also detected in the laboratory blank and may be the result of laboratory cross-contamination.
- In MW-4, three compounds exceeded groundwater standards or guidance values: benzene (2 ppb), ethylbenzene (6 ppb); toluene (10 ppb); and xylenes (34 ppb). These compounds are constituents of petroleum products, such as gasoline. [Note: Monitoring well MW-4 is in the southeastern portion of the Site, and is not close to the former gas station.] The following compounds were also detected in MW-4 at concentrations ranging from 0.4 to 11 ppb, which are below standards and guidance values: 1,2,4-trichlorobenzene; 2-butanone; 4-methyl-2-pentanone; acetone; carbon disulfide; cyclohexane; and methylcyclohexane. In addition, naphthalene was also detected at a concentration of 3 ppb; however, this compound was also detected in the laboratory blank and may be the result of laboratory cross-contamination.

2.2.3 Subsurface Conditions in the Former Gas Station Area

Four UST systems and their contents were successfully removed and disposed off-site between July 21 and July 22, 2008. (Refer to Figure 3 for the approximate UST locations.) No apparent petroleum-impacted soil was encountered while removing Tank #1 through Tank #3. Apparent petroleum-impacted soil, based on PID readings, was encountered in the area of Tank #4. In order to avoid possible undermining at the southern extent of the tank excavation, only a limited volume of impacted soil was removed from the Tank #4 area. A layer of apparent petroleum impacted soil, beginning at a depth of approximately 7 ft bgs, was observed in the southern sidewall of the excavation (adjacent to Tank #4); however, this area could not be excavated without penetrating a concrete pad or undermining existing pavement above the excavation sidewall. Thus, this apparent petroleum impacted soil was left in place. The 2008 Tank Removal Report indicated that additional investigation and remediation may be warranted in this area (Refer to Section 3.1.2 for site-specific considerations regarding this portion of the Site).

After the UST removal, the excavated soil was temporarily staged on-site and was subsequently transported off-site and disposed at Mill Seat Landfill on August 19, 2008.

The analytical laboratory test results for the six confirmatory soil samples from the tank excavation (i.e., a single excavation that contained the four removed USTs) indicate that in Sample TK-4 South Wall (7') one VOC exceeded the TAGM 4046 Recommended Soil Cleanup Objective and one VOC exceeded the Part 375 Unrestricted Use Soil Cleanup Objective. No VOCs in excess of the standards/guidance values were detected in the remaining five samples. In addition, one to four SVOCs in each of the six samples analyzed exceeded TAGM 4046 RSCOs. The highest SVOC concentrations were detected in TK-1 North/East Wall (6.5'-7.5'). Refer to Figure 4 for sample locations within the tank excavation.

The presence of two to three of the same SVOCs in the fill samples that were detected in the tank excavation samples, suggests that the SVOCs present in the tank excavation may be attributable, at least in part, to the fill materials that are present throughout the Site.

No groundwater was encountered during the removal of abandoned USTs in the vicinity of the former gas station on the Site.

3.0 ENVIRONMENTAL MANAGEMENT PLAN

This EMP provides options for the management, disposal and/or re-use of soil and fill material at the Site that contains elevated concentrations of metals, VOCs and SVOCs and potentially other environmental impacts that could be encountered during construction activities. This EMP also provides a protocol for preventing fugitive emissions during disturbance of contaminated materials, and reducing future impacts associated with contaminated materials. The procedures presented are intended to reduce potential exposure to construction workers and nearby residents during re-development; and future workers and residents of the Site and the nearby community. The Summary Flow Chart included in Appendix B provides a matrix of the recommended handling and disposal options for materials covered by this EMP. A site-specific Health and Safety Plan (HASP) to be implemented during activities that disturb contaminated soil or fill material is included in Appendix C.

While selected constituents measured in samples collected from the Site exceed the restricted-residential use criteria (although the Site is not in a specific NYSDEC program), an EMP can be utilized as a remedial measure during re-development of this property. Specifically, as defined in 6 NYCRR Subpart 375-1.8 (g) (ii) restricted residential use is "... considered when there is common ownership or a single owner/managing entity of the site. Restricted-residential use:

(a) shall, at a minimum, include restrictions which prohibit:

- (1) any vegetable gardens on a site, although community vegetable gardens may be considered with regulatory agency approval; and
- (2) single family housing; and

(b) includes active recreational uses, which are public uses with a reasonable potential for soil contact;"

Based on DAY's understanding of the anticipated development plans for the Site, the Site meets these criteria. (Refer to Section 1.3 for a description of the anticipated future development of the Site.) According to the 1990 Foundation Design geotechnical report, "the in-place rubble fill is not acceptable under [proposed] buildings or pavements." (i.e., for the development proposed for the Site in 1990). Thus, depending upon redevelopment plans, excavation and off-site disposal of a substantial amount of the fill material may be anticipated. In addition, it is anticipated that the majority of the Site will be covered with buildings, asphalt, concrete, brick, etc., which would prevent the potential for soil or fill contact or exposure by future residents/business owners/patrons in this area. It is assumed that limited space will be used for landscaping or other "green" areas, and to the extent necessary, engineering controls (EC) discussed in Section 4.0 can be implemented to limit potential soil contact with residual contamination.

During construction activities that disturb impacted fill materials, a qualified environmental consultant or other regulatory – approved entity must monitor and document the work completed for compliance with the requirements of this EMP. In addition, the City of Rochester (City) and

other appropriate regulatory authorities, such as the Monroe County Department of Public Health (MCDPH), the NYSDEC, and/or the New York State Department of Health (NYSDOH) will be notified at least two business days prior to performing activities that disturb impacted media at the Site.

3.1 Potentially-Impacted Media

This section describes the types of impacted media documented at the Site and provides information on the identification, handling, analytical laboratory testing, disposal or re-use of these materials.

3.1.1 In-Field Identification

Identification of potentially impacted media will be part of the construction process, so that appropriate actions can be taken. The following sub-sections provide guidance for this identification process:

Heterogeneous Fill

A layer of heterogeneous fill material is located immediately below the asphalt pavement across the Site extending to variable depths, with an average depth of approximately seven feet. The fill generally consists of fine to medium sand and gravel with varying quantities of cinder, ash, slag, concrete, brick, metal pipe, rebar and apparent rubble from demolished buildings. Previous analytical laboratory testing indicates this fill material contains elevated concentrations of various metals, SVOCs and VOCs (refer to Section 2.0). Except for apparent petroleum-impacted materials along the southern wall of the former tank excavation on the northeastern portion of the Site (refer to Section 2.2.3), this fill material did not emit discernable odors, and may not result in positive responses when the ambient air above the material is screened with a photoionization detector (PID). (Refer to the following section for a specific discussion of the tank excavation in the vicinity of the former gas station.) Based on available data, it is not anticipated that VOC or petroleum sources are a widespread occurrence at the Site, but areas of localized impact are possible. For purposes of this EMP, heterogeneous fill material throughout the Site should be considered to be impacted by selected metals, SVOCs and/or VOCs and handled as such unless testing is done to quantify the constituents in this material. Refer to Section 2.2.1 for a discussion of pre-development sampling that can provide additional characterization of the nature and extent of SVOCs in fill materials and potential VOC-impacted material.

Petroleum-Impacted Soil

Based on the previous studies completed at the Site, it is known that an area of petroleum-impacted soil is present near the southern wall of the tank excavation of the former gas station area (Refer to Section 2.2.3, Figure 3 and Figure 4). Additionally, it is possible that isolated areas of petroleum and/or VOC-impacted soil or fill material could be encountered during development. If petroleum impacts are present, the soil or fill may appear stained black, gray,

etc. and emit petroleum-like odors or other odors. In addition, screening the ambient air above this material could result in positive responses on a PID. [Note: heavier non-volatile petroleum-related constituents, such as polynuclear aromatic hydrocarbon SVOCs, might not result in a positive PID response].

Groundwater

The depth to groundwater was previously measured to be approximately 4.6 to 11.3 feet below the ground surface at the Site. (Refer to Table 4 of the 2008 Phase II ESA report in Appendix A.) Previous testing shows groundwater on some portions of the Site generally contained petroleum-related VOCs. Total VOC concentrations in the groundwater samples ranged from 10 ppb to 115 ppb. Petroleum impacted groundwater may be identified by the presence of petroleum odors or a sheen on the water. Additionally, screening the ambient air above samples of groundwater from these areas may result in positive PID responses.

3.1.2 Handling

Unless otherwise specified, the Owner will be responsible for contamination should it be encountered/disturbed.

Fill materials that are excavated or disturbed, and that cannot be re-used on the Site, will be removed, segregated from non-impacted media, and placed on, and covered with, plastic sheeting; or the material may be directly loaded onto trucks and transported to an appropriate regulated disposal facility. [Note: The disposal facility may require additional testing (beyond the testing that has been completed on fill materials to date) prior to accepting the fill materials.]

Staged fill must be addressed (e.g., characterized, disposed of off-site, etc.) in accordance with the applicable regulations within 60 days, unless otherwise authorized by the appropriate regulatory agency.

A layer of apparent petroleum-impacted soil/fill, beginning at a depth of approximately 7 ft bgs, remains in place near the southern sidewall of the tank removal excavation (adjacent to Tank #4) in the former gas station area. (Refer to Figure 4 and Tables 1-3 from the UST Removal Report. These tables are included in Appendix A). The 2008 Tank Removal Report indicated that additional investigation and remediation may be warranted in this area. Therefore, this area will be further evaluated based upon the new use.

Petroleum-contaminated soil/fill exhibiting visual, olfactory or PID evidence of contamination will be segregated from non-impacted media, and be placed on, and covered with, plastic sheeting. The location, appearance, and quantity (if possible) of such material will be documented. The City and the NYSDEC Spills Unit must be notified, and the MCDPH may also be notified regarding the contamination. After removal of the apparent petroleum-impacted soil/fill, the sidewalls and bottom of the excavation shall be sampled, and the samples analyzed for parameters as outlined in Section 3.1.3. If impacted material is to be staged on-site, any disposal, treatment, etc. must be conducted within 60 days, unless otherwise authorized by the appropriate regulatory agency.

Fill materials in the remaining portions of the Site (other than the former gas station area) that are excavated or disturbed during development activities and appear to be impacted by VOCs, petroleum based or other contaminants based on visual and olfactory assessment, PID readings, etc., will also be removed, segregated from non-impacted media, and be placed on, and covered with, plastic sheeting. The procedures identified in the preceding paragraph will then be implemented.

Groundwater or standing water removed from excavations that have evidence of contamination (e.g., elevated PID readings, petroleum odor, sheen, etc.) must be containerized (i.e., placed in sealed New York State Department of Transportation (NYSDOT)-approved 55-gallon drums or holding tanks) prior to characterization and disposal. Uncontaminated groundwater or standing water can be handled in the same manner as a normal construction project.

3.1.3 Analytical Laboratory Testing

A proposed analytical laboratory testing program and associated analytical laboratory test methods are summarized on Table 1. The actual analytical laboratory testing program will vary depending on the nature of the materials and conditions encountered (e.g., visual and olfactory observations, PID readings, staining, etc.), on the requirements of the City and/or appropriate regulatory agencies, and/or testing requirements of the disposal facility or publicly owned treatment works (POTW). The disposal facility receiving impacted soil or fill material will determine the number of samples needed per load. Additional sampling/analysis of soil or fill material prior to commencement of construction may help to expedite its segregation, loading, transportation, etc.

The recommended analytical laboratory-testing program for anticipated types of impacted media is summarized below:

- Samples of fill that are suspected to contain heavy metals and SVOCs: Resource Conservation and Recovery Act (RCRA) metals and NYSDEC Spill Technology and Remediation Series (STARS)-list SVOCs. Depending on the concentrations measured, this type of material may also warrant Toxicity Characteristic Leaching Procedure (TCLP) metals and/or TCLP SVOC testing as well as pH, reactivity and ignitability testing.
- Samples of soil or fill that are suspected to contain petroleum-related compounds or other VOCs: United States Environmental Protection Agency (USEPA) target compound list (TCL) and NYSDEC STARS-list VOCs, and NYSDEC STARS-list SVOCs. This type of material may also warrant TCLP VOCs and/or TCLP SVOCs testing.
- Samples of groundwater or standing water that are removed: Total RCRA Metals and 40 CFR 136 purgeable aromatics respectively.
- Samples of soil or fill that are suspected to contain unknown contamination: USEPA TCL and NYSDEC STARS-list VOCs, NYSDEC STARS-list SVOCs, USEPA RCRA Metals. Depending on the concentrations measured, this type of material may also warrant TCLP VOCs, TCLP SVOCs, and metals, testing, as well as pH, reactivity, corrosivity testing as well as testing for or other parameters, to the extent warranted.

[Note: In the event significant amounts of construction and demolition (C&D) material are encountered during development (e.g., bricks, concrete, etc.) that is deemed to be uncontaminated (i.e., based upon observation and field screening), analytical laboratory testing will not be required for the C&D material unless there is a specific requirement of the off-site facility receiving the material.]

