

ENVIRONMENTAL MANAGEMENT PLAN

**Former Caribbean Service Center
935 West Broad St. and 399 Saxton St.
Rochester, New York
NYSDEC Spill # 0270244**

Prepared By:
City of Rochester Department of Environmental Services
Division of Environmental Quality

July, 2012

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1.0 INTRODUCTION

This site-specific Environmental Management Plan (EMP) was developed for the property located at 935 West Broad Street and 399 Saxton Street, Rochester New York (Site). This site is owned by the City of Rochester and its location is depicted on the project locus map included as Figure 1.

Previous investigations identified and documented the existence of soil and groundwater contamination (mostly gasoline related constituents) due to historical operations at the Site (i.e., fueling operations, vehicle maintenance/repair, etc.).

Extensive contaminated soil removal, and groundwater treatment remedial actions completed in 2012, have successfully addressed most of the petroleum related volatile organic compounds (VOCs) at the Site, however some residual contamination still exists. This EMP should be implemented when work performed at the Site has the potential to disturb soil/fill and/or groundwater impacted with residual petroleum VOCs on the Site.

The purpose of this EMP is to:

1. Manage soil/fill impacted with elevated concentrations of 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;
4. Implement engineering controls to reduce potential environmental impacts, if warranted, depending upon the redevelopment plans; and
5. Satisfy the NYSDEC requirements for closure of Spill File #0270244.

2.0 SITE DESCRIPTION AND PREVIOUS ENVIRONMENTAL INVESTIGATION/REMEDICATION

The Site consists of a two parcels of land (935 West Broad Street and 399 Saxton St) totaling approximately 1.26-acres. The Site's current use code is 438 (commercial parking lot) and is used as a parking lot for the nearby Sahlen's soccer Stadium. There are currently no structures on the Site. The long-term reuse of the Site has not been determined.

2.1 Site History

The Site was used as residential property until it was developed as a gasoline station in about 1929. The Site was occupied by the HH Morse Oil, Inc. and the Morse Tank car station from approximately 1929 until 1974. The Site was later occupied by the Caribbean Service Station and Auto Body Shop from approximately 1979 until at least 1994. Former structures previously located on the Site are depicted on Figure 4. Site history, supported by the Remedial Investigation (RI), indicates that releases of petroleum products have occurred at the Site.

2.2 Previous Environmental Studies/Remedial Actions

Previous environmental investigations and remedial measures conducted at the Site include the following:

- Petroleum storage tank removal, May 2004
- Phase I ESA , 2005
- Remedial Investigation, 2005
- Corrective Action, Implemented in January 2007

These previous environmental investigations/remedial actions are described in more detail below.

2.2.1 Tank Removal:

Three 10,000 gallon gasoline and one 1,000-gallon waste oil underground storage tanks (USTs) were excavated and removed from the Site in May 2004 by the City. Residual product was pumped from the USTs prior to excavation, and properly disposed of off-site. Samples from the sidewalls and bottom of the tank excavations indicated that surrounding soils were impacted with petroleum compounds. Impacted soils were left in place during tank removal. The USTs were cleaned and transported off-site to be recycled.

2.2.2 Phase I ESA (2005):

A Phase I Environmental Site Assessment (ESA) was performed in 2005 by LaBella Associates, P.C. (LaBella) on behalf of the City and identified the following seven (7) areas of concern (AOC):

- Former above ground storage tank area
- Former underground storage tank area
- Former pump house
- Former “Oil & Grease” building
- Former gasoline station building
- Two pump island areas
- General site conditions

2.2.3 Remedial Investigation (2005)

A Remedial Investigation (RI) was performed in 2005 by LaBella on behalf of the City to evaluate the AOCs identified in the Phase I ESA above. The RI included the following work:

- Conducting a geophysical electromagnetic survey program at the Site to evaluate for potential orphaned USTs, piping, or other structures at the site;
- Excavating seven test pits to evaluate electromagnetic anomalies identified as part of the geophysical survey;
- Advancing fifty-two (52) soil test borings to evaluate for and delineate the extent of contamination in soil and groundwater;²
- Installing six groundwater monitoring wells to evaluate groundwater conditions and flow direction at the Site; and,
- Collecting/ analyzing soil and groundwater samples for determining the extent of soil and groundwater remediation required at the Site.

Figures 2 and 3 illustrate the RI Soil and Groundwater Sample Locations and Analytical results. The results of the Remedial Investigation confirmed subsurface soil and groundwater impacted with petroleum, and resulted in the development of a Corrective Action Plan (CAP) that was implemented in January 2007. The CAP was reviewed and approved by the NYSDEC.

2.2.4 Corrective Action- Soil:

Remedial Investigations performed at the Site identified four areas of subsurface impact (refer to Figure 4) that required remedial excavation. The Corrective Action entailed the removal and off-site disposal of a total of approximately 3,162 tons of petroleum contaminated soil. A total of twenty-two excavation confirmatory soil samples were collected from the bottom and sidewalls of the completed excavation and analyzed. Confirmatory soil sample locations are illustrated in Figure 4, and analytical laboratory data for these samples is summarized in Table 1. Of the twenty-two samples collected, five contained residual petroleum compounds above NYSDEC soil cleanup objectives (SCO), three of which were excavation bottom samples from the saturated soil at the interface with the water table. The remaining two samples exceeding SCOs were from the sidewalls in which further removal was not permitted due to the West Broad Street right-of-way. Excavation closure sampling has confirmed that the vast majority of contaminated source area soils have effectively been removed, and meet NYSDEC TAGM 4046 SCOs; however, residual petroleum contamination may exist.

2.2.5 Corrective Action- Groundwater:

A Post-Source Removal Groundwater Evaluation was completed in April 2007 to evaluate groundwater conditions associated with the petroleum plume after completion of the large source removal. A total of sixteen monitoring wells were installed on-site and bordering the Site to the east. Monitoring Well locations are illustrated on Figure 5. The results indicated that the areal extent and magnitude of the overburden groundwater plume decreased as a direct result of the source removal program; however, the concentration of petroleum VOCs in the center portion of the plume required active groundwater treatment. Groundwater treatment consisted of the installation and operation of a thirty-two (32) point oxygen injection system (OIS) to facilitate the in-situ biodegradation of petroleum hydrocarbons. The layout of the OIS system, as well as the location of the sixteen monitoring wells, is illustrated in Figure 6. The OIS was operated from September, 2007 through February 2012. Periodic groundwater sampling and analysis was performed during that time to evaluate the effectiveness of the OIS in remediating the groundwater at the site. Historical analytical laboratory data for groundwater collected from the monitoring wells is provided in Table 2.

An electronic copy of the Corrective Action Report dated September 2008 prepared by LaBella Associates, P. C. is included on CD and attached to this EMP.

2.3 Geology and Hydrogeology

The depth of overburden soils at the site ranges from approximately 7.0 to 10.0 feet below ground surface (bgs). The overburden consists of varying thicknesses of fill material underlain by sand and gravel, that in turn is underlain by glacial till. Bedrock at the site is a dolomitic limestone (Lockport Dolomite).

Groundwater is generally encountered at depths ranging from four to seven bgs. The groundwater flow direction for the Site is east/northeast, towards West Broad Street.

3.0 ENVIRONMENTAL MANAGEMENT PLAN

This EMP provides procedures to mitigate exposure to petroleum, chlorinated solvent, and fill impacted media that could be encountered should the Site be disturbed. In addition, this EMP provides

information on how to identify impacted material, and also provides options for the management, disposal and/or re-use of impacted subsurface material. The procedures presented herein are intended to reduce potential exposure to construction workers and building occupants during future operation of the Site should impacted material be encountered that requires management.

During construction activities that have the potential to disturb impacted subsurface materials, a qualified environmental professional must monitor and document the work completed for compliance with the requirements of this EMP. It is recommended that the New York State Department of Environmental Conservation (NYSDEC) Spills Unit be notified two business days before intrusive site work is initiated. Additionally, the NYSDEC must be notified within two hours if residual impacted media is encountered. The owner of the Site is responsible for impacted media unless a different entity acceptable to the NYSDEC is identified as the responsible party.

3.1 Identification of 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.

Identification of potentially impacted media will be part of the construction process, so that appropriate actions can be taken. A qualified environmental professional must be present during any future intrusive work at the Site to monitor for evidence of impacted media via visual and olfactory observations and screening for VOCs using a photoionization detector (PID). The owner of the Site will be responsible for the proper handling and disposal of impacted media if it is encountered at this site in the future. The following sub-sections provide guidance for this identification process:

3.1.1 Petroleum Impacted Soil:

Soils may be impacted with petroleum contamination along the West Broad Street right-of-way where it was not possible to excavate during cleanup. In addition, some residual petroleum contamination may be present in the footprint of the former gasoline station near the center of the Site. Additional areas of petroleum impacted soil or other environmental concerns may exist. If petroleum impacts are present, the soil or fill will likely appear stained black, gray etc. and emit petroleum like odors. In addition, screening of the ambient air surrounding the material may result in positive PID responses. For the purpose of this EMP, soil/ fill exhibiting the properties described above should be considered to be petroleum impacted, and should be handled as such unless further testing is done to quantify the constituents of the material.

3.1.2 Groundwater:

The depth to groundwater was previously measured to be approximately 4 to 7 feet below the ground surface at the Site. Previous testing shows groundwater on some portions of the Site contained petroleum-related VOCs. Petroleum impacted groundwater may be identified by the presence of petroleum/chemical odors or sheen on the water. Additionally, screening the ambient air above samples of groundwater from these areas may result in positive PID responses.

3.1.3 Heterogeneous fill:

Heterogeneous fill material may be located across the Site extending to variable depths. If present, this fill material may contain elevated concentrations of VOCs, SVOCs, and metals,

and may not emit a discerning odor. Screening of the ambient air surrounding the material may not result in positive PID responses.

3.2 Handling and Disposal

Impacted soil/fill that is excavated or disturbed should be removed, segregated from non-impacted media, and placed on, and covered with, plastic sheeting. Alternatively, the impacted material can be placed in 55-gallon drums or a roll-off disposal container (depending on the quantity of material generated), or the material may be directly loaded onto trucks for off-site disposal if pre-approved by the disposal facility. 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.

Representative samples of the stockpiled media will be collected and analyzed by a New York State Department of Health (NYSDOH) approved laboratory. Laboratory testing of petroleum/chemical impacted soils will typically include VOCs, as well as additional waste characterization parameters as required by the disposal facility. Following the receipt of the laboratory results, approval from a permitted disposal facility will be obtained and the soil will be properly transported to by a licensed waste hauler and disposed of at the disposal facility.

In the event that impacted groundwater or standing water is encountered and needs to be removed from excavations, the water must be containerized (i.e., placed in sealed New York State Department of Transportation (NYSDOT)-approved 55-gallon drums or a holding tank) prior to characterization and disposal. Once the impacted groundwater has been transferred to the storage container, options for the proper disposal of the water will be evaluated. Options include 1) discharge to the municipal sewer system after first performing waste characterization analysis and obtaining a temporary sewer discharge permit and 2) off-site disposal at an approved facility following proper characterization.

3.2.1 Analytical Laboratory Testing:

Based on previous test results for samples from the Site, the recommended analytical laboratory testing program for petroleum VOC impacted media (soil, fill, groundwater) is summarized below:

- NYSDEC Spill Technology and Remediation Series (STARS) list VOCs- via USEPA Method 8260.
- NYSDEC STARS-list SVOCs via USEPA Method 8270

The actual analytical laboratory testing program may vary depending on the nature of the soil, fill, and groundwater encountered, and requirements of the disposal facility or publicly-owned treatment works (POTW).

The analytical laboratory test results for characterization of soil and groundwater samples should be compared to the appropriate criteria listed below.

- NYSDEC Part 375 Soil Cleanup Objectives (SCOs) to assist in determining if soil or fill media require removal, off-site disposal and/or treatment, or can be re-used on-site.
- NYSDEC CP-51 Soil Cleanup Guidance to assist in determining if soil or fill media require removal, off-site disposal and/or treatment, or can be re-used on-site.
- Technical and Operational Guidance Series (NYSDEC TOGS 1.1.1) groundwater standards and guidance values to assist in determining if groundwater: 1) can be

discharged on-site; 2) requires pre-treatment and/or can be discharged to the public combined sewer system under a sewer use permit; or 3) requires off-site disposal at a regulated treatment/disposal facility.

- Applicable portions of the Monroe County Pure Waters (MCPW) Rules and Regulations, and Sewer Use Law, 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 under a Sewer Use Permit, or requires off-site disposal at a treatment/disposal facility.

3.2.2 Disposal of Petroleum Impacted Media

Comparison of analytical laboratory test results to the appropriate criteria may indicate that petroleum-impacted soil and/or fill encountered during construction activities at the Site requires disposal off-site in accordance with applicable regulations. In addition, excavated subsurface material may require off-site disposal due to construction requirements (e.g., geotechnical considerations, space available on-site for storage and subsequent re-use, etc.). Based on existing data and information, the petroleum-impacted fill and/or soil that contains VOCs described herein will likely be characterized as non-hazardous waste. Written permission of the NYSDEC will be required for any on-site treatment (i.e., aeration biopile, etc.) of petroleum-impacted soil.

Water (e.g., groundwater, standing water) that is generated/removed during construction activities (if any) that meet TOGS 1.1.1 groundwater standards and guidance values can be discharged on-site. Water that is generated and removed during construction activities at the Site (if any) that does not meet TOGS 1.1.1 groundwater standards and guidance values must be: 1) discharged to the public combined sewer under a sewer use permit; or, 2) transported and disposed off-site at a regulated facility. If the water contains free phase gasoline, petroleum sheen, or a total VOC and SVOC concentration greater than 2.13 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 contaminated 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 approved by the appropriate regulatory agency for accepting the specific waste. This includes contaminated material that may be defined as non-hazardous waste and hazardous waste.

3.2.3 Re-Use of Soil or Fill:

Soil or fill material that does not contain petroleum constituents above NYSDEC Part 375 Unrestricted Use SCOs can be left in place, or re-used on or off-site. Any soils to be used off-Site must be approved by the NYSDEC. However, to the extent deemed appropriate, geotechnical properties of the soil or fill should be considered prior to it being re-used on or off-site.

3.3 Health and Safety Monitoring Plan

Workers involved with future on-site work (e.g., new installation/repair of buried utilities, etc.) that have the potential to disturb petroleum-impacted soil, fill and/or 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. Workers should be provided with the previous reports, the exposure assessment, and this EMP. These documents contain information on the type and location of petroleum impact encountered at the Site and address how to handle, treat, transport, dispose, or re-use the impacted materials in a manner that precludes exposure. Precautions should be implemented to minimize disturbance of 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.).

3.4 Management of Potential Future Disturbances

Anyone involved with on-site work that may potentially disturb impacted soils should be made aware of potential exposure hazards. The owner of the site is responsible for notifying on-site workers of potential hazards. On-site workers should be provided with the previous reports and this EMP. These documents contain information on previous uses of the Site, location and type of contamination on the Site, and how to address and manage impacted material should it be encountered. Precautions should be implemented to attempt to minimize disturbances of impacted material that may allow for the release of harmful airborne particulates.

4.0 ENGINEERING CONTROLS

Considerations should be made for potential vapor intrusions in buildings, should any be constructed. It is anticipated that a sub-slab depressurization system (SSDS) will be required under the slab floor of new buildings at the Site unless an SSDS is deemed not necessary (i.e., soil vapor investigations (SVI) indicate no need, use of other vapor mitigation measures or engineering controls – First floor parking, etc.). In the event that engineering controls are deemed necessary for new construction, the appropriate regulatory agencies should be consulted for approval of such controls.

5.0 INSTITUTIONAL CONTROLS

As an environmental institutional control (IC), the City will "flag" the Site on its computerized Building Information System (BIS) database of parcels located in the City. The BIS is utilized by all City staff involved with the issuance of new City permits. Sites "flagged" in the City's BIS with an environmental institutional control cannot obtain new permits without review and approval of City DEQ. The flagging in BIS ensures that environmental conditions are evaluated by the City prior to issuing of any new permits for this Site.

If the proposed permit activity has the potential to result in the exposure to or disturbance of residual contamination at the Site, City DEQ provides the permit applicant with copies of the EMP, and discusses the technical elements of the EMP and potential mitigation measures. In addition, the City has the ability to condition the new permit to comply:

- The site-specific EMP;
- Notification of the City or environmental regulatory agencies prior to start of work;
- Installation of Environmental Engineering Controls (e.g., sub-slab depressurization system);
- Consultation and written approval from environmental regulatory agencies as deemed warranted.