The analytical laboratory test results for samples collected can be compared to the most appropriate of the following criteria to evaluate disposal and/or re-use options.

- A comparison to Part 371 waste criteria will be used to assist in evaluating if the material is a characteristic hazardous waste or a non-hazardous waste.
- A comparison to NYSDEC Part 375-6 SCOs, NYSDEC TAGM 4046 RSCOs, NYSDEC TAGM 4046 typical background ranges (metals only), and NYSDEC STARS Memo #1 petroleum soil guidance values will be used to assist in determining if soil or fill media require removal, off-site disposal and/or treatment, or can be re-used on-site.
- A comparison to the Technical and Operational Guidance Series (NYSDEC TOGS 1.1.1) groundwater standards and guidance values will be used to evaluate groundwater quality.
- A comparison to applicable portions of the Monroe County Pure Waters (MCPW) Rules and Regulations, and Sewer Use Law, will be used to assist in determining if water from the Site (groundwater, excavation water, well water, etc.) requires pre-treatment and/or can be discharged to the public combined sewer with or without a Sewer Use Permit, or requires off-site disposal/treatment at an appropriate facility.

A list of possible regulatory guidance documents is included in Appendix D.

3.1.4 Disposal of Impacted Media

Comparison of analytical laboratory test results to the appropriate criteria may indicate that impacted soil and/or fill encountered during construction activities at the Site requires disposal off-site in accordance with applicable regulations. In addition, due to construction requirements and the limited space available on-site for storage and re-use, a majority of the excavated material may require off-site disposal. Based on existing data and information, the soil or fill at the Site will likely be characterized as non-hazardous, industrial waste or C&D debris impacted by heavy metals and SVOCs, and non-hazardous petroleum-impacted waste. However, contingency provisions should be considered in case the soil or fill requires off-site disposal at a regulated facility as a hazardous waste. [Note: Due to construction requirements, fill material that is not adversely impacted (e.g., C & D debris) may also require removal and off-site disposal. This material must be handled and disposed of in accordance with appropriate protocols.]

If determined to be contaminated, water (e.g., groundwater and standing water,) that is generated and removed during construction activities at the Site must be: 1) discharged to the public combined sewer under a sewer use permit; or, 2) transported and disposed/treated off-site at an appropriate facility. If the water contains free petroleum product, a petroleum sheen, or total VOC concentration greater than 2.13 milligrams per liter/part per million (mg/l), it should be anticipated that MCPW will require pre-treatment and confirmatory sampling prior to authorizing discharge to the public combined sewer system under a sewer use permit.

Transporters removing impacted media from the Site must have the appropriate regulatory permits (e.g., NYSDEC Part 364 permit, etc.), and the selected disposal facility of each waste stream (e.g., soil/fill to landfill, water to POTW, etc.) must be acceptable and appropriate in accordance with applicable regulations. This includes impacted material that may be defined as non-hazardous waste and hazardous waste.

3.1.5 Contingency Option for Re-Use of Impacted Soil/Fill

As indicated in New York Codes, Rules and Regulations (NYCRR) Part 360, Section 360-1.15 (b) (8), non-hazardous soil, ceases to be solid waste when it is excavated as part of a construction project (e.g., re-development project), other than a NYSDEC-approved site remediation program, and the material is used as backfill for the same excavation or excavations containing similar contaminants at the same site. As such, non-hazardous soil/fill at the Site that is excavated during re-development is not a solid waste if re-used on-site in areas where similar material already exists. However, criteria for re-use established in this EMP (e.g., Part 375-6 Restricted Residential Use SCOs, petroleum soil guidance values listed in the August 1992 NYSDEC STARS Memo #1, etc.) must be achieved.

If the detected concentrations of constituents of concern (i.e., VOCs, SVOCs, and heavy metals) in samples of the impacted soil or fill material are below the appropriate criteria set forth in Table 2, the media represented by the samples can be deemed as "suitable" for re-use on-site with the permission of the appropriate regulatory agencies, in consultation with the project geotechnical engineer. In this case, the following conditions will apply:

- Fill material, which is deemed acceptable for re-use by the geotechnical engineer at the time of construction, but contains detectable concentrations of VOCs and SVOCs, or that emanates petroleum-type or chemical odors, cannot be used in the vicinity of existing or planned residential buildings, or other subsurface structures where the potential for human exposure, vapor accumulation, or nuisance odors could arise. Also, such material should not be used below the groundwater table, nor should it be used within the top two feet of finished grade unless covered by an impervious material (e.g., asphalt pavement. Acceptable uses of this type of soil/fill that is designated as suitable for re-use may include backfill under parking lots, grading, etc.
- Fill material, which is deemed acceptable for re-use by the geotechnical engineer at the time of construction, but potentially contains elevated concentrations of heavy metals, but does

not contain VOCs or SVOCs, may also be acceptable for re-use in the vicinity of existing or planned residential buildings, or other subsurface structures; however, such material should not be used below the groundwater table, nor should it be used within the top two feet of finished grade unless covered by an impervious material (e.g., asphalt pavement). Impacted soil/fill that is re-used on-site must be covered with a minimum two-foot layer of clean soil or impervious material and cannot be re-used on-site in planters, landscaping beds or in areas that may be used as gardens.

Note: Soil or fill that are characterized (i.e., as shown by appropriate analytical laboratory testing) as non-impacted, and are not considered to be a regulated waste, may be re-used off-site in accordance with applicable regulations. The Owner or developer may want to consider discussing off-site re-use options with regulatory agencies (e.g., the NYSDEC, MCPDH, NYSDOH, City) prior to taking the material off-site for re-use.

3.2 Health and Safety Plan and Air Monitoring

The site-specific HASP included in Appendix C outlines policies and procedures intended to protect workers and the public from potential environmental hazards posed during future site activities, including redevelopment activities.

During activities that disturb impacted media (e.g., soil, fill and groundwater), air monitoring must be conducted. This includes during re-development activities and during post-development activities as they arise (e.g., repairs to buried utilities, etc.). Further details pertaining to the required air monitoring are provided in the HASP. Depending upon the specific activities being completed that are disturbing impacted media, and on Site conditions encountered, air monitoring for particulates and VOCs may be needed on-site for protection of Site workers, and along the perimeters of the Site as part of the community air-monitoring plan (CAMP) as specified in Section 8.3 of the HASP.

3.3 Dust Suppression

During activities that disturb impacted media (e.g., soil, fill), if particulate concentrations exceed action levels outlined in the HASP, dust suppression will be required. Dust suppression techniques that can be implemented include: applying water to haul roads; wetting equipment and excavation faces; spraying water on buckets during excavation and dumping; covering materials that are being hauled; restricting equipment speeds; and covering excavated areas and exposed areas of fill and/or petroleum-impacted material. Dust suppression techniques will be utilized until air monitoring indicates that particulate levels are within an acceptable range.

3.4 Site Controls

Fencing should be placed around excavations into impacted materials that are to be left open over night, the weekend, or for other extended periods of time.

3.5 Management of Potential Future Disturbances

Workers involved with future on-site work (e.g., new installation/repair of buried utilities, etc.) that disturb impacted media (e.g., soil, fill, groundwater) should be made aware of the potential exposure hazards. The owner of the Site will be responsible for notifying future on-site workers of potential exposure hazards. The owner should be provided with the previous reports, this EMP, and the associated HASP. These documents contain information on the type and location of contaminants at the Site, and address how to handle, treat, transport and dispose impacted materials in a manner that precludes exposure. Precautions should be implemented to minimize disturbance of known or suspected impacted soil or fill that result in air-borne release of particulates. Areas where work has been completed should be repaired (e.g., clean soil/fill re-applied, paved, etc.).

4.0 ENGINEERING CONTROLS

Engineering controls (ECs) may be warranted as part of the redevelopment of this Site. The appropriate regulatory agencies (i.e., MCDPH, the NYSDEC, and/or the NYSDOH) and the City should approve proposed EC designs for the Site prior to starting redevelopment activities at the Site, depending on the nature of the ECs. The specific ECs will depend on the planned design of buildings (such as whether buildings will have a sub-grade parking garage, habitable basement space, uninhabited crawlspace, slab-on-grade construction, etc.) and other property improvements (e.g., walkways, vehicle parking, landscaping, etc.). The ECs may include covering portions of the Site beyond building footprints to preclude direct exposures to underlying potentially impacted materials and a vapor intrusion mitigation system on new buildings. The potential types of ECs for this Site are further outlined in this section of the EMP.

4.1 Site Cover

Based on the data currently available, a site cover of “clean” soil, crushed stone, etc. may be used as an EC over that portion of the Site in which it is not necessary to excavate the fill material because of geotechnical considerations or the anticipated construction. Site cover is used in order to preclude direct exposure to underlying existing fill material/soil that may contain elevated concentrations of various constituents (e.g., heavy metals, VOCs and SVOCs). With this EC, the building(s), paved surfaces or a minimum one-foot layer of “clean” soil/select fill will cover these areas.

4.2 Vapor Intrusion Mitigation System

Since VOCs were detected in soil and fill samples in various locations throughout the Site, and since VOCs were detected in groundwater, it is recommended that the NYSDOH be contacted to determine if the VOC vapor intrusion exposure pathway into any new Site structures needs to be addressed in accordance with provisions set forth in the NYSDOH document titled “*Final Guidance for Evaluation Soil Vapor Intrusion in the State of New York*” dated October 2006. For example, vapor intrusion may be addressed by installation of a sub-slab depressurization system (SSDS), sub-membrane depressurization system (SMDS), or other appropriate methods (first floor open air parking garage, providing a crawlspace at the ground surface, etc.) This document can be obtained by contacting the NYSDOH Bureau of Environmental Exposure Investigation at: 1-800-458-1158 (ext. 27850) or by visiting the following web site link:

http://www.health.state.ny.us/environmental/investigations/soil_gas/svi_guidance/

5.0 PROJECT DELIVERABLES

The following deliverables must be provided to the appropriate regulatory agencies (e.g., NYSDEC):

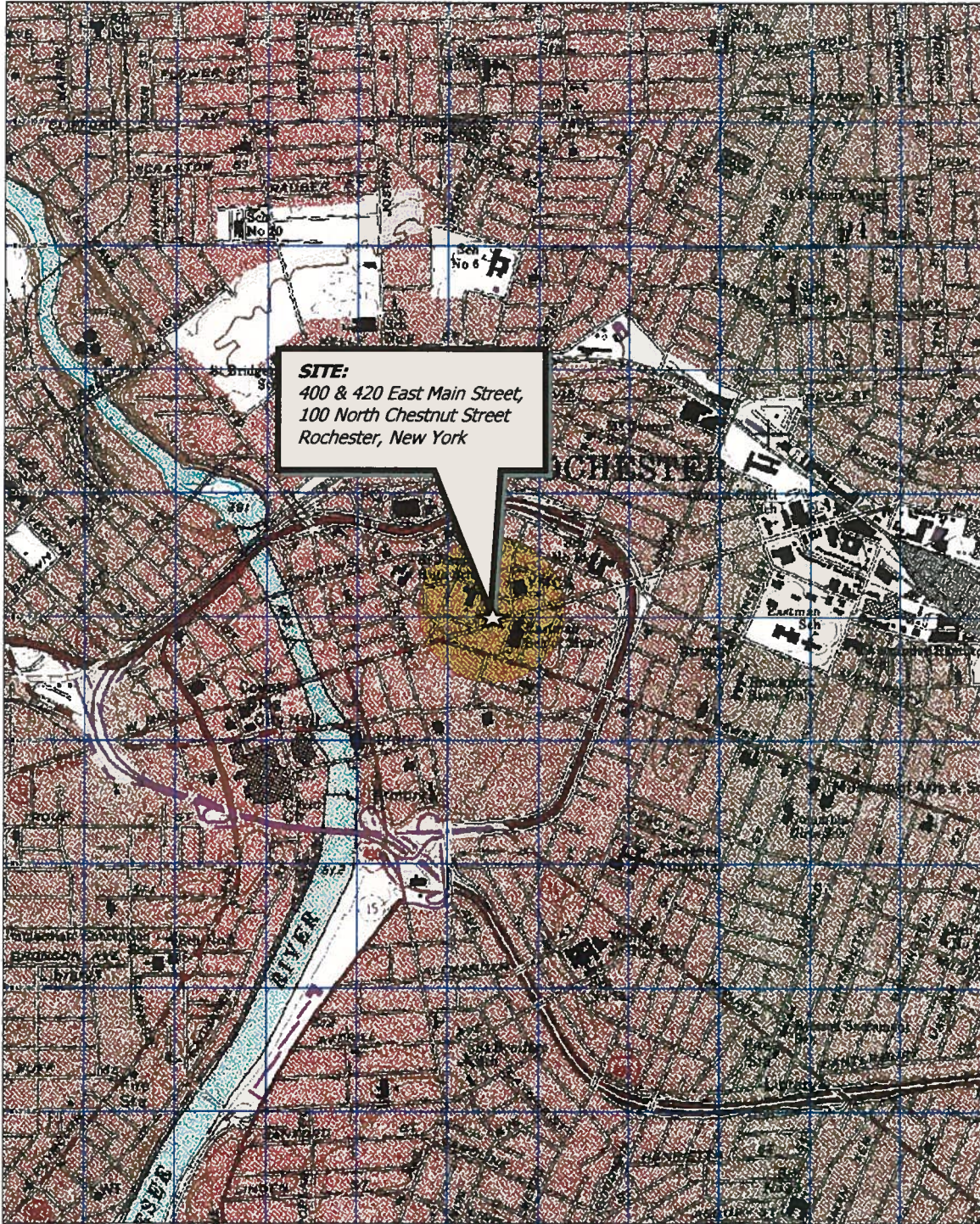
1. Documentation of removal/disposal of soil from the area of removed USTs.
2. If a vapor intrusion mitigation system or other EC plan is deemed necessary.
3. A Post-Construction Report upon completion of the re-development activities. This report will summarize monitoring activities that are completed to document that the provisions, protocols and components of the EMP and HASP, and also ECs and institutional controls if deemed necessary for the development, were satisfactorily implemented. The document will also identify modifications to the EMP, HASP, etc. that were first approved by regulatory agencies and subsequently made during redevelopment of the Site.
4. Depending upon the actual redevelopment of the Site, an Operation, Maintenance and Monitoring (OM&M) Plan may be developed and provided to the City and appropriate regulatory agencies.