6.0 SITE CONTACTS

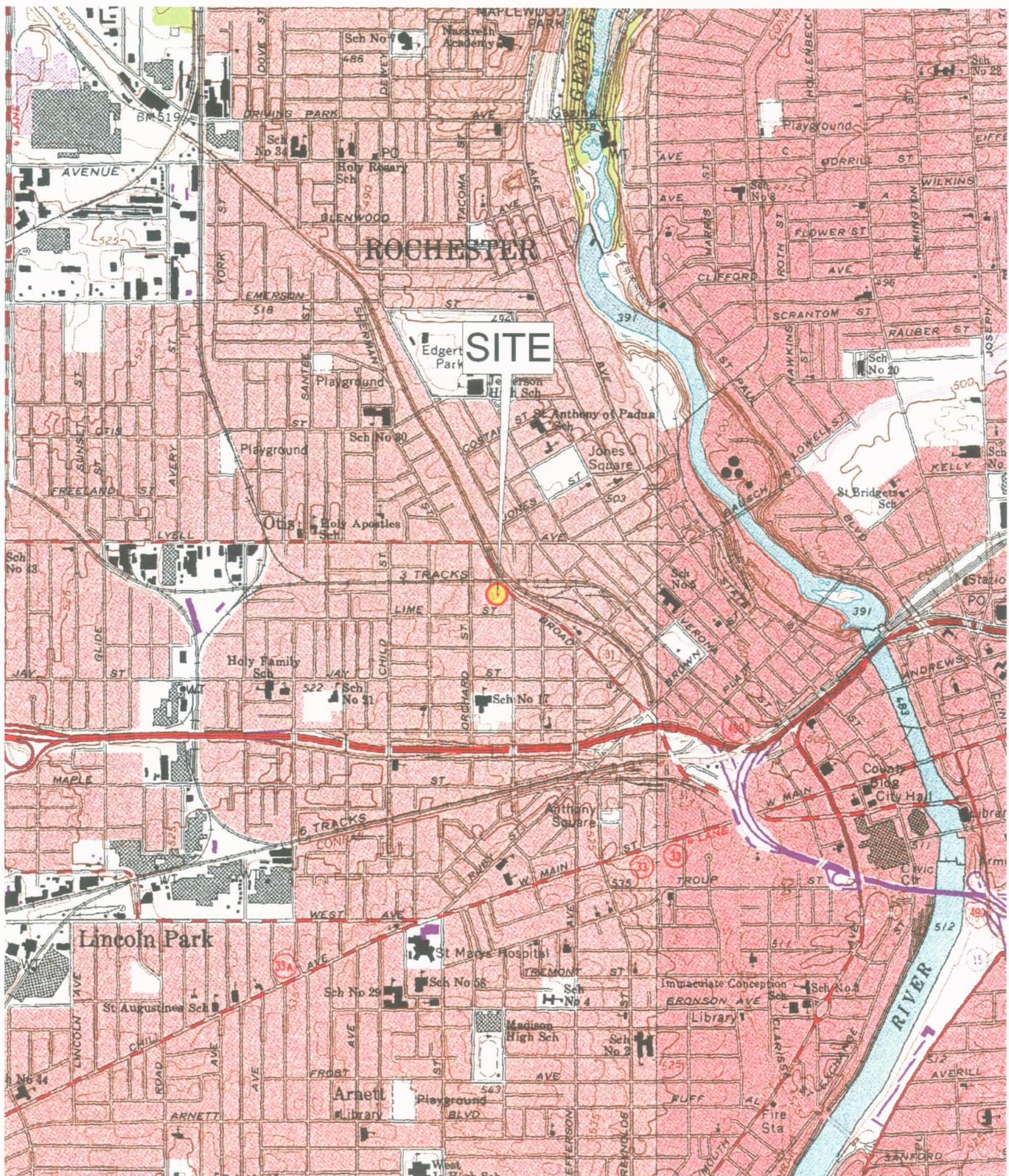
Contact information for NYSDEC and other parties this EMP will be distributed to is listed below.

NYSDEC Region 8
6274 East Avon-Lima Road
Avon, New York 14414
Phone: (585) 226-5438
Or 1-800-457-7362
Contact: Michael Zamiarski

Monroe County Department of Health
111 Westfall Road Room 914
Rochester, New York 14620
Contact: Jeffery Kosmala, P.E.
Senior Public Health Engineer

City of Rochester
Division of Environmental Quality
City Hall Room 300B
30 Church Street
Rochester, New York 14614
Contact: Joseph Biondolillo
Phone: (585) 428-6649

Figures



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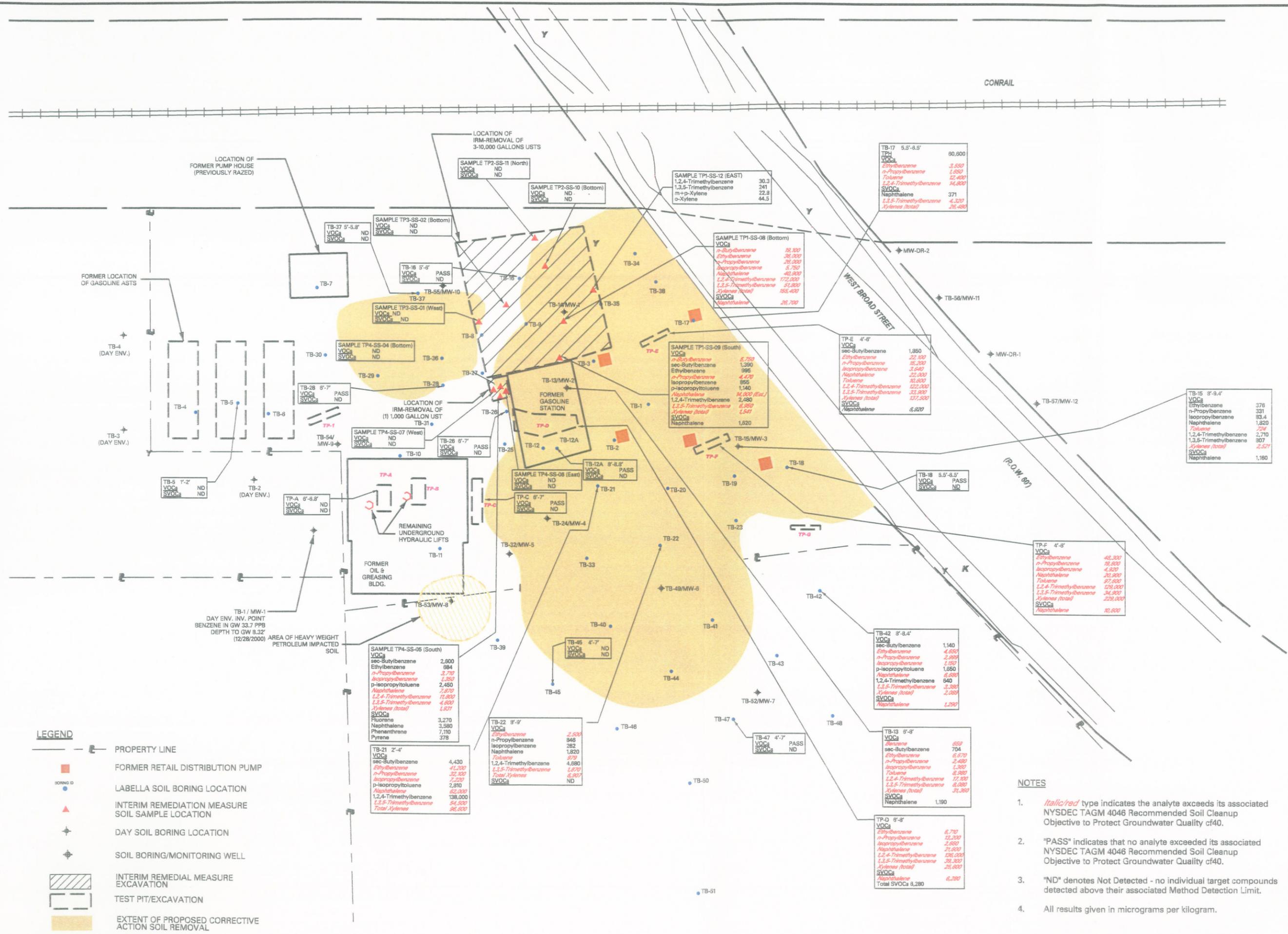
FIGURE 1
Site Location Map

Former Caribbean Service Station
935 West Broad Street
Rochester, New York

LABELLA
 Associates, P.C.

PROJECT NO. 207346

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LEGEND

- PROPERTY LINE
- FORMER RETAIL DISTRIBUTION PUMP
- LABELLA SOIL BORING LOCATION
- INTERIM REMEDIATION MEASURE SOIL SAMPLE LOCATION
- DAY SOIL BORING LOCATION
- SOIL BORING/MONITORING WELL
- INTERIM REMEDIATION MEASURE EXCAVATION
- TEST PIT/EXCAVATION
- EXTENT OF PROPOSED CORRECTIVE ACTION SOIL REMOVAL

SAMPLE TP4-SS-05 (South)

VOCs	
sec-Butylbenzene	2,600
Ethylbenzene	684
n-Propylbenzene	3,710
Isopropylbenzene	1,350
p-Isopropyltoluene	2,450
Naphthalene	7,970
1,2,4-Trimethylbenzene	71,800
1,3,5-Trimethylbenzene	4,800
Xylenes (total)	1,831
SVOCs	
Fluorene	3,270
Naphthalene	3,580
Phenanthrene	7,110
Pyrene	378

TB-21 2'-4'

VOCs	
sec-Butylbenzene	4,430
Ethylbenzene	41,200
n-Propylbenzene	32,100
Isopropylbenzene	7,220
p-Isopropyltoluene	2,810
Naphthalene	156,900
1,2,4-Trimethylbenzene	138,000
1,3,5-Trimethylbenzene	54,500
Total Xylenes	96,600

TB-22 8'-9'

VOCs	
Ethylbenzene	2,520
n-Propylbenzene	846
Isopropylbenzene	282
Naphthalene	1,820
Toluene	879
1,2,4-Trimethylbenzene	4,890
1,3,5-Trimethylbenzene	1,970
Total Xylenes	8,907
SVOCs	
Naphthalene	ND

TB-42 8'-8.4'

VOCs	
sec-Butylbenzene	1,140
Ethylbenzene	4,650
n-Propylbenzene	2,984
Isopropylbenzene	1,150
p-Isopropyltoluene	1,050
Naphthalene	6,680
1,2,4-Trimethylbenzene	840
1,3,5-Trimethylbenzene	3,330
Xylenes (total)	2,089
SVOCs	
Naphthalene	1,290

TB-13 6'-8'

VOCs	
Benzene	659
sec-Butylbenzene	704
Ethylbenzene	6,670
n-Propylbenzene	2,430
Isopropylbenzene	1,300
Toluene	6,390
1,2,4-Trimethylbenzene	17,100
1,3,5-Trimethylbenzene	8,080
Xylenes (total)	31,300
SVOCs	
Naphthalene	1,190

TP-D 6'-8'

VOCs	
Ethylbenzene	6,710
n-Propylbenzene	13,200
Isopropylbenzene	2,680
Naphthalene	31,600
1,2,4-Trimethylbenzene	136,000
1,3,5-Trimethylbenzene	38,300
Xylenes (total)	185,600
SVOCs	
Naphthalene	6,280
Total SVOCs	6,280

NOTES

- Italic/red* type indicates the analyte exceeds its associated NYSDEC TAGM 4046 Recommended Soil Cleanup Objective to Protect Groundwater Quality of 40.
- "PASS" indicates that no analyte exceeded its associated NYSDEC TAGM 4046 Recommended Soil Cleanup Objective to Protect Groundwater Quality of 40.
- "ND" denotes Not Detected - no individual target compounds detected above their associated Method Detection Limit.
- All results given in micrograms per kilogram.

NO.	REVISION	DATE
1		
2		
3		
4		
5		
6		

LABELLA
Associates, P.C.

300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3086
www.labellicpc.com

CORRECTIVE ACTION REPORT
NYSDEC SPILL #0270244

FORMER CARIBBEAN SERVICE CENTER
935 WEST BROAD STREET
ROCHESTER, NEW YORK

REMEDIAL INVESTIGATION SOIL SAMPLING LOCATIONS AND ANALYTICAL RESULTS

ISSUED FOR: DRAFT

SCALE: 1" = 30'

DESIGNED BY: GRC/N

DRAWN BY: GRC/N

REVIEWED BY: GRC/N

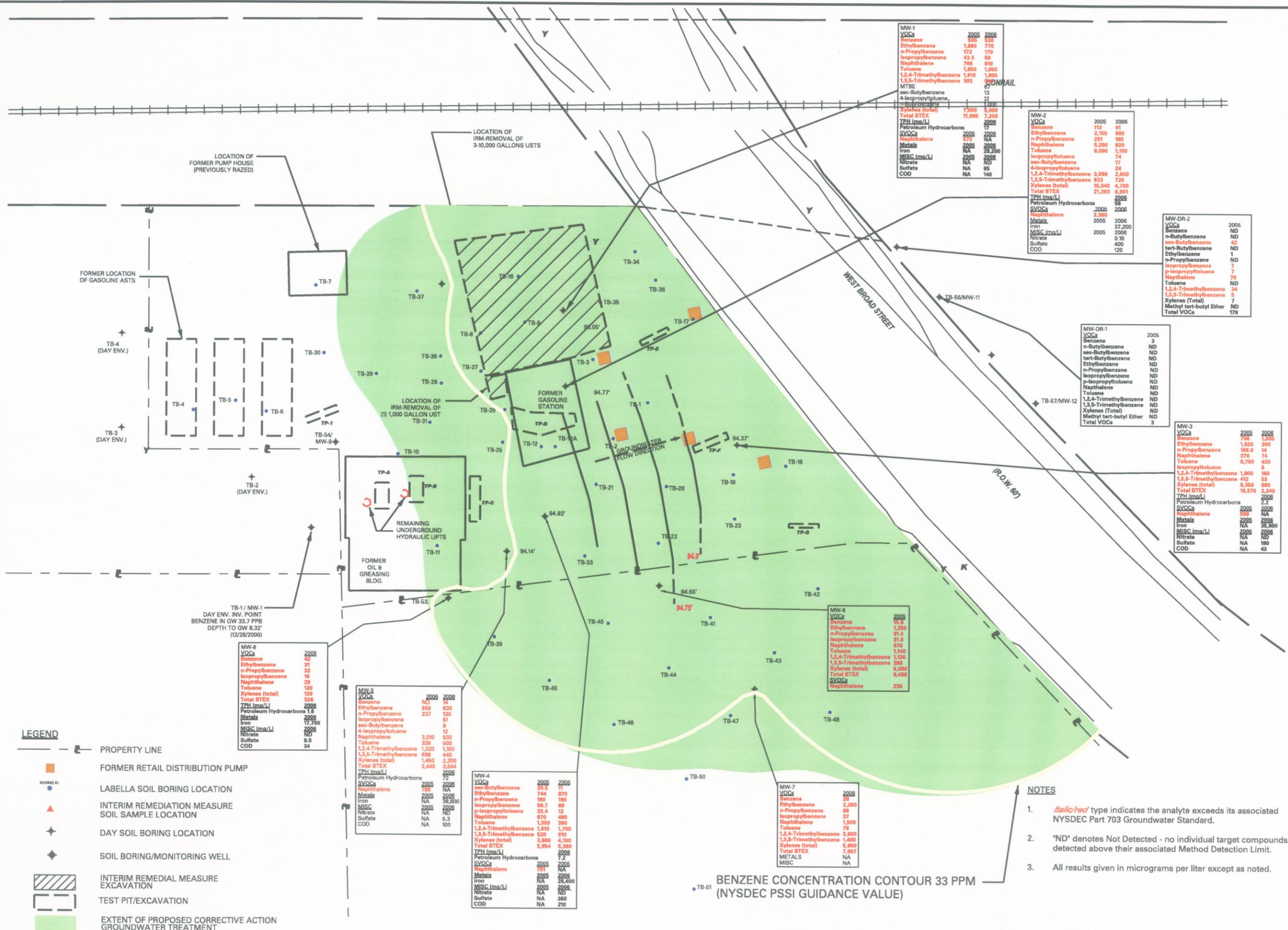
DATE: OCTOBER 2007

PROJECT NUMBER
207346

DRAWING NUMBER
FIGURE 2

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MW-1	2005	2006
VOCs		
Benzene	585	530
Ethylbenzene	1,880	770
n-Propylbenzene	172	170
Isopropylbenzene	43.3	58
Naphthalene	766	610
Toluene	1,850	1,000
1,2,4-Trimethylbenzene	1,910	1,800
1,3,5-Trimethylbenzene	393	500
MTBE	67	12
sec-Butylbenzene	13	12
4-Isopropyltoluene	12	12
Xylenes (total)	7,960	5,000
Total BTEX	11,985	7,200
TPH (mg/L)	2006	2006
Petroleum Hydrocarbons	17	17
SVOCs	2005	2006
Naphthalene	573	NA
Metals	2005	2006
Iron	NA	29,200
MISC (mg/L)	2005	2006
Nitrate	NA	ND
Sulfate	NA	65
COD	NA	140