6.0 ABBREVIATIONS

CAMP	Community Air Monitoring Plan
C&D	Construction and Demolition
City	City of Rochester
DAY	DAY Environmental, Inc.
EC	Engineering Control
EMP	Environmental Management Plan
ESA	Environmental Site Assessment
HASP	Health and Safety Plan
MCDPH	Monroe County Department of Public Health
MCPW	Monroe County Pure Waters
mg/l	Milligrams Per Liter/ Part Per Million
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
OM&M	Operation, Maintenance and Monitoring
PID	Photoionization Detector
POTW	Publicly Owned Treatment Works
RCRA	Resource Conservation and Recovery Act
RSCO	Recommended Soil Cleanup Objective
SCOs	Soil Clean-up Objectives
STARS	Spill Technology and Remediation Series
SVOC	Semi-Volatile Organic Compound
TAGM	Technical and Administrative Guidance Memorandum
TCL	Target Compound List
TCLP	Toxicity Characteristic Leaching Procedure
TOGS	Technical and Operational Guidance Series
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

FIGURES

Figure 1
Project Locus Map



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 1" = 500 ft Scale: 1 : 19,200 Detail: 14-0 Datum: WGS84

Drawing Produced From: 3-D TopoQuads, DeLorme Map Co., referencing USGS quad maps Rochester East (NY) 1995. Site Lat/Long: N43° 9.51' – W77° 36.13'


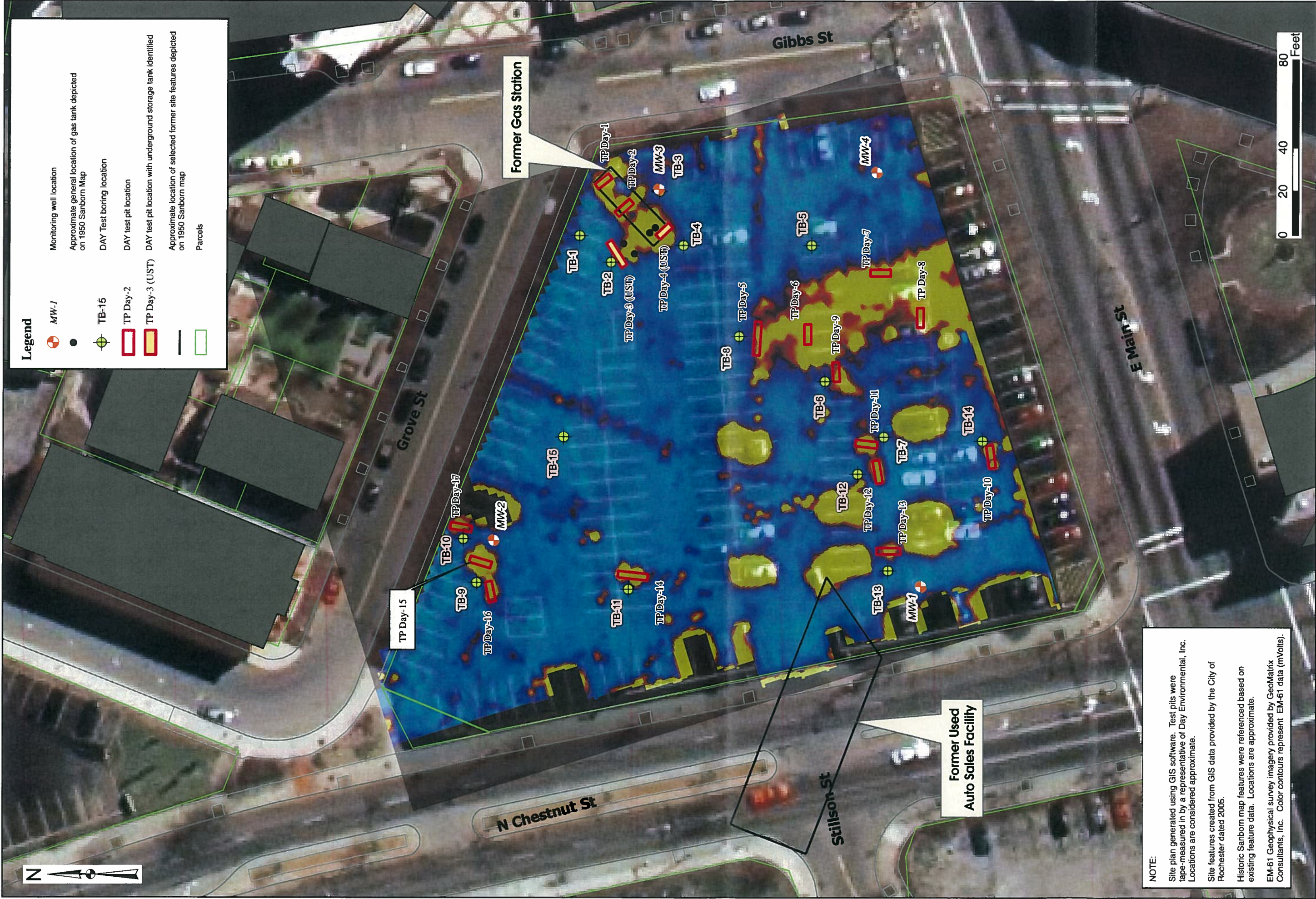
DATE 10/16/2009	 DAY ENVIRONMENTAL, INC. ENVIRONMENTAL CONSULTANTS ROCHESTER, NEW YORK 14614-1008 NEW YORK, NEW YORK 10165-1617	PROJECT TITLE 400 & 420 EAST MAIN STREET, 100 NORTH CHESTNUT STREET ROCHESTER, NEW YORK ENVIRONMENTAL MANAGEMENT PLAN	PROJECT NO. 4026S-07 FIGURE 1
DRAWN BY RJM		DRAWING TITLE PROJECT LOCUS MAP	

Figure 2
Exploration Location Plan



Legend

- MW-1 Monitoring well location
- Approximate general location of gas tank depicted on 1950 Sanborn Map
- TB-15 DAY Test boring location
- TP Day-2 DAY test pit location
- TP Day-3 (UST) DAY test pit location with underground storage tank identified
- Approximate location of selected former site features depicted on 1950 Sanborn map
- Parcels

NOTE:
 Site plan generated using GIS software. Test pits were tape-measured in by a representative of Day Environmental, Inc. Locations are considered approximate.
 Site features created from GIS data provided by the City of Rochester dated 2005.
 Historic Sanborn map features were referenced based on existing feature data. Locations are approximate.
 EM-61 Geophysical survey imagery provided by GeoMatrix Consultants, Inc. Color contours represent EM-61 data (mVols).

Project No.
4026S-07
FIGURE 2

day
DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14614-1008
 New York, New York 10016-0701









Project Title
 400 & 420 EAST MAIN STREET,
 100 NORTH CHESTNUT STREET
 ROCHESTER, NEW YORK 14620
 ENVIRONMENTAL MANAGEMENT PLAN
 Drawing Title
EXPLORATION LOCATION PLAN

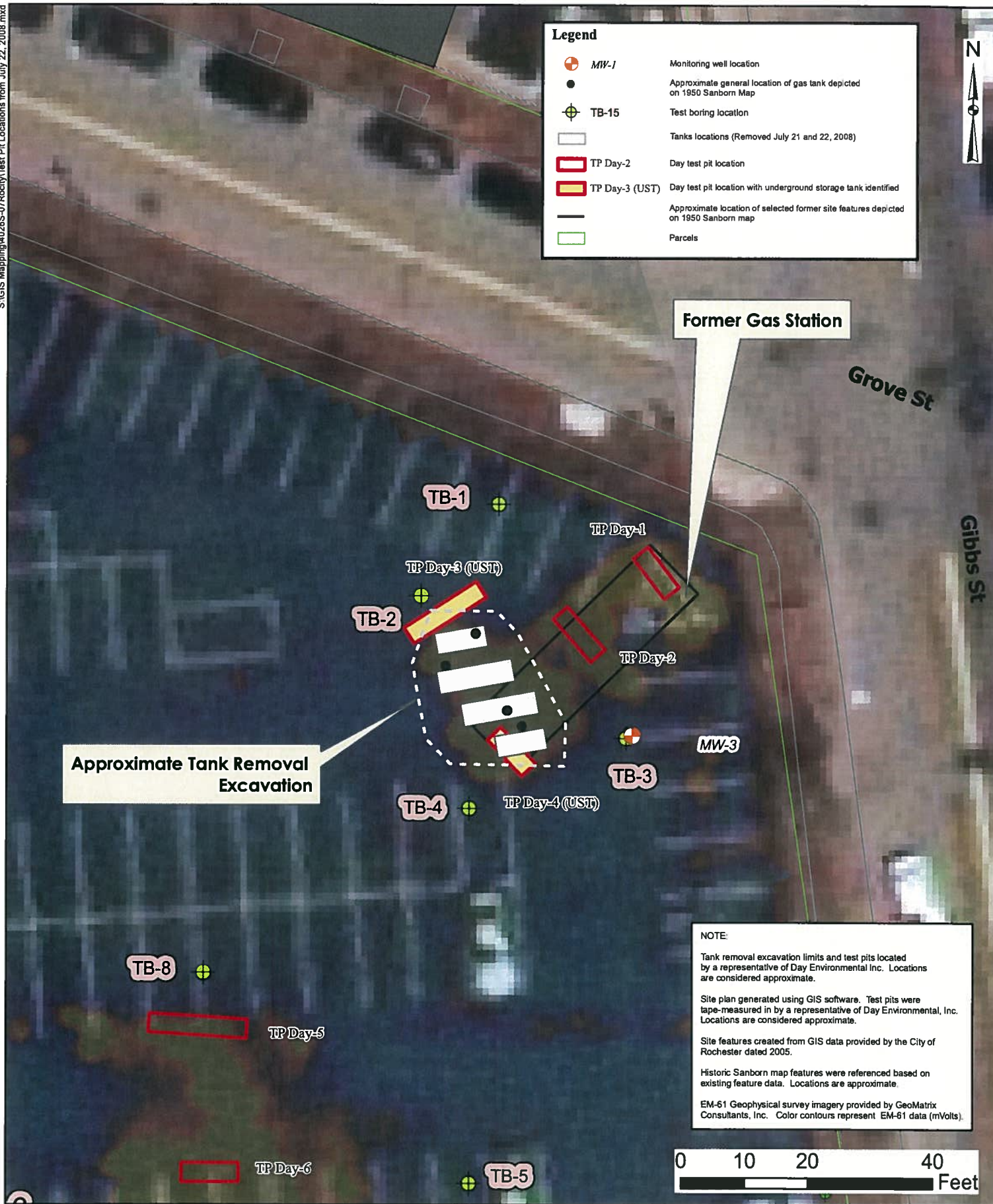
Date
07-30-2009
 Drawn By
CPS
 Scale
1" = 40'

Figure 3

Location of Removed USTs

Legend

-  MW-1 Monitoring well location
-  Approximate general location of gas tank depicted on 1950 Sanborn Map
-  TB-15 Test boring location
-  Tanks locations (Removed July 21 and 22, 2008)
-  TP Day-2 Day test pit location
-  TP Day-3 (UST) Day test pit location with underground storage tank identified
-  Approximate location of selected former site features depicted on 1950 Sanborn map
-  Parcels



Former Gas Station

Approximate Tank Removal Excavation

NOTE:

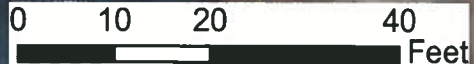
Tank removal excavation limits and test pits located by a representative of Day Environmental Inc. Locations are considered approximate.