MW-2	2005	2006
VOCs		
Benzene	113	41
Ethylbenzene	2,150	980
n-Propylbenzene	281	180
Naphthalene	5,280	820
Toluene	8,090	1,100
Isopropyltoluene	74	74
sec-Butylbenzene	17	17
4-Isopropyltoluene	24	24
1,2,4-Trimethylbenzene	3,890	2,600
1,3,5-Trimethylbenzene	933	720
Xylenes (total)	10,540	4,700
Total BTEX	21,393	6,901
TPH (mg/L)	2006	2006
Petroleum Hydrocarbons	56	56
SVOCs	2005	2006
Naphthalene	3,360	NA
Metals	2005	2006
Iron	NA	37,200
MISC (mg/L)	2005	2006
Nitrate	0.18	ND
Sulfate	400	ND
COD	120	ND

MW-DR-2	2005	2006
VOCs		
Benzene	ND	ND
n-Butylbenzene	ND	ND
sec-Butylbenzene	42	ND
tert-Butylbenzene	ND	ND
Ethylbenzene	1	ND
n-Propylbenzene	ND	ND
Isopropylbenzene	7	ND
p-Isopropyltoluene	7	ND
Naphthalene	76	ND
Toluene	ND	ND
1,2,4-Trimethylbenzene	34	ND
1,3,5-Trimethylbenzene	5	ND
Xylenes (Total)	7	ND
Methyl tert-butyl Ether	ND	ND
Total VOCs	179	ND

MW-DR-1	2005
VOCs	
Benzene	3
n-Butylbenzene	ND
sec-Butylbenzene	ND
tert-Butylbenzene	ND
Ethylbenzene	ND
n-Propylbenzene	ND
Isopropylbenzene	ND
p-Isopropyltoluene	ND
Naphthalene	ND
Toluene	ND
1,2,4-Trimethylbenzene	ND
1,3,5-Trimethylbenzene	ND
Xylenes (Total)	ND
Methyl tert-butyl Ether	3
Total VOCs	3

MW-3	2005	2006
VOCs		
Benzene	706	1,000
Ethylbenzene	1,820	200
n-Propylbenzene	168.0	14
Naphthalene	376	74
Toluene	8,700	430
Isopropyltoluene	8	8
1,2,4-Trimethylbenzene	1,800	160
1,3,5-Trimethylbenzene	412	53
Xylenes (total)	8,350	680
Total BTEX	19,576	2,240
TPH (mg/L)	2006	2006
Petroleum Hydrocarbons	2.2	2.2
SVOCs	2005	2006
Naphthalene	7	589
Metals	2005	2006
Iron	NA	25,900
MISC (mg/L)	2005	2006
Nitrate	NA	ND
Sulfate	NA	180
COD	NA	43

MW-6	2005
VOCs	
Benzene	18.3
Ethylbenzene	1,350
n-Propylbenzene	91.4
Isopropylbenzene	31.9
Naphthalene	671
Toluene	1,140
1,2,4-Trimethylbenzene	1,130
1,3,5-Trimethylbenzene	203
Xylenes (total)	6,090
Total BTEX	8,488
SVOCs	2006
Naphthalene	236

MW-5	2005	2006
VOCs		
Benzene	ND	14
Ethylbenzene	660	830
n-Propylbenzene	237	130
Isopropylbenzene	51	51
sec-Butylbenzene	9	9
4-Isopropyltoluene	12	12
Naphthalene	3,010	530
Toluene	328	900
1,2,4-Trimethylbenzene	1,320	1,100
1,3,5-Trimethylbenzene	698	440
Xylenes (total)	1,450	2,200
Total BTEX	2,445	3,544
TPH (mg/L)	2006	2006
Petroleum Hydrocarbons	72	72
SVOCs	2005	2006
Naphthalene	788	NA
Metals	2005	2006
Iron	NA	38,800
MISC (mg/L)	2005	2006
Nitrate	NA	ND
Sulfate	NA	5.3
COD	NA	100

MW-4	2005	2006
VOCs		
sec-Butylbenzene	25.5	11
Ethylbenzene	744	670
n-Propylbenzene	190	190
Isopropylbenzene	56.7	66
p-Isopropyltoluene	23.4	12
Naphthalene	970	480
Toluene	1,250	390
1,2,4-Trimethylbenzene	1,210	1,700
1,3,5-Trimethylbenzene	520	610
Xylenes (total)	3,860	4,100
Total BTEX	5,954	5,360
TPH (mg/L)	2006	2006
Petroleum Hydrocarbons	7.2	7.2
SVOCs	2005	2006
Naphthalene	781	NA
Metals	2005	2006
Iron	NA	28,400
MISC (mg/L)	2005	2006
Nitrate	NA	ND
Sulfate	NA	260
COD	NA	210

MW-7	2006
VOCs	
Benzene	28
Ethylbenzene	2,200
n-Propylbenzene	66
Isopropylbenzene	37
Naphthalene	1,500
Toluene	79
1,2,4-Trimethylbenzene	3,600
1,3,5-Trimethylbenzene	1,400
Xylenes (total)	5,900
Total BTEX	5,907
METALS	NA
MISC	NA

LEGEND

- PROPERTY LINE
- FORMER RETAIL DISTRIBUTION PUMP
- SOILING ID
- LABELLA SOIL BORING LOCATION
- INTERIM REMEDIATION MEASURE SOIL SAMPLE LOCATION
- DAY SOIL BORING LOCATION
- SOIL BORING/MONITORING WELL
- INTERIM REMEDIAL MEASURE EXCAVATION
- TEST PIT/EXCAVATION
- EXTENT OF PROPOSED CORRECTIVE ACTION GROUNDWATER TREATMENT

- NOTES**
- Italic/red* type indicates the analyte exceeds its associated NYSDEC Part 703 Groundwater Standard.
 - "ND" denotes Not Detected - no individual target compounds detected above their associated Method Detection Limit.
 - All results given in micrograms per liter except as noted.

NO.	REVISION	DATE
1		
2		
3		
4		
5		
6		

LABELLA Associates, P.C.
 300 STATE STREET
 ROCHESTER, NY 14614
 P: (585) 454-6110
 F: (585) 454-3066
 www.labellapc.com

CORRECTIVE ACTION REPORT
 NYSDEC SPILL #0270244
 FORMER CARIBBEAN SERVICE CENTER
 935 WEST BROAD STREET
 ROCHESTER, NEW YORK

REMEDIAL INVESTIGATION GROUND-WATER SAMPLING LOCATIONS AND ANALYTICAL RESULTS

ISSUED FOR: **DRAFT**

SCALE: 1" = 30'