Site plan generated using GIS software. Test pits were tape-measured in by a representative of Day Environmental, Inc. Locations are considered approximate.

Site features created from GIS data provided by the City of Rochester dated 2005.

Historic Sanborn map features were referenced based on existing feature data. Locations are approximate.

EM-61 Geophysical survey imagery provided by GeoMatrix Consultants, Inc. Color contours represent EM-61 data (mVolts).



Date	07-30-2009
Drawn By	CPS
Scale	AS NOTED

day
DAY ENVIRONMENTAL, INC.
 Environmental Consultants
 Rochester, New York 14614-1008
 New York, New York 10016-0701

Project Title
 400 & 420 EAST MAIN STREET,
 100 NORTH CHESTNUT STREET
 ROCHESTER, NEW YORK 14620

ENVIRONMENTAL MANAGEMENT PLAN

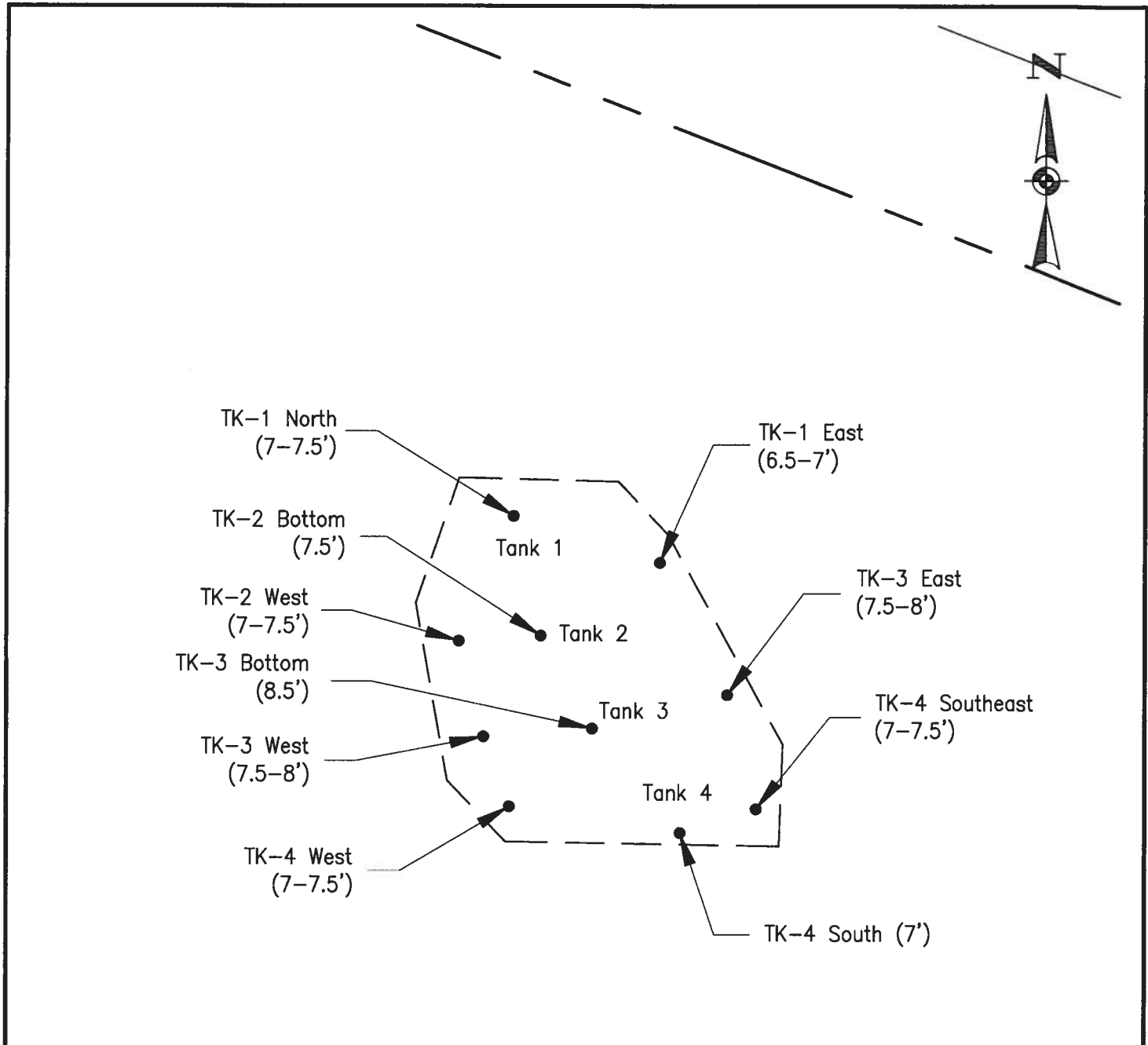
Drawing Title
 REMOVED UST LOCATION PLAN

Project No.
 4026S-07

FIGURE 3

Figure 4

Sample Locations for UST Excavation




NOTE:

Site plan created based on a site sketch from a representative of DAY Environmental Inc. Site features where tape-measured in. Locations are to be considered approximate.

LEGEND:

- TK-3 West (7.5-8') Sample location with depth in feet
- Approximate limits of excavation



<p>DATE 07-30-2009</p>	 <p>DAY ENVIRONMENTAL, INC. ENVIRONMENTAL CONSULTANTS ROCHESTER, NEW YORK 14614-1008 NEW YORK, NEW YORK 10165-1617</p>	<p>PROJECT TITLE 400 & 420 EAST MAIN STREET, 100 NORTH CHESTNUT STREET ROCHESTER, NEW YORK 14620</p>	<p>PROJECT NO. 4026S-07</p>
<p>DRAWN BY CPS</p>		<p>ENVIRONMENTAL MANAGEMENT PLAN</p>	<p>FIGURE 4</p>
<p>SCALE AS NOTED</p>		<p>DRAWING TITLE UST EXCAVATION SAMPLE LOCATION PLAN</p>	

TABLES

Table 1

Recommended Analytical Program

TABLE 1

RECOMMENDED ANALYTICAL PROGRAM

400 & 420 EAST MAIN STREET & 100 NORTH CHESTNUT STREET
ROCHESTER, NEW YORK

TYPE OF MATERIAL	ANALYTICAL PARAMETERS										No Testing Recommended
	TCL and STARS VOCs EPA Method 8260	STARS SVOCs EPA Method 8260	Total RCRA Metals EPA Methods 6010/7470	TCLP Metals EPA Methods 6010/7470	TCLP SVOCs EPA Method 8270	TCLP VOCs EPA Method 8260	pH, Reactivity, Ignitability ⁽¹⁾	Purgeable Aromatics using Method 602 or equivalent			
Fill suspected of containing heavy metals and SVOCs		X	X	X ⁽²⁾	X ⁽²⁾		X ⁽²⁾				
Soil/fill with suspect petroleum-related constituents and/or other VOCs	X	X			X ⁽²⁾	X ⁽²⁾					
Groundwater suspected of containing heavy metals			X								
Groundwater with suspect petroleum-related constituents and/or other VOCs									X		
Unanticipated soil/fill contamination of unknown type	X	X	X	X ⁽²⁾	X ⁽²⁾		X ⁽²⁾			X ⁽²⁾	X ⁽³⁾
C&D fill											X ⁽³⁾
Solid Waste											X ⁽³⁾

Footnotes:

- 1 Ignitability and corrosivity for liquid wastes only.
- 2 If required by disposal facility.
- 3 In accordance with Part 360, treat as uncontaminated unless suspected and proven otherwise via analytical testing. Disposal facilities may require some analytical testing

Table 2

Objectives for Re-Use of Impacted Soil / Fill

TABLE 2

OBJECTIVES FOR RE-USE OF IMPACTED SOIL/FILL
 400 & 420 EAST MAIN STREET & 100 NORTH CHESTNUT STREET
 ROCHESTER, NEW YORK

TYPE OF SOIL/FILL MATERIAL ANALYZED	Unrestricted Use SCO ⁽¹⁾	Restricted Residential Use SCO ⁽²⁾	STARS MEMO #1 Soil Guidance Values for VOCs and SVOCs ⁽³⁾	NYSDEC TAGM #4046 RSCOs for VOCs and SVOCs ⁽⁴⁾	NYSDEC TAGM #4046 RSCOs and/or background ranges for Metals ⁽⁴⁾
Specific petroleum constituents in soil/fill	X	X	X		
Heavy metals and specific non-petroleum constituents in soil/fill	X	X		X	X

Footnotes:

- 1 Unrestricted use soil cleanup objective (SCO) as referenced in 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives, dated December 14, 2006.
- 2 Restricted residential use SCO as referenced in 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives, dated December 14, 2006.
- 3 If petroleum impacted material is proposed for re-use on-site, compare to petroleum soil guidance values a referenced in the August 1992 NYSDEC STARS Memo #1
- 4 If non-petroleum impacted material is proposed for re-use on-site, compare to recommended soil cleanup objectives (RSCOs) and/or background ranges as referenced in the January 24, 1994 NYSDEC TAGM 4046 as amended by the NYSDEC's Table 1 dated 1998
- 5 The most restrictive cleanup objectives (i.e., the lowest) should be applied to provide the highest liability coverage.

APPENDIX A

DATA SUMMARY TABLES – PREVIOUS REPORTS

Tables from May 2007 Phase II ESA Report

Table 1

400 and 420 East Main Street,
100 North Chestnut Street,
Rochester, New York

Summary of Detected Volatile Organic Compounds (VOCs)
in mg/Kg or Parts Per Million (ppm)

Soil and Fill Material Samples

Detected Compound	TAGM 4046 RSCO (1)	Unrestricted SCO (2)	Restricted Residential SCO (3)	3951-01 TB-2 (10.5')	3951-02 TB-3 (16')	3951-03 TB-5 (3.5')	3951-04 TB-14 (4')	3951-06 TB-11 (3')	3951-07 TB-10 (9.7')
Acetone	0.2	0.05	100	0.0552	0.096	0.219	NT	NT	0.0449
TOTAL VOCs	10	NA	NA	0.0552	0.096	0.219	0.0	0.0	0.0449

NA = Not available

U = Not detected at concentration above reported analytical laboratory detection limit

(1) = Recommended soil cleanup objective (RSCO) as referenced in NYSDEC TAGM 4046 dated January 24, 1994.

(2) = Unrestricted soil cleanup objective (SCO) as referenced in 6 NYCRR Part 375 dated December 14, 2006.

(3) = Restricted residential soil cleanup objective (SCO) as referenced in 6 NYCRR Part 375 dated December 14, 2006.

0.0552 = Exceeds one or more regulatory criteria

Table 2

400 and 420 East Main Street,
100 North Chestnut Street,
Rochester, New York

Summary of RCRA Metals
in mg/Kg or Parts Per Million (ppm)

Soil and Fill Material Samples

Detected Analyte	TAGM 4046 RSCO (1)	TAGM 4046 Background Range (2)	Unrestricted SCO (3)	Restricted Residential SCO (4)	3951-03 TB-5 (3.5')	3951-04 TB-14 (4')	3951-05 TB-14 (8-12')	3951-06 TB-11 (3')
Arsenic	7.5 or SB	3-12	13	16	6.24	4.81	5.72	6.16
Barium	300 or SB	15-600	350	400	54.3	101	31	87.9
Cadmium	1 or SB (10)	0.1-1	2.5	4.3	U (<0.591)	U (<0.619)	U (<0.491)	U (<0.544)
Chromium	10 or SB (50)	1.5-40	30	180	10.8	9.84	7.13	9.69
Lead	SB	200-500**	63	400	85.7	241	10.9	176
Mercury	0.1	0.001-0.2	0.18	0.81	0.1204	0.1685	0.0158	1.157
Selenium	2 or SB	0.1-3.9	3.9	180	U (<0.591)	U (<0.619)	U (<0.495)	1.13
Silver	SB	NA	2	180	U (<1.18)	U <1.24)	U (<0.989)	U (<1.09)

(1) = Recommended soil cleanup objective (RSCO) as referenced in NYSDEC TAGM 4046 dated January 24, 1994.

Cadmium results also compared to RSCO of 10 ppm listed in the 1995 "proposed" TAGM 4046.

Chromium results also compared to RSCO of 50 ppm listed in the 1995 "proposed" TAGM 4046.

(2) = Typical background range as referenced in NYSDEC TAGM 4046 dated January 24, 1994.

(3) = Unrestricted soil cleanup objective (SCO) as referenced in 6 NYCRR Part 375 dated December 14, 2006.

(4) = Restricted residential soil cleanup objective (SCO) as referenced in 6 NYCRR Part 375 dated December 14, 2006.