DESIGNED BY: _____

DRAWN BY: _____

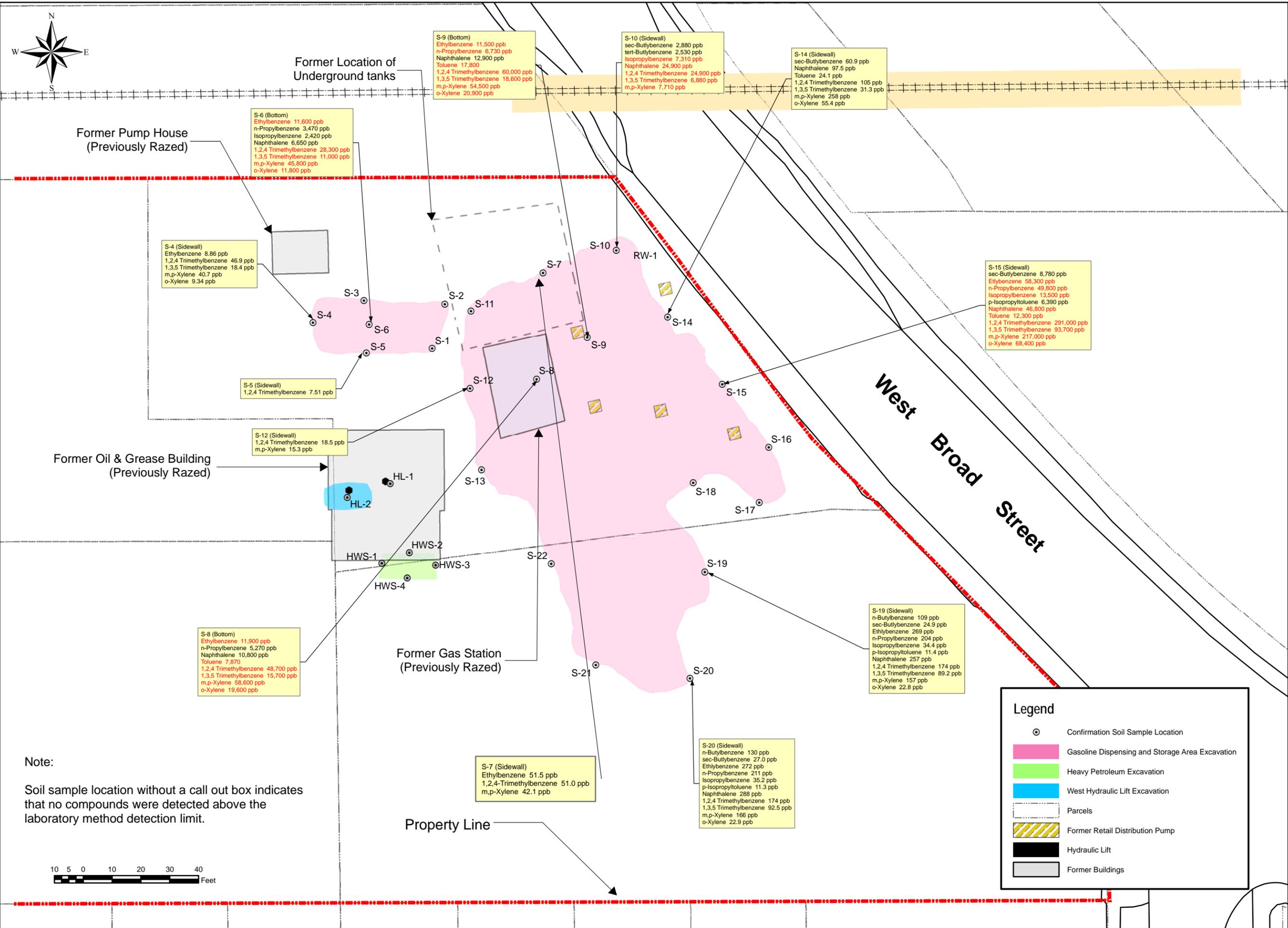
REVIEWED BY: _____

DATE: OCTOBER 2007

PROJECT NUMBER: **207346**

DRAWING NUMBER: **FIGURE 3**

SHEET OF: _____



Note:
Soil sample location without a call out box indicates that no compounds were detected above the laboratory method detection limit.



- S-9 (Bottom)**
Ethylbenzene 11,500 ppb
n-Propylbenzene 6,730 ppb
Naphthalene 12,900 ppb
Toluene 17,800
1,2,4 Trimethylbenzene 60,000 ppb
1,3,5 Trimethylbenzene 18,600 ppb
m,p-Xylene 54,500 ppb
o-Xylene 20,900 ppb
- S-10 (Sidewall)**
sec-Butylbenzene 2,880 ppb
tert-Butylbenzene 2,530 ppb
Isopropylbenzene 7,310 ppb
Naphthalene 24,900 ppb
1,2,4 Trimethylbenzene 24,900 ppb
1,3,5 Trimethylbenzene 6,880 ppb
m,p-Xylene 7,710 ppb
- S-14 (Sidewall)**
sec-Butylbenzene 60.9 ppb
Naphthalene 97.5 ppb
Toluene 24.1 ppb
1,2,4 Trimethylbenzene 105 ppb
1,3,5 Trimethylbenzene 31.3 ppb
m,p-Xylene 258 ppb
o-Xylene 55.4 ppb
- S-6 (Bottom)**
Ethylbenzene 11,600 ppb
n-Propylbenzene 3,470 ppb
Isopropylbenzene 2,420 ppb
Naphthalene 6,650 ppb
1,2,4 Trimethylbenzene 28,300 ppb
1,3,5 Trimethylbenzene 11,000 ppb
m,p-Xylene 45,800 ppb
o-Xylene 11,800 ppb
- S-4 (Sidewall)**
Ethylbenzene 8.86 ppb
1,2,4 Trimethylbenzene 46.9 ppb
1,3,5 Trimethylbenzene 18.4 ppb
m,p-Xylene 40.7 ppb
o-Xylene 9.34 ppb
- S-5 (Sidewall)**
1,2,4 Trimethylbenzene 7.51 ppb
- S-12 (Sidewall)**
1,2,4 Trimethylbenzene 18.5 ppb
m,p-Xylene 15.3 ppb
- S-8 (Bottom)**
Ethylbenzene 11,900 ppb
n-Propylbenzene 5,270 ppb
Naphthalene 10,800 ppb
Toluene 7,670
1,2,4 Trimethylbenzene 48,700 ppb
1,3,5 Trimethylbenzene 15,700 ppb
m,p-Xylene 58,600 ppb
o-Xylene 19,600 ppb
- S-7 (Sidewall)**
Ethylbenzene 51.5 ppb
1,2,4-Trimethylbenzene 51.0 ppb
m,p-Xylene 42.1 ppb
- S-20 (Sidewall)**
n-Butylbenzene 130 ppb
sec-Butylbenzene 27.0 ppb
Ethylbenzene 272 ppb
n-Propylbenzene 211 ppb
Isopropylbenzene 35.2 ppb
p-Isopropyltoluene 11.3 ppb
Naphthalene 288 ppb
1,2,4 Trimethylbenzene 174 ppb
1,3,5 Trimethylbenzene 92.5 ppb
m,p-Xylene 166 ppb
o-Xylene 22.9 ppb
- S-19 (Sidewall)**
n-Butylbenzene 109 ppb
sec-Butylbenzene 24.9 ppb
Ethylbenzene 269 ppb
n-Propylbenzene 204 ppb
Isopropylbenzene 34.4 ppb
p-Isopropyltoluene 11.4 ppb
Naphthalene 257 ppb
1,2,4 Trimethylbenzene 174 ppb
1,3,5 Trimethylbenzene 89.2 ppb
m,p-Xylene 157 ppb
o-Xylene 22.8 ppb
- S-15 (Sidewall)**
sec-Butylbenzene 8,780 ppb
Ethylbenzene 58,300 ppb
n-Propylbenzene 49,800 ppb
Isopropylbenzene 13,500 ppb
p-Isopropyltoluene 6,390 ppb
Naphthalene 46,800 ppb
Toluene 12,300 ppb
1,2,4 Trimethylbenzene 291,000 ppb
1,3,5 Trimethylbenzene 93,700 ppb
m,p-Xylene 217,000 ppb
o-Xylene 68,400 ppb

Legend

- ⊙ Confirmation Soil Sample Location
- Gasoline Dispensing and Storage Area Excavation
- Heavy Petroleum Excavation
- West Hydraulic Lift Excavation
- Parcels
- Former Retail Distribution Pump
- Hydraulic Lift
- Former Buildings

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ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3066
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PROJECT CLIENT
CORRECTIVE ACTION REPORT
NYSDEC SPILL #0270244
FORMER CARRIBEAN
SERVICE CENTER
935 WEST BROAD STREET
ROCHESTER, NEW YORK

ISSUED FOR: FINAL
DESIGNED BY: MFP
DRAWN BY: MFP
REVIEWED BY: DPN
DATE: OCTOBER 2007
SGIS/PROJECTS/WBROAD/CA/ReportFigure 4.mxd