U = Not detected at concentration above reported analytical laboratory detection limit in parentheses

NA = Not available

241 = Exceeds one or more regulatory criteria

Tables from June 2008 Supplemental Phase II ESA Report

Table 2
Summary of RCRA Metals
 in mg/kg or Parts Per Million (ppm)
 Soil and Fill Material Samples
 Block F - 420 E. Main Street
 Rochester, New York

	Unrestricted Use SCO ⁽¹⁾	RSCO ⁽²⁾	Typical Background Levels ⁽³⁾	TPDAY-2 (1.5') (01/18/2008)	TPDAY-3 (1.5') (01/18/2008)	TPDAY-5 (2') (01/18/2008)	TPDAY-9 (2') (01/18/2008)	TPDAY-13 (6') (01/28/2008)	TPDAY-14 (6') (01/28/2008)	TPDAY-18 (1.5') (01/28/2008)	TPDAY-2 (2'-4') (08/11/2008)	TPDAY-1 (4'-8') (08/11/2008)	TPDAY-3 (6'-10') (08/11/2008)	TPDAY-4 (6'-8') (08/11/2008)
Arsenic	13	7.5 or SB	3-12	5.4	8.9	2.5	22.2	3.5	5.8	7.2	10	2.6	ND<2.5	ND<2.2
Barium	350	200 or SB	15-800	71.9	65.4	60.5	629	89.3	59.7	58.9	200	44.7	55.8	59.2
Cadmium	2.5	10 or SB	0.1-1.0	ND<0.24	0.78	0.56	1.9	ND<0.22	ND<0.26	ND<0.29	ND<0.22	ND<0.21	ND<0.26	ND<0.22
Chromium	30	50 or SB	1.5-40	6.7	5.4	4.4	41.5	6.2	9.3	20.2	8.0	7.1	8.2	5.5
Lead	63	SB	200-500 ⁽⁴⁾	86.8	171	49.8	1770	100	8.4	104	171	7.6	81.1	17.9
Mercury	0.18	0.1	0.001-0.2	0.89	0.85	0.040	1.8	0.34	0.082	0.60	0.73	0.082	0.04	0.090
Selenium	3.9	2 or SB	0.1-3.1	ND<4.9	ND<4.5	ND<4.6	ND<8.5	ND<4.5	ND<5.3	ND<4.8	ND<4.5	ND<4.2	ND<4.9	ND<4.5
Silver	2	SB	NA	ND<0.61	ND<0.56	ND<0.66	1.1	ND<0.56	ND<0.66	ND<0.56	ND<0.56	ND<0.55	ND<0.58	ND<0.56

(1) = Unrestricted use soil cleanup objective (SCO) as referenced in 8 NYCRR Part 375-6 Environmental Remediation Programs, dated December 14, 2008.

(2) = Recommended soil cleanup objective (RSCO) as referenced in the NYSDEC TAGM 4046 dated January 24, 1994.

Cadmium results compared to RSCO of 10 ppm listed in the 1995 "proposed" TAGM 4046.

Chromium results compared to RSCO of 50 ppm listed in the 1995 "proposed" TAGM 4046.

(3) = Typical background range as referenced in NYSDEC TAGM 4046 dated January 24, 1994.

(4) = Background range for lead in metropolitan or suburban areas or near highways as referenced in NYSDEC TAGM 4046 dated January 24, 1994.

ND<0.54 = Not detected at concentration above reported analytical laboratory detection limit shown

SB = Site Background

NA = Not Available

0.29 = Exceeds TAGM 4046 RSCOs and Typical Background Levels

85.8 = Exceeds Unrestricted use SCO

Table 3
Summary of Detected Volatile Organic Compounds (VOCs) and Naphthalene
in ug/l or Parts Per Billion (ppb)

Groundwater Samples

Block F - 420 E. Main Street
Rochester, New York

DETECTED VOCS	Groundwater Standard or Guidance Value ¹	MW-1	MW-2	MW-3	MW-4
		3/19/2008	3/19/2008	3/19/2008	3/19/2008
1,2,4-Trichlorobenzene	5	ND<10	1 J	ND<10	1 J
2-Butanone	50	3 J	1 J	1 J	11
4-Methyl-2-pentanone	NA	ND<10	ND<10	ND<10	1 J
Acetone	50	10	14	9 J	48
Benzene	1	ND<10	ND<10	ND<10	2 J
Carbon Disulfide	60	0.3 J	0.2 J	0.2 J	0.6 J
Cyclohexane	NA	ND<10	ND<10	ND<10	0.4 J
Ethylbenzene	5	ND<10	ND<10	ND<10	6 J
Methylcyclohexane	NA	ND<10	ND<10	ND<10	1 J
Toluene	5	ND<10	ND<10	ND<10	10
Total Xylenes	5	ND<10	ND<10	ND<10	34
Total VOCS	NA	13.3 J	16.2 J	10.2 J	115 J
Napthalene	10	2 BJ	2 BJ	ND<10	3 BJ

Notes

1. Groundwater standard or guidance value as referenced in NYSDEC TOGS 1.1.1 dated June 1998 as amended by the NYSDEC's supplemental table dated April 2000

VOC = Volatile Organic Compound

J = Estimated Value

B = Analyte Found in Blank

ND<10 = compound analyzed but not detected above quantitation limit

NA = Not Available

34 = compound exceeds standard or guidance value

Table 4

Groundwater Elevation Data for April 2, 2008

Block F - 420 E. Main Street
Rochester, New York

Well ID	Ground Surface Elevation	Top of PVC Casing Elevation (Ft)	Static Water Level (SWL) Measurement (Ft)*	Groundwater Elevation (Ft)	LNAPL Thickness Detected (Ft)	DNAPL Thickness Detected (Ft)*
MW 1	533.26	532.92	11.26	521.66	ND	ND
MW 2	531.84	531.58	4.57	527.01	ND	ND
MW 3	532.80	532.50	10.68	521.82	ND	ND
MW 4	531.97	531.74	11.34	520.40	ND	ND

ND = Not Detected by Heron Oil/Water Interface probe model H01.L

* Measured from top of PVC casing

Vertical reference datum used is NAVD 1988

**Table 5
Subsurface Conditions
Summary of Depth of Fill
Block F - 420 East Main St.
Rochester, New York**

Boring/Test Pit Label	Depth of Fill (ft)	Company/Date
B-1	14.3	Foundation Design/ 1989
B-2	10.10	Foundation Design/ 1989
B-3	11.70	Foundation Design/ 1989
B-4	12.0	Foundation Design/ 1989
B-5	13.70	Foundation Design/ 1989
B-6	12.70	Foundation Design/ 1989
TP-1	4.90	Foundation Design/ 1990
TP-2	4.08	Foundation Design/ 1990
TP-3	2.83	Foundation Design/ 1990
TP-4	7.50	Foundation Design/ 1990
TP-5	4.00	Foundation Design/ 1990
TP-6	0.50	Foundation Design/ 1990
TP-6A	3.08	Foundation Design/ 1990
TP-8	3.83	Foundation Design/ 1990
TP-9	4.92	Foundation Design/ 1990
TB-1	9.00	Day Environmental/ 2007
TB-2	9.50	Day Environmental/ 2007
TB-3	13.50	Day Environmental/ 2007
TB-4	11.50	Day Environmental/ 2007
TB-8	9.00	Day Environmental/ 2007
TB-9	9.00	Day Environmental/ 2007
TB-10	4.00	Day Environmental/ 2007
TB-11	5.50	Day Environmental/ 2007
TB-12	5.50	Day Environmental/ 2007
TB-13	6.50	Day Environmental/ 2007
TB-14	5.50	Day Environmental/ 2007
TB-15	9.00	Day Environmental/ 2007
TP-DAY-1	1.50	Day Environmental/ 2008
TP-DAY-2	1.50	Day Environmental/ 2008
TP-DAY-3	3.50	Day Environmental/ 2008
TP-DAY-10	3.50	Day Environmental/ 2008
TP-DAY-14	3.50	Day Environmental/ 2008
TP-DAY-16	3.50	Day Environmental/ 2008
TBDAY-1	9.50	Day Environmental/ 2008
TBDAY-2	9.50	Day Environmental/ 2008
TBDAY-3	9.50	Day Environmental/ 2008
TBDAY-4	16.50	Day Environmental/ 2008
Average Depth of Fill		7.29 ft

NOTES

1. The data in this table is limited to information from those test pits/borings that fully penetrated the fill material and extended to natural soils.
2. Thickness of fill material obtained from this Phase II ESA and the following previous reports:
 - A. Foundation Design, P.C., "Chestnut Court, Proposed Five Story Building, East Main Street, Rochester, New York, Soils and Foundation Evaluation" May 1989
 - B. Foundation Design, P.C. "Chestnut Court, Three Story Townhouses, East Main Street Rochester, New York, Soil and Foundation Evaluation" April 1990
 - C. DAY Environmental, Inc. Phase II Environmental Site Assessment, 400 & 420 East Main Street, 100 North Chestnut Street, Rochester, New York" June 19, 2007

Tables from September 2008 Underground Storage Tank (UST) Removal Report

Table 1

Tank Removal Report

400 and 420 East Main Street/100 North Chestnut Street
Rochester, New York

Summary of Detected Semi-Volatile Organic Compounds (SVOCs) in mg/kg or Parts Per Million (ppm)

Subsurface Soil Samples

Detected Compound	Unrestricted SCO ⁽¹⁾	Restricted Residential SCO ⁽²⁾	RSCO ⁽³⁾	TK-1 North/East Wall (6.5-7.5')	TK-2 West Wall/Bottom (7'-7.5')	TK-3 Bottom (8.5')	TK-3 West/East Wall (7.5'-8')	TK-4 South Wall (7')	TK-4 West/Southeast Wall (7'-7.5')
Acenaphthylene	100	100	41	0.44 J	0.043 J	ND<0.96	ND<0.97	0.046 J	0.12 J
Anthracene	100	100	50	0.28 J	0.051 J	ND<0.96	ND<0.97	0.048 J	0.14 J
Benzo(a)anthracene	1	1	0.224	3.0*	0.34* J	0.28* J	0.18 J	0.34* J	0.97* J
Benzo(a)pyrene	1	1	0.061	3.2*	0.33* J	0.29* J	0.16* J	0.30* J	0.90* J
Benzo(b)fluoranthene	1	1	1.1	5.3*	0.43	0.53 J	0.31 J	0.70 J	1.6*
Benzo(g,h)perylene	100	100	50	1.3	0.11 J	0.038 J	0.083 J	0.19 J	0.34 J
Benzo(k)fluoranthene	0.8	1	1.1	ND<0.98	0.15 BJ	ND<0.96	ND<0.97	ND<1.0	ND<0.99
Chrysene	1	3.9	0.4	2.6* B	0.35 BJ	0.38 BJ	0.27 BJ	0.47* BJ	0.99* B
Dibenzo(a,h)anthracene	0.33	0.33	0.014	0.42* J	0.039* J	ND<0.96	ND<0.97	0.043* J	0.1* J
Flouranthene	30	100	50	4.1	0.61	0.48 J	0.30 J	0.78 J	1.8
Flourene	30	100	50	0.042 J	ND<0.40	ND<0.96	ND<0.97	ND<1.0	ND<0.99
Indeno(1,2,3-cd)pyrene	0.5	0.5	3.2	1.4	0.13 J	0.15 J	0.094 J	0.17 J	0.36 J
Naphthalene	12	100	13	0.062 J	ND<0.40	ND<0.96	ND<0.97	1.2	ND<0.99
Phenanthrene	100	100	50	0.30 J	0.13 J	0.16 J	0.10 J	0.24 J	0.42 J
Pyrene	100	100	50.0	3.3	0.42	0.36 J	0.23 J	0.61 J	1.2

(1) = Unrestricted use soil cleanup objective (SCO) as referenced in 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives, dated December 14, 2006.

(2) = Restricted Commercial SCO as referenced in 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives dated December 14, 2006.

(3) = Recommended soil cleanup objective (RSCO) as referenced in the NYSDEC document titled "Division of Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels" (TAGM 4046) dated January 24, 1994, as amended by the NYSDEC's supplemental Tables dated August 22, 2001.