PROJECT/DRAWING NUMBER
207346
FIGURE 4



MW07-4
Benzene 14 ppb
Total BTEX 138 ppb
Total VOXs 605 ppb

FORMER PUMP HOUSE
(PREVIOUSLY RAZED)

FORMER LOCATION OF
UNDERGROUND TANKS

RW-1
Benzene 1,700 ppb
Total BTEX 16,000 ppb
Total VOXs 18,767 ppb

RW-2
Benzene 6,800 ppb
Total BTEX 12,280 ppb
Total VOXs 12,810 ppb

RW-6
Benzene 150 ppb
Total BTEX 23,350 ppb
Total VOXs 25,920 ppb

RW-5
Benzene 11 ppb
Total BTEX 823 ppb
Total VOXs 1,778 ppb

RW-3
Benzene 1 ppb
Total BTEX 7 ppb
Total VOXs 24 ppb

MW07-1
Benzene 12 ppb
Total BTEX 871 ppb
Total VOXs 1,757 ppb

MW07-2
Benzene 410 ppb
Total BTEX 8,210 ppb
Total VOXs 8,510 ppb

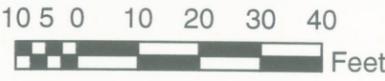
MW07-3
Benzene ND
Total BTEX ND
Total VOXs 6 ppb

WEST BROAD STREET
(R.O.W. 60')

GROUNDWATER
FLOW DIRECTION

Legend

- ◆ Wells installed Spring 2007
- ✘ Destroyed Monitoring Well
- ⊕ Existing Monitoring Well
- ⊕ Recovery Well (4-inch)
- ⊙ Confirmation Soil Sample Location
- Hydraulic Lift Excavation
- Heavy Petroleum Contamination Excavation
- Former Retail Distribution Pump
- Former Buildings
- Gasoline Dispensing and Storage Area Excavation
- Extent of Proposed Groundwater Treatment
- Parcels



PROPERTY LINE

Note:

(1) Groundwater sample results shown depict samples collected on March 22, 2007.

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PROJECT CLIENT
CORRECTIVE ACTION REPORT
NYSDEC SPILL #0270244
FORMER CARRIBEAN
SERVICE CENTER
935 WEST BROAD STREET
ROCHESTER, NEW YORK

DRAWING TITLE
POST SOURCE REMOVAL
GROUNDWATER EVALUATION
AND GROUNDWATER MONITORING
WELL LOCATIONS
ISSUED FOR
FINAL
DESIGNED BY: MFP
DRAWN BY: MFP
DATE: OCTOBER 2007
REVIEWED BY: DPN
S:\GIS\PROJECTS\WBROAD\Cap Report\Figure 5.mxd

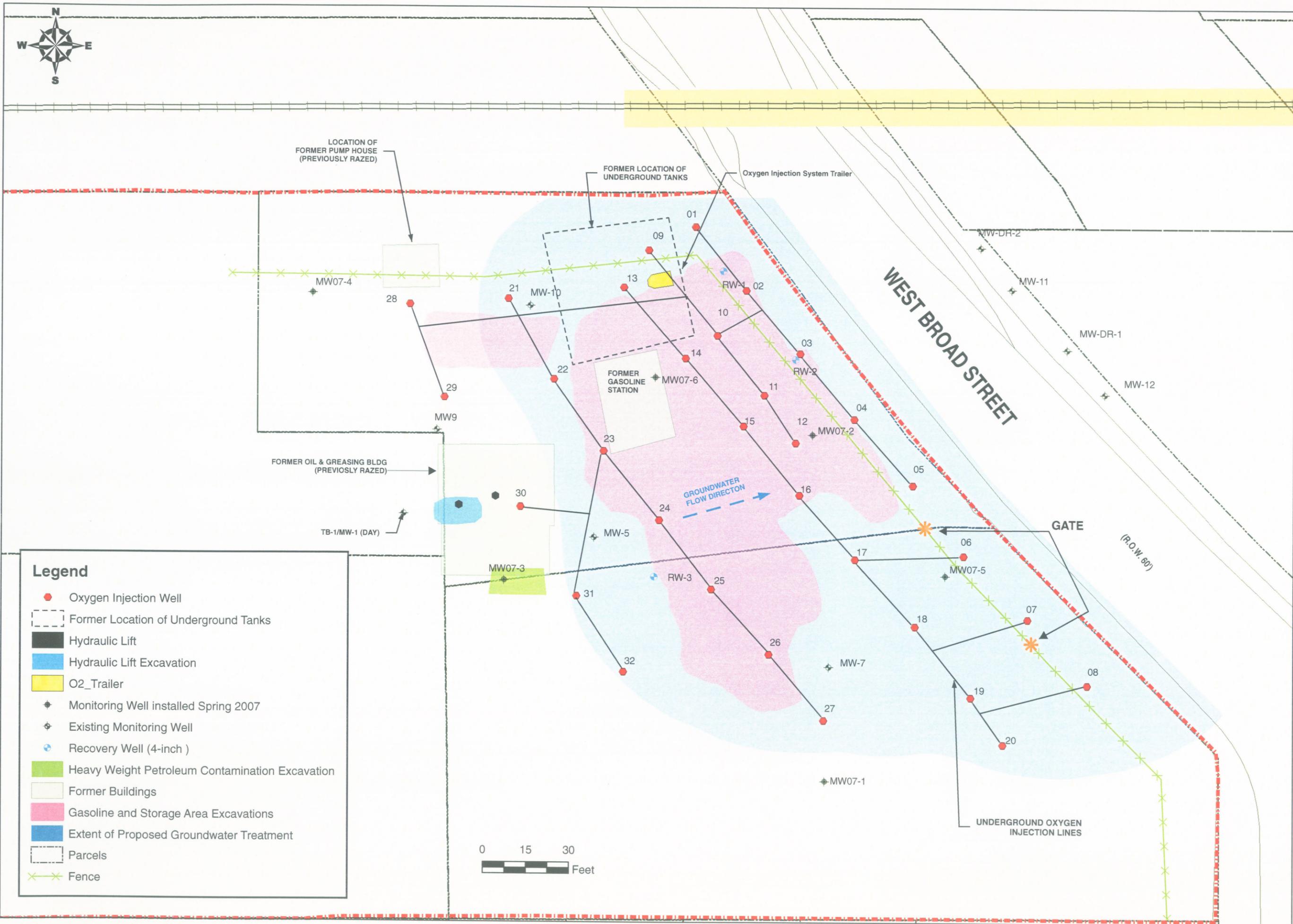
PROJECT/DRAWING NUMBER
207346
FIGURE 5



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Legend

- Oxygen Injection Well
- Former Location of Underground Tanks
- Hydraulic Lift
- Hydraulic Lift Excavation
- O2_Trailer
- ◆ Monitoring Well installed Spring 2007
- ◆ Existing Monitoring Well
- Recovery Well (4-inch)
- Heavy Weight Petroleum Contamination Excavation
- Former Buildings
- Gasoline and Storage Area Excavations
- Extent of Proposed Groundwater Treatment
- Parcels
- ××× Fence

PROJECT CLIENT
CORRECTIVE ACTION REPORT
NYSDEC SPILL #0270244
FORMER CARRIBEAN
SERVICE CENTER
935 WEST BROAD STREET
ROCHESTER, NEW YORK

DRAWING TITLE
OXYGEN INJECTION
SYSTEM LAYOUT

ISSUED FOR	DESIGNED BY	MFP
FINAL	DRAWN BY	MFP
DATE: OCTOBER 2007	REVIEWED BY	DPN

S:\GIS\PROJECTS\WBROAD\CAP_Report\Figure 6.mxd

PROJECT/DRAWING NUMBER
207346
FIGURE 6

Tables

Table 1
Former Caribbean Service Station
Gasoline Dispensing and Storage Area Confirmatory Soil Samples
Volatile Organic Compounds by USEPA Method 8260B
All Results Expressed in micrograms per Kilogram (µg/Kg)