ND<0.323 = Not detected at concentration above the reported analytical laboratory detection limit shown

J = indicates an estimated value

B = Analyte was found in the associated blank, as well as in the sample

* = Exceeds TAGM 4046 RSCO

2.6 Exceeds unrestricted use SCO

3.0 Exceeds both unrestricted SCO and restricted residential SCOs

Table 2
Tank Removal Report

400 and 420 East Main Street/100 North Chestnut Street
Rochester, New York

Summary of Detected Volatile Organic Compounds (VOCs) in mg/kg or Parts Per Million (ppm)
Subsurface Soil Samples

Detected Compound	Unrestricted Use SCO (1)	Restricted Residential SCO (2)	RSCO (3)	TK-1 North/East Wall (6.5'-7.5')	TK-2 West Wall/Bottom (7'-7.5')	TK-3 Bottom (8.5')	TK-3 West/East Wall (8.5'-8')	TK-4 South Wall (7')	TK-4 West/Southeast Wall (7'-7.5')
1,2,4-Trimethylbenzene	3.60	52.00	10.00	ND<0.006	ND<0.006	ND<0.006	ND<0.006	0.170	ND<0.005
1,3,5-Trimethylbenzene	8.40	52.00	3.30	ND<0.006	ND<0.006	0.001 J	ND<0.006	6.000* D	ND<0.005
2-Butanone	n/a	n/a	0.3	ND<0.029	ND<0.028	ND<0.028	ND<0.028	0.012 J	ND<0.027
Acetone	0.05	100.00	0.2	0.010 J	0.011 J	0.006 J	ND<0.006	0.065	ND<0.005
Benzene	0.06	4.80	0.06	ND<0.006	ND<0.006	ND<0.006	ND<0.006	0.009	ND<0.005
Carbon Disulfide	n/a	n/a	2.7	ND<0.006	ND<0.006	ND<0.006	ND<0.006	0.001 J	ND<0.005
Cyclohexane	n/a	n/a	n/a	ND<0.006	ND<0.006	ND<0.006	ND<0.006	0.053	ND<0.005
Ethylbenzene	1.00	41.00	5.50	ND<0.006	ND<0.006	ND<0.006	ND<0.006	0.010	ND<0.005
Isopropylbenzene	n/a	n/a	2.30	ND<0.006	ND<0.006	ND<0.006	ND<0.006	0.003 J	ND<0.005
Methylcyclohexane	n/a	n/a	n/a	ND<0.006	ND<0.006	ND<0.006	ND<0.006	2.800 D	ND<0.005
Methylene chloride	0.05	100.00	0.10	0.012	0.015	0.014	0.010	0.008	0.009
n-Propylbenzene	3.90	100.00	3.70	ND<0.006	ND<0.006	ND<0.006	ND<0.006	0.004 J	ND<0.005
Naphthalene	12.00	100.00	13.00	0.002 BJ	0.002 BJ	0.002 BJ	0.001 BJ	0.220 B	0.002 BJ
p-Cymene	n/a	n/a	n/a	ND<0.006	ND<0.006	ND<0.006	ND<0.006	0.012	ND<0.005
Toluene	0.70	100.00	1.50	ND<0.006	ND<0.006	ND<0.006	ND<0.006	0.005 J	ND<0.005
Total Xylenes	0.26	100.00	1.20	ND<0.017	ND<0.017	ND<0.017	ND<0.017	0.14	ND<0.016

(1) = Unrestricted use soil cleanup objective (SCO) as referenced in 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives, dated December 14, 2006.

(2) = Restricted Residential SCO as referenced in 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives dated December 14, 2006.

(3) = Recommended soil cleanup objective (RSCO) as referenced in the NYSDEC document titled "Division of Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels" (TAGM 4046) dated January 24, 1994, as amended by the NYSDEC's supplemental Tables dated August 22, 2001.

ND<0.006 = Not detected at concentration above the reported analytical laboratory detection limit shown.

n/a - Not Available

J = indicates an estimated value

B = Analyte was found in the associated blank, as well as in the sample

D = concentration of compounds identified in an analysis at the secondary dilution factor

* = Exceeds TAGM 4046 RSCO

0.065 Exceeds unrestricted use SCO

Table 3

Tank Removal Report

400 and 420 East Main Street/100 North Chestnut Street
Rochester, New York

Summary of Detected Semi-Volatile Organic Compounds (SVOCs) in mg/kg or Parts Per Million (ppm)

Fill Material Samples

Detected Compound	Unrestricted SCO ⁽¹⁾	Restricted Residential SCO ⁽²⁾	RSCO ⁽³⁾	TK-4 Fill Material (3')	TP-17A Fill Material (2.5'-3')
Acenaphthylene	100	100	41	0.042 J	ND<1.9
Anthracene	100	100	50	0.095 J	ND<1.9
Benzo(a)anthracene	1	1	0.224	0.49* J	0.56* J
Benzo(a)pyrene	1	1	0.061	0.48* J	0.61* J
Benzo(b)fluoranthene	1	1	1.1	0.93 J	0.94 J
Benzo(ghi)perylene	100	100	50	0.2 J	0.63 J
Benzo(k)fluoranthene	0.8	1	1.1	ND<0.95	0.28 J
Chrysene	1	3.9	0.4	0.6* BJ	0.87* BJ
Dibenzo(a,h)anthracene	0.33	0.33	0.014	0.062* J	ND<1.9
Flouranthene	30	100	50	0.8 J	0.94 J
Indeno(1,2,3-cd)pyrene	0.5	0.5	3.2	0.2 J	0.5 J
Naphthalene	12	100	13	0.038 J	ND<1.9
Phenanthrene	100	100	50	0.37 J	0.21 J
Pyrene	100	100	50.0	0.62 J	0.76 J

(1) = Unrestricted use soil cleanup objective (SCO) as referenced in 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives, dated December 14, 2006.

(2) = Restricted Residential SCO as referenced in 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives dated December 14, 2006.

(3)= Recommended soil cleanup objective (RSCO) as referenced in the NYSDEC document titled "Division of Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels" (TAGM 4046) dated January 24, 1994, as amended by the NYSDEC's supplemental Tables dated August 22, 2001.

ND<0.323 = Not detected at concentration above the reported analytical laboratory detection limit shown

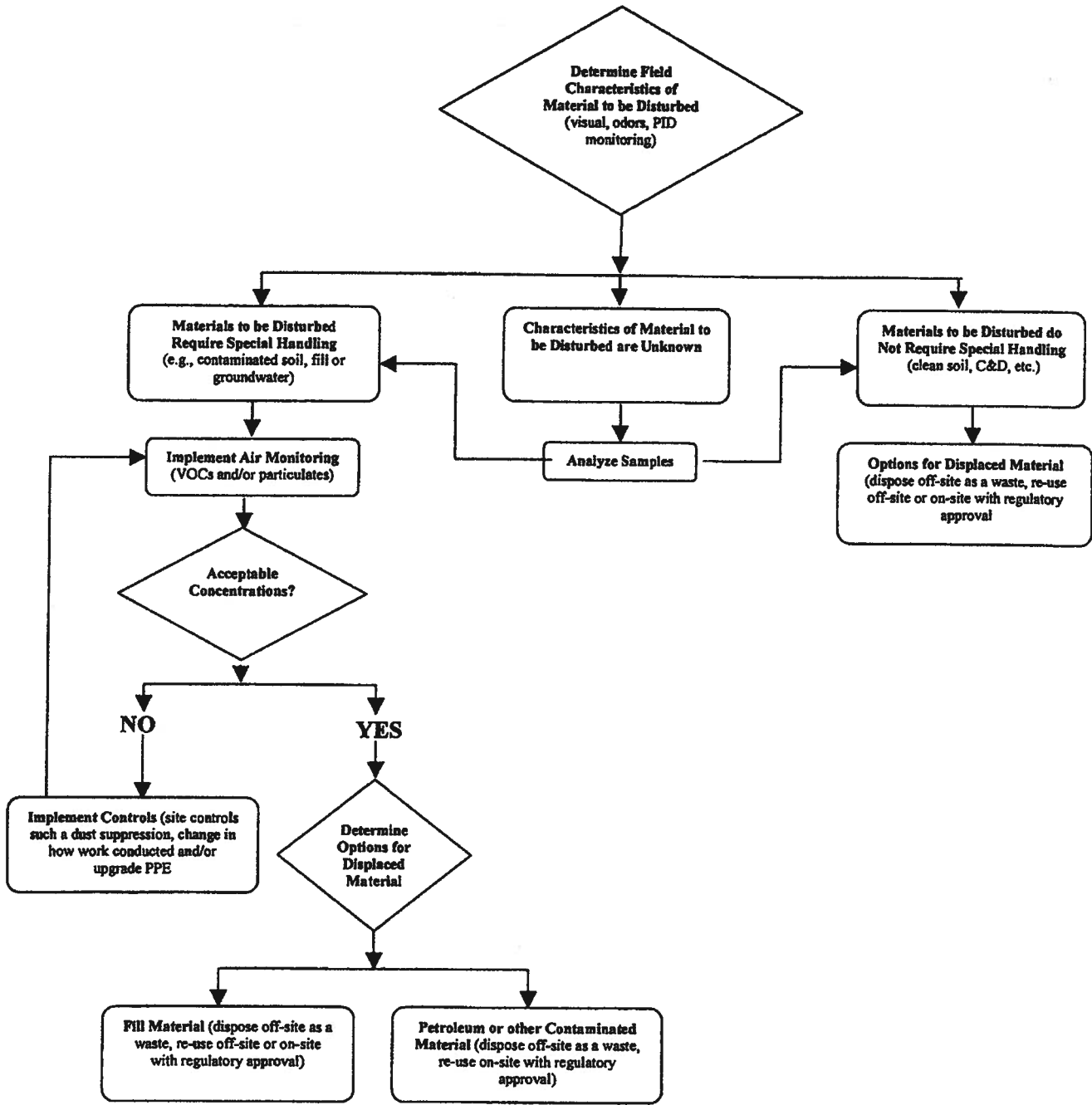
J = indicates a estimated value

B = Analyte was found in the associated blank, as well as in the sample

* = Exceeds TAGM 4046 RSCO

APPENDIX B
SUMMARY FLOW CHART

SUMMARY FLOW CHART
ENVIRONMENTAL MANAGEMENT PLAN
400 & 420 EAST MAIN STREET & 100 NORTH CHESTNUT STREET
ROCHESTER, NEW YORK



APPENDIX C
HEALTH AND SAFETY PLAN

HEALTH AND SAFETY PLAN

**400 & 420 EAST MAIN STREET
& 100 NORTH CHESTNUT STREET
ROCHESTER, NEW YORK**

Prepared for: City of Rochester
Division of Environmental Quality
30 Church Street
Rochester, New York 14614

Prepared by: Day Environmental, Inc
40 Commercial Street
Rochester, New York 14614

Project No.: 4026S-07

Date: October 16, 2009

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Site History/Overview	1
1.2	Planned Activities Covered by HASP	1
2.0	KEY PERSONNEL AND MANAGEMENT.....	2
2.1	Project Manager.....	2
2.2	Environmental Project Monitor.....	2
3.0	SAFETY RESPONSIBILITY	3
4.0	JOB HAZARD ANALYSIS.....	4
4.1	Chemical Hazards.....	4
4.2	Physical Hazards.....	6
4.3	Environmental Hazards	7
	4.3.1 Heat Stress.....	7
	4.3.2 Exposure to Cold.....	7
5.0	SITE CONTROLS.....	8
5.1	Site Zones	8
5.2	General	8
6.0	PROTECTIVE EQUIPMENT.....	9
6.1	Anticipated Protection Levels	9
6.2	Protection Level Descriptions	9
	6.2.1 Level D.....	10
	6.2.2 Modified Level D.....	10
	6.2.3 Level C.....	10
	6.2.4 Level B.....	10
	6.2.5 Level A.....	11
6.3	Respiratory Protection	11
7.0	DECONTAMINATION PROCEDURES.....	12
7.1	Personnel Decontamination.....	12
7.2	Equipment Decontamination	12
7.3	Disposal	12
8.0	AIR MONITORING.....	13
8.1	Particulate Monitoring	13
8.2	Volatile Organic Compound Monitoring	13
8.3	Community Air Monitoring Plan	14
	8.3.1 VOC Monitoring, Response Levels, and Actions	14
	8.3.2 Particulate Monitoring, Response Levels, and Actions.....	15
9.0	EMERGENCY RESPONSE.....	16
9.1	Emergency Telephone Numbers	16
9.2	Evacuation	16
9.3	Medical Emergency.....	17
9.4	Contamination Emergency	17
9.5	Fire Emergency.....	17
9.6	Spill or Air Release.....	18
9.7	Locating Containerized Waste and/or Underground Storage Tanks	18
10.0	ABBREVIATIONS.....	19

ATTACHMENT 1 Figure 1 – Route to Hospital

1.0 INTRODUCTION

This Health and Safety Plan (HASP) outlines the policies and procedures to protect workers and the public from potential environmental hazards posed during Site activities that encounter and/or disturb contaminated soil, fill materials, and groundwater at an approximate 1.48-acre property located at 400 & 420 East Main Street & 100 North Chestnut Street, City of Rochester, County of Monroe, New York (Site). Construction activities that involve the disturbance of subsurface contaminated soil/fill material and groundwater will be conducted in accordance with the Environmental Management Plan (EMP), a separate related document. In addition to the requirements outlined in the EMP and this HASP, activities shall be conducted in a manner to reduce the probability of injury, accident, or incident occurrence.

1.1 Site History/Overview

The Site is currently used as an open asphalt-paved parking lot. A review of historical Sanborn maps and City Directories indicates that the Site previously contained a tire store, a photography studio, a furniture store, a printer, a machine company, an electric company, an auto repair shop, a parking garage, a fixtures manufacturer, a machinery manufacturer, a tin/sheet metal works facility, an oil and gas company, and a gas station.

Previous investigations identified a significant quantity of fill material, including rubble fill, beneath the asphalt parking lot throughout the Site. Glacial till soils underlie the rubble and fill materials. The fill material generally consists of reworked soil intermixed with lesser amounts of brick, cinders, rock, ash, and organics. Rubble, such as wood, concrete, metal pipe, rebar, brick, roofing slate, an air tank, a boiler, etc. was encountered in the subsurface explorations at the Site. The specific source of the subsurface fill material is unknown. However, it is possible that the fill is associated with the demolition and backfilling of former structures at the Site. It is also possible that this fill could have been brought to the Site from one or more off-site source.

The distribution of contaminants in the fill material and groundwater is variable. Refer to DAY's Environmental Management Plan and Section 4.1 of this document for a discussion of contaminants detected in environmental media.

Additionally, four abandoned petroleum underground storage tanks (USTs) associated with a former gas station on the Site were identified and removed in 2008. Residual petroleum contamination in soil remains in the southern end of the tank excavation in the vicinity of removed Tank #4.

1.2 Planned Activities Covered by HASP

This HASP is to be implemented when contaminated soil, fill material, and groundwater at the Site will be disturbed. This HASP is not intended to cover general health and safety regulations that are associated with normal construction activities. The owner of the property, its contractors, and other site workers will be responsible for the development and/or implementation of health and safety provisions associated with normal construction activities or site activities.

2.0 KEY PERSONNEL AND MANAGEMENT

The Project Manager and Environmental Project Monitor are responsible for preparing and enforcing environmental health and safety requirements that are associated with contaminated soil, fill material, and groundwater. The aforementioned responsibilities of the project manager and environmental project monitor can be performed by the same individual.

2.1 Project Manager

The project manager is responsible for coordinating with the environmental project monitor and ensuring the goals of this project are attained in a manner consistent with the HASP requirements outlined herein.

2.2 Environmental Project Monitor

The environmental project monitor is responsible for implementing and administering the HASP relative to Site activities, and will be in the field while site activities associated with the disturbance of contaminated soil, fill material, and groundwater are in progress. The environmental project monitor's operational responsibilities will be monitoring, including personal and environmental monitoring, personal protective equipment (PPE) maintenance, establishing and ensuring compliance with Site control areas and procedures, and identification of protection levels. The air monitoring data obtained by the environmental project monitor must be available for review by the Owner, regulatory agencies, the City, and other on-site personnel.

3.0 SAFETY RESPONSIBILITY

Contractors, consultants, subcontractors, State or local agencies, other parties, their employees, and on-site personnel involved with construction activities or other activities that disturb contaminated soil, fill material and groundwater will be responsible for their own safety while on-site. These entities and their employees will be required to understand the information contained in this HASP, and must follow the recommendations that are made in this document. As an alternative, contractors, consultants, state or local agencies, other parties, and their employees involved with this project can utilize their own health and safety plan for intrusive activities at this Site as long as it is found acceptable to appropriate regulatory agencies (e.g., NYSDOH, MCDPH, NYSDEC) and the City of Rochester.

4.0 JOB HAZARD ANALYSIS

This HASP discusses some of the anticipated environmental hazards for this Site that are specifically associated with the management of contaminated soil, fill material, and groundwater during future redevelopment and construction-related activities.

4.1 Chemical Hazards

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

Some samples of fill material collected and analyzed as part of the previous studies were found to contain volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and the metals arsenic, barium, lead, chromium and/or mercury at concentrations that exceeded one or more of the available Technical and Administrative Guidance Memorandum (TAGM) 4046 recommended soil cleanup objectives (RSCOs), TAGM 4046 typical background ranges (metals only) and Part 375 soil cleanup objectives (SCOs) for unrestricted use and restricted residential use. Additionally, VOCs were detected in four groundwater samples collected at the Site. The VOCs detected in one of these four groundwater samples exceeded groundwater standards or guidance values.

A list of select analytes that have been detected in groundwater and/or fill/soil at the Site during the previous studies completed by DAY is presented in the following table. Complete lists of detected constituents are included in Appendix A of the EMP. Based on the extensive presence of fill material at the Site, and the variety of historic uses/occupants over time, it is possible that significant variation in contaminant presence and concentration may exist. Therefore, the list of VOCs and SVOCs includes compounds detected, even if the compound did not exceed one or more SCO in the samples that were analyzed. Additionally, the list of metals includes those detected above the typical soil background ranges, even if the concentration did not exceed one of more SCO. This list also presents the available OSHA permissible exposure limits (PELs), the available levels that are considered immediately dangerous to life and health (IDLH), as well as NIOSH recommended exposure limits (RELs).

CONSTITUENT	OSHA PEL	IDLH	NIOSH REL
1,2,4-Trichlorobenzene	NA	NA	C 5 ppm
1,2,4-Trimethylbenzene	NA	NA	25 ppm
1,3,5-Trimethylbenzene	NA	NA	25 ppm
2-Butanone	200 ppm	3000 ppm	200 ppm
4-Methyl.-2-pentanone	100 ppm	500 ppm	50 ppm
Acetone*	1000 ppm	2500 ppm	250 ppm
Benzene	1 ppm	500 ppm	0.1 ppm

CONSTITUENT	OSHA PEL	IDLH	NIOSH REL
Carbon Disulfide	20 ppm	500 ppm	1 ppm
Cyclohexane	300 ppm	1300 ppm	300 ppm
Ethylbenzene	100 ppm	800 ppm	100 ppm
Isopropylbenzene	50 ppm	900 ppm	50 ppm
Methylcyclohexane	500 ppm	1200 ppm	400 ppm
Methylene chloride*	25 ppm	2300 ppm	NA
Tetrachloroethene	100 ppm	150 ppm	NA
Toluene	200 ppm	500 ppm	100 ppm
Xylenes	100 ppm	900 ppm	100 ppm
SEMI-VOLATILE ORGANIC COMPOUNDS			
Anthracene	0.2 mg/m ³	80 mg/m ³	0.1 mg/m ³
Benzo(a)pyrene	0.2 mg/m ³	80 mg/m ³	0.1 mg/m ³
Chrysene*	0.2 mg/m ³	80 mg/m ³	NA0.1 mg/m ³
Naphthalene	10 ppm	250 ppm	10 ppm
Phenanthrene	0.2 mg/m ³	80 mg/m ³	0.1 mg/m ³
Pyrene	0.2 mg/m ³	80 mg/m ³	0.1 mg/m ³
METALS			
Arsenic	0.01 mg/m ³	5 mg/m ³	0.002 mg/m ³
Barium	0.5 mg/m ³	50 mg/m ³	0.5 mg/m ³
Lead	0.05 mg/m ³	100 mg/m ³	0.05 mg/m ³
Chromium	1 mg/m ³	250 mg/m ³	0.5 mg/m ³
Mercury	0.01 mg/m ³	2 mg/m ³	0.01 mg/m ³

Notes: PEL = OSHA Permissible Exposure Limits [time-weighted average (TWA) for 8-hour day]
IDLH = Immediately Dangerous To Life Or Health
REL = NIOSH Recommended Exposure Limits [time-weighted average (TWA) for up to a 10-hour work day]
C = A ceiling REL is designated by "C" preceding the value; unless noted otherwise, the ceiling value should not be exceeded.
NA = Not Available

* Detection of this compound in one or more samples may have been attributable to laboratory, sampling, or delivery artifacts.

The potential routes of exposure for these contaminants include inhalation, ingestion, absorption and skin/eye contact. The potential for exposure through any one of these routes will depend on the activity conducted. It is anticipated that inhalation absorption and skin contact would be the most likely routes of exposure if groundwater is encountered and/or during disturbance of soil or fill material at the Site.

During project activities that encounter contaminated groundwater and/or involve the removal and/or disturbance of contaminated soil or fill material, the worker's breathing zone shall be monitored by the environmental project monitor. Monitoring will be for dusts and particulates using a real-time aerosol monitor (RTAM) and for VOCs using a photoionization detector (PID) or Flame Ionization Detector (FID). These RTAM field instrument readings can be used to determine the level of PPE required (refer to Section 8.0).

4.2 Physical Hazards

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

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

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

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

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

4.3 Environmental Hazards

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

4.3.1 Heat Stress

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

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

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

4.3.2 Exposure to Cold

With outdoor work in the winter months, the potential exists for hypothermia and frostbite.

Protective clothing greatly reduces the possibility of hypothermia in workers. However, personnel will be instructed to wear warm clothing and to stop work to obtain more clothing if they become too cold. Site Workers will be encouraged to change into dry clothes if their clothing becomes wet from perspiration or from exposure to precipitation.

5.0 SITE CONTROLS

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

5.1 Site Zones

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

5.2 General

The following items will be requirements to protect the health and safety of workers during implementation of project activities that disturb contaminated soil, fill material, and groundwater.

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

6.0 PROTECTIVE EQUIPMENT

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

6.1 Anticipated Protection Levels

The following table summarizes the protection levels (refer to Section 6.2) anticipated for various tasks to be implemented during redevelopment and construction related activities that involve disturbing contaminated soil, fill material, or groundwater.

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

During disturbance of contaminated soil, fill material, and groundwater, air in the worker's breathing zone and on the Site (upwind, downwind, etc.) shall be monitored for:

- Dusts, aerosols, particulates, etc. using a RTAM, and
- VOCs using a PID

The air monitoring program will be used to assist in determining the level of PPE required (see Section 8.0).

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

6.2 Protection Level Descriptions

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

6.2.1 Level D

Level D consists of the following:

- Safety glasses with side shields
- Hard hat
- Hard-toed work boots
- Work gloves
- Work clothing as prescribed by weather

6.2.2 Modified Level D

Modified Level D consists of the following:

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

6.2.3 Level C

Level C consists of the following:

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

6.2.4 Level B

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

6.2.5 Level A

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

6.3 Respiratory Protection

Any respirator used will meet the requirements of OSHA 29 CFR 1910.134. Both the respirator and cartridges specified shall be fit-tested prior to use in accordance with OSHA regulations (29 CFR 1910). Air purifying respirators shall not be worn if contaminant levels exceed designated use concentrations. The workers will wear respirators with approval for: organic vapors <1,000 parts per million (ppm); and dusts, fumes and mists with a TWA <0.05 mg/m³.

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

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

7.0 DECONTAMINATION PROCEDURES

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

7.1 Personnel Decontamination

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

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

7.2 Equipment Decontamination

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

7.3 Disposal

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

8.0 AIR MONITORING

During activities that disturb contaminated soil, fill material, or groundwater, air monitoring will be conducted in order to determine airborne particulate and potential contamination levels. This ensures that respiratory protection is adequate to protect personnel against the contaminants, and that contaminants are not migrating off-site. Additional air monitoring may be conducted at the discretion of the environmental project monitor.

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

Monitoring Device	Action level	Action/Level of PPE
RTAM Particulate Meter	< 150 ug/m ³ over an integrated period not to exceed 15 minutes.	Continue working
	> 150 ug/m ³ over an integrated period not to exceed 15 minutes.	Cease work, implement dust suppression, change in way work performed, etc. If levels can not be brought below 150 ug/m ³ , then upgrade PPE to <u>Level C</u> .
PID Volatile Organic Compound Meter	< 1 ppm in breathing zone, sustained 5 minutes	<u>Level D</u>
	1-25 ppm in breathing zone, sustained 5 minutes	<u>Level C</u> , monitor air for VOCs using chemical-specific drager tubes.
	26-250 ppm in breathing zone, sustained 5 minutes	<u>Level B</u> , Stop work, evaluate the use of engineering controls
	>250 ppm in breathing zone	<u>Level A</u>

8.1 Particulate Monitoring

During activities that disturb contaminated soil, fill material or groundwater, air monitoring will include RTAM monitoring for particulates using a RTAM particulate meter at the perimeter of the work zone in accordance with the 1989 NYSDEC TAGM 4031, titled "*Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites*". The TAGM uses an action level of 150 ug/m³ over an integrated period not to exceed 15 minutes. If the action level is exceeded, or if visible dust is encountered, then work shall be discontinued until corrective actions are implemented. Corrective actions may include dust suppression, change in the way work is performed, upgrade of PPE, etc. Readings will be recorded and be available for review.

8.2 Volatile Organic Compound Monitoring

During activities that disturb contaminated soil, fill material, or groundwater, a PID will be used to monitor total volatile organic content of the ambient air. The PID will prove useful as a direct

reading instrument to aid in determining if current respiratory protection is adequate or needs to be upgraded. The environmental project monitor will take measurements before operations begin in an area to determine the amount of VOCs naturally occurring in the air. This is referred to as a background level. Levels of VOCs will periodically be measured in the air at active work sites, and at the transition zone when levels are detected above background in the work zone. If VOC concentrations are detected, appropriate response actions should be taken and appropriate protective gear utilized as specified in the preceding table in Section 8.0.

8.3 Community Air Monitoring Plan

During activities that disturb contaminated soil, fill material or groundwater, a Community Air Monitoring Plan (CAMP) will be implemented. The CAMP includes RTAM monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when activities with the potential to release VOCs or dust are in progress at the Site. This CAMP is based on the New York State Department of Health (NYSDOH) Generic CAMP included as Appendix 1A of the NYSDEC document titled “*Draft DER-10, Technical Guidance for Site Investigation and Remediation*” dated December 2002. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of project work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shut down. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air. Reliance on the CAMP should not preclude simple, common sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Continuous monitoring will be conducted during ground intrusive activities involving contaminated soil, fill material or groundwater. Ground intrusive activities include, but are not limited to, excavation, grading, handling, etc.

Periodic monitoring for VOCs will be conducted during non-intrusive activities involving contaminated soil, fill material or groundwater when deemed appropriate (e.g., during collection of background data, during worker breaks, etc.).

8.3.1 VOC Monitoring, Response Levels, and Actions

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

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 ppm above background for the 15-minute average,

work activities must be temporarily halted and monitoring must be continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

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

The 15-minute readings must be recorded and made available for review. Instantaneous readings, if any, used for decision purposes should also be recorded.

8.3.2 Particulate Monitoring, Response Levels, and Actions

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

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

Particulate readings must be recorded and made available for review.

9.0 EMERGENCY RESPONSE

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

- First-aid kit;
- Portable emergency eye wash; and
- Supply of clean water.

9.1 Emergency Telephone Numbers

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

Fire/Police Department:	911
Poison Control Center:	(800) 222-1222
NYSDEC Spills	(585) 226-5436
NYSDEC Spills Hotline	(800) 457-7362
<u>City of Rochester</u>	
Dennis Peck	(585) 428-6884
Mark Gregor	(585) 428-5978
Nearest Hospital	Highland Hospital 1000 South Avenue, Rochester, NY 14620 (585) 473-2200

Directions to the Hospital (refer to Figure 1):

- From site turn right (heading west) onto East Main Street
- Proceed approximately 0.4 miles on East Main Street and turn left (heading south) onto South Avenue
- Proceed approximately 1.5 miles then turn left into Highland Hospital (1000 South Avenue) and follow signs to emergency medical services.

9.2 Evacuation

During activities involving disturbance of contaminated soil, fill material or groundwater, a log of each individual entering and leaving the Site will be kept for emergency accounting practices. Although unlikely, it is possible that a site emergency could require evacuating all personnel from the site. If required, the environmental project monitor will give the appropriate signal for site evacuation (i.e., hand signals, alarms, etc.).

All personnel shall exit the site and shall congregate in an area designated by the environmental project monitor. The environmental project monitor shall ensure that all personnel are accounted for. If someone is missing, the environmental project monitor will alert emergency personnel. The appropriate government agencies will be notified as soon as possible regarding the evacuation, and any necessary measures that may be required to mitigate the reason for the evacuation.

9.3 Medical Emergency

In the event of a medical emergency involving illness or injury to one of the on-site personnel, Emergency Medical Service (EMS) and the appropriate government agencies should be notified immediately. The area in which the injury or illness occurred shall not be entered until the cause of the illness or injury is known. The nature of injury or illness shall be assessed. If the victim appears to be critically injured, administer first aid and/or cardio-pulmonary resuscitation (CPR) as needed. If appropriate, real time air monitoring shall be done in accordance with air monitoring outlined in Section 8.0 of this HASP.

9.4 Contamination Emergency

It is unlikely that a contamination emergency will occur; however, if such an emergency does occur, the specific work area shall be shut down and immediately secured. If an emergency rescue is needed, notify Police, Fire Department and EMS units immediately. Advise them of the situation and request an expedient response. The appropriate government agencies shall be notified immediately. The area in which the contamination occurred shall not be entered until the arrival of trained personnel who are properly equipped with the appropriate PPE and monitoring instrumentation as outlined in Section 8.0 of this HASP.

9.5 Fire Emergency

In the event of a fire on-site, all non-essential site personnel shall be evacuated to a safe, secure area. The Fire Department will be notified immediately, and advised of the situation and the identification of any hazardous materials involved. The appropriate government agencies shall be notified as soon as possible.

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

- Class A: Wood, cloth, paper, rubber, many plastics, and ordinary combustible materials.
- Class B: Flammable liquids, gases and greases.
- Class C: Energized electrical equipment.
- Class D: Combustible metals such as magnesium, titanium, sodium, and potassium.

Small fires on-site may be actively extinguished; however, extreme care shall be taken while in this operation. All approaches to the fire shall be done from the upwind side if possible. Distance from on-site personnel to the fire shall be close enough to ensure proper application of the extinguishing material, but far enough away to ensure that the personnel are safe. The proper extinguisher shall be utilized for the Class(s) of fire present on the site. If possible, the fuel source shall be cut off or separated from the fire. Care must be taken when performing operations involving the shut-off of valves and manifolds, if present.

Examples of proper extinguishing agent as follows:

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

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

9.6 Spill or Air Release

In the event of spills or air releases of hazardous materials on-site, the specific area of the spill or release shall be shut down and immediately secured. The area in which the spills or releases occurred shall not be entered until the cause can be determined and site safety can be evaluated. All non-essential site personnel shall be evacuated to a safe and secure area. The appropriate government agencies shall be notified as soon as possible. The spilled or released materials shall be immediately identified and appropriate containment measures shall be implemented, if possible. Real time air monitoring shall be implemented as outlined in Section 8.0 of this HASP. If the materials are unknown, Level B protection is mandatory. Samples of the materials shall be acquired to facilitate identification.

9.7 Locating Containerized Waste and/or Underground Storage Tanks

In the event that unanticipated containerized waste (e.g., drums) and/or underground storage tanks are located during the project, the work will be stopped in the specific area until site safety can be evaluated and addressed. All non-essential Site personnel shall not work in the immediate area until conditions, including possible exposure hazards, are addressed. The appropriate government agencies shall be notified as soon as possible. The environmental project monitor shall monitor the area as outlined in Section 8.0 of this HASP.

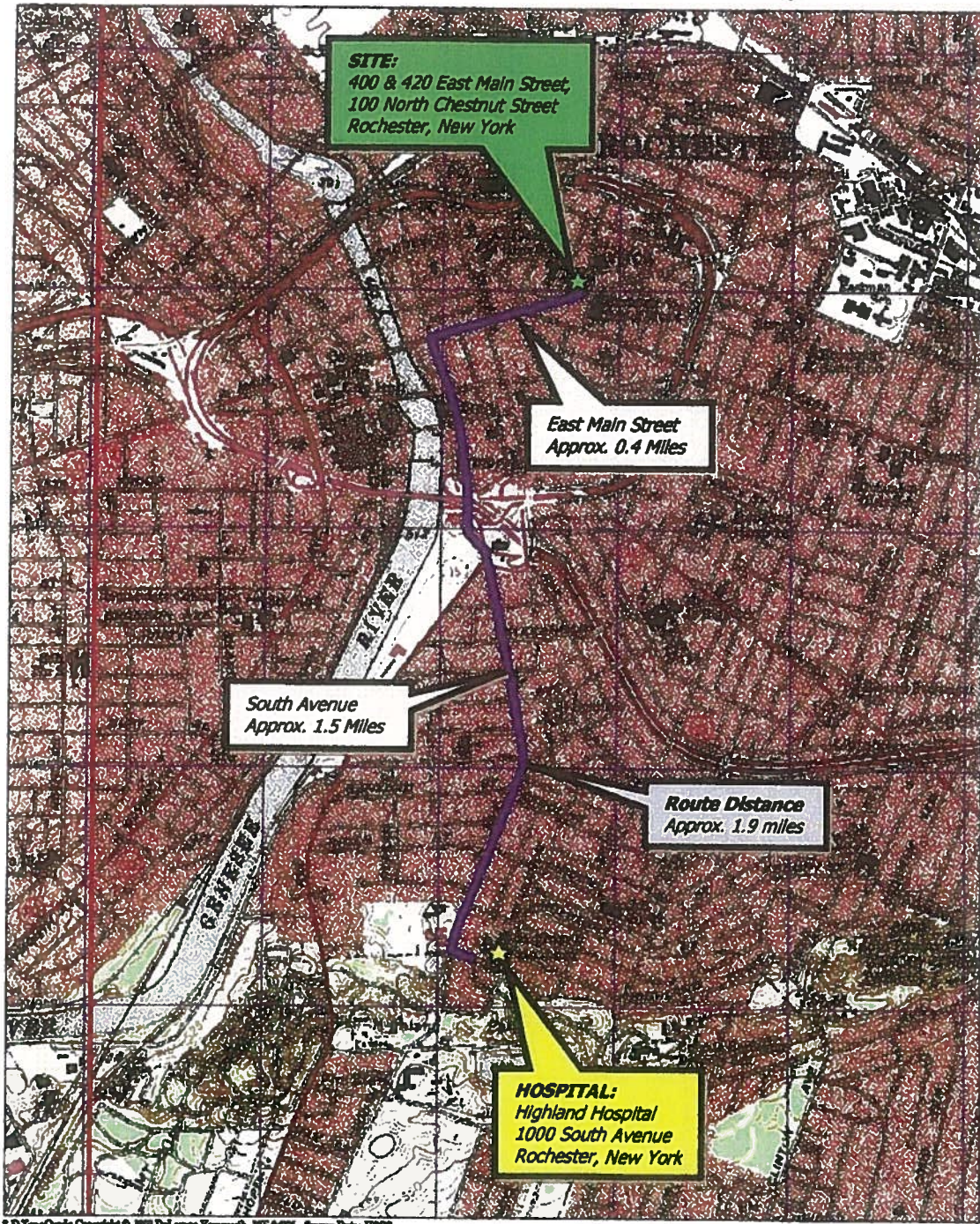
Prior to any handling, unanticipated containers will be visually assessed by the environmental project monitor to gain as much information as possible about their contents. As a precautionary measure, personnel shall assume that unlabelled containers and/or tanks contain hazardous materials until their contents are characterized. To the extent possible based upon the nature of the containers encountered, actions may be taken to stabilize the area and prevent migration (e.g., placement of berms, etc.). Subsequent to initial visual assessment and any required stabilization, properly trained personnel will sample, test, remove, and dispose of any containers and/or tanks, and their contents. After visual assessment and air monitoring, if the material remains unknown, Level B protection is mandatory.

10.0 ABBREVIATIONS

CAMP	Community Air Monitoring Program
CAP	Corrective Action Plan
CPR	Cardio-Pulmonary Resuscitation
DAY	Day Environmental, Inc.
d(B)A	Decibels on the A-Weighted Scale
EMS	Emergency Medical Service
FID	Flame Ionization Detector
HASP	Health and Safety Plan
IDLH	Immediately Dangerous to Life or Health
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PEL	Permissible Exposure Limit
PID	Photoionization Detector
PM-10	Particulate Matter less than 10 micrometers in diameter
PPE	Personal Protective Equipment
ppm	Parts Per Million
PVC	Polyvinyl Chloride
REC	Recognized Environmental Condition
RSCO	Recommended Soil Cleanup Objective
RTAM	Real-Time Aerosol Monitor
SVOC	Semi-Volatile Organic Compound
TAGM	Technical and Administrative Guidance Memorandum
TWA	Time-Weighted Average
ug/m ³	Micrograms Per Meter Cubed
VOC	Volatile Organic Compound

ATTACHMENT 1

Map to Hospital



Drawing Produced From: 3-D TopoQuads, DeLorme Map Co., referencing USGS quad maps Rochester East (NY) 1995 and Rochester West (NY) 1995.

<p>DATE 07-29-2009</p>	<p>day DAY ENVIRONMENTAL, INC. ENVIRONMENTAL CONSULTANTS ROCHESTER, NEW YORK 14614-1008</p>	<p>PROJECT TITLE 400 & 420 EAST MAIN STREET 100 NORTH CHESTNUT STREET ROCHESTER, NEW YORK</p> <p>HEALTH AND SAFETY PLAN</p>	<p>PROJECT NO. 4026S-07</p> <p>FIGURE 1</p>
<p>DRAWN BY RJM</p> <p>SCALE 1" = 2000'</p>		<p>DRAWING TITLE ROUTE FOR EMERGENCY SERVICES</p>	

APPENDIX D

LIST OF REGULATORY GUIDANCE DOCUMENTS

LIST OF GUIDANCE DOCUMENTS

NYSDEC 6 NYCRR Subpart 375-Environmental Remediation Programs, December 2006

NYSDEC 6 NYCRR Subpart 371-Identification and Listing of Hazardous Waste, September 2006

NYSDEC TAGM 4046-Determination of Soil Cleanup Objectives and Cleanup Levels, January 1994, amended August 2001

NYSDEC TOGS 1.1.1-Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, October 1992, amended June 1998

NYSDEC STARS Memo #1-Petroleum-Contamination Soil Guidance Policy, last revised August 1992

NYSDOH Guidance for Evaluating Soil Vapor Intrusion in New York State, October 2006

Monroe County Pure Waters-Rules and Regulations and Sewer Use Law

NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, December 2002