Sample Location	Small Excavation						Main Excavation																NYSDEC TAGM 4046 Soil Cleanup Objective to Protect Groundwater Quality
	Southeast Corner Wall	Northeast Corner Sidewall	North Sidewall	West Sidewall	South Sidewall	Bottom	North Sidewall	Bottom	Bottom	East Sidewall	West Sidewall	West Sidewall	West Sidewall	East Sidewall	East Sidewall	East Sidewall	South Sidewall	South Sidewall	Southeast Sidewall	South Sidewall	Southwest Sidewall	West Sidewall	
Sample ID	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	S-16	S-17	S-18	S-19	S-20	S-21S	S-22	
Approximate Sample Depth (feet)	4	4	4	4	4	6.5	4	7	6	4	4	4	4	4	5	5	5	5	4	3.5	4	4	
Sample Date	1/24/2007	1/24/2007	1/24/2007	1/24/2007	1/24/2007	1/24/2007	1/30/2007	1/30/2007	1/30/2007	1/30/2007	1/30/2007	1/30/2007	1/30/2007	1/30/2007	2/1/2007	2/7/2007	2/7/2007	2/7/2007	2/7/2007	2/12/2007	2/12/2007	2/12/2007	2/12/2007
Benzene	ND<6.33	ND<7.29	ND<8.41	ND<8.68	ND<7.34	ND<1,720	ND<29.1	ND<2,210	ND<1,900	ND<1,660	ND<8.19	ND<10.8	ND<7.97	ND<19.9	ND<3,060	ND<11.4	ND<9.00	ND<8.45	ND<9.74	ND<9.83	ND<8.20	ND<10.4	80
n-Butylbenzene	ND<6.33	ND<7.29	ND<8.41	ND<8.68	ND<7.34	ND<1,720	ND<29.1	ND<2,210	ND<1,900	ND<1,660	ND<8.19	ND<10.8	ND<7.97	ND<19.9	ND<3,060	ND<11.4	ND<9.00	ND<8.45	109	130	ND<8.20	ND<10.4	12,000
sec-Butylbenzene	ND<6.33	ND<7.29	ND<8.41	ND<8.68	ND<7.34	ND<1,720	ND<29.1	ND<2,210	ND<1,900	2,880	ND<8.19	ND<10.8	ND<7.97	60.9	8,780	ND<11.4	ND<9.00	ND<8.45	24.9	27	ND<8.20	ND<10.4	11,000
tert-Butylbenzene	ND<6.33	ND<7.29	ND<8.41	ND<8.68	ND<7.34	ND<1,720	ND<29.1	ND<2,210	ND<1,900	2,530	ND<8.19	ND<10.8	ND<7.97	ND<19.9	ND<3,060	ND<11.4	ND<9.00	ND<8.45	ND<9.74	ND<9.83	ND<8.20	ND<10.4	11,000
Ethylbenzene	ND<6.33	ND<7.29	ND<8.41	8.86	ND<7.34	11,600	51.5	11,900	11,500	ND<1,660	ND<8.19	ND<10.8	ND<7.97	ND<19.9	58,300	ND<11.4	ND<9.00	ND<8.45	269	272	ND<8.20	ND<10.4	5,500
n-Propylbenzene	ND<6.33	ND<7.29	ND<8.41	ND<8.68	ND<7.34	3,470	ND<29.1	5,270	6,730	ND<1,660	ND<8.19	ND<10.8	ND<7.97	ND<19.9	49,800	ND<11.4	ND<9.00	ND<8.45	204	211	ND<8.20	ND<10.4	3,700
Isopropylbenzene	ND<6.33	ND<7.29	ND<8.41	ND<8.68	ND<7.34	2,420	ND<29.1	ND<2,210	ND<1,900	7,310	ND<8.19	ND<10.8	ND<7.97	ND<19.9	13,500	ND<11.4	ND<9.00	ND<8.45	34.4	35.2	ND<8.20	ND<10.4	2,300
p-Isopropyltoluene	ND<6.33	ND<7.29	ND<8.41	ND<8.68	ND<7.34	ND<1,720	ND<29.1	ND<2,210	ND<1,900	ND<1,660	ND<8.19	ND<10.8	ND<7.97	ND<19.9	6,390	ND<11.4	ND<9.00	ND<8.45	11.4	11.3	ND<8.20	ND<10.4	11,000
Naphthalene	ND<15.8	ND<18.2	ND<21.0	ND<21.7	ND<18.3	6,650	ND<72.7	10,800	12,900	24,900	ND<20.5	ND<26.9	ND<19.9	97.5	46,800	ND<28.5	ND<22.5	ND<21.1	257	288	ND<20.5	ND<25.9	13,000
Toluene	ND<6.33	ND<7.29	ND<8.41	ND<8.68	ND<7.34	ND<1,720	ND<29.1	7,870	17,800	ND<1,660	ND<8.19	ND<10.8	ND<7.97	24.1	12,300	ND<11.4	ND<9.00	ND<8.45	ND<9.74	ND<9.83	ND<8.20	ND<10.4	1,500
1,2,4-Trimethylbenzene	ND<6.33	ND<7.29	ND<8.41	46.9	7.51	28,300	51.0	48,700	60,000	24,900	ND<8.19	18.5	ND<7.97	105	291,000	ND<11.4	ND<9.00	ND<8.45	174	174	ND<8.20	ND<10.4	13,000
1,3,5-Trimethylbenzene	ND<6.33	ND<7.29	ND<8.41	18.4	ND<7.34	11,000	ND<29.1	15,700	18,600	6,880	ND<8.19	ND<10.8	ND<7.97	31.3	93,700	ND<11.4	ND<9.00	ND<8.45	89.2	92.5	ND<8.20	ND<10.4	3,300
m,p-Xylene	ND<6.33	ND<7.29	ND<8.41	40.7	ND<7.34	45,800	42.1	58,600	54,500	7,710	ND<8.19	15.3	ND<7.97	258	217,000	ND<11.4	ND<9.00	ND<8.45	157	166	ND<8.20	ND<10.4	1,200
o-Xylene	ND<6.33	ND<7.29	ND<8.41	9.34	ND<7.34	11,800	ND<29.1	19,600	20,900	ND<1,660	ND<8.19	ND<10.8	ND<7.97	55.4	68,400	ND<11.4	ND<9.00	ND<8.45	22.8	22.9	ND<8.20	ND<10.4	1,200
MTBE	ND<6.33	ND<7.29	ND<8.41	ND<8.68	ND<7.34	ND<1,720	ND<29.1	ND<2,210	ND<1,900	ND<1,660	ND<8.19	ND<10.8	ND<7.97	ND<19.9	ND<3,060	ND<11.4	ND<9.00	ND<8.45	ND<9.74	ND<9.83	ND<8.20	ND<10.4	120
Total VOCs	0.0	0.0	0.0	124.2	7.5	121040.0	144.6	178440.0	202930.0	77110.0	0.0	33.8	0.0	632.2	865970.0	0.0	0.0	0.0	1352.7	1429.9	0.0	0.0	0.0

Note:
(1) All results expressed in micrograms per Kilogram which is approximately equivalent to parts per billion (ppb)
(2) ND denoted Non Detected below laboratory detection limit
(3) **Bold** denoted compoune detected above the NYSDEC TAGM 4046 Soil Cleanup Objective to Protect Groundwater Quality

Table 2
City of Rochester Division of Environmental Quality
935 West Broad Street
Historical VOC Concentrations in Groundwater
(results in ug/L or ppb)

Groundwater Target Compounds Sample Results																	T.O.G.s
																	1.1.1
Constituent	MW07-1	MW07-2	MW07-3	MW07-4	MW07-5	MW07-6	RW-1	RW-2	RW-3	MW-5	MW-7	MW-10	MW-11	MW-12	MWDR-1	MWDR-2	Guidance Value(1)
MTBE																	
3/23/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ns	ns	ns	ns	ns	ns	ns	10.00
9/12/2007	ns	ND	ns	ns	ND	ND	ND	ND	ND	ND	ns	ns	ns	ns	ND	ND	10.00
1/8/2008	ND	ND	ND	ns	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.00
5/9/2008	ND	ND	ns	ns	ND	ND	ND	ND	ND	34.6	ND	ND	ND	ND	ND	ND	10.00
8/7/2008	ns	ND	ns	ns	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.00
11/5/2008	ns	ND	ns	ns	ND	ND	ND	ND	ND	ND	ND	ns	ns	ns	ND	ND	10.00
3/26/2009	ND	ND	ns	ns	ND	ND	ND	ND	ND	ND	ND	ND	ns	ND	ND	ND	10.00
7/22/2009	ND	ND	ns	ns	ND	ND	ND	ND	ND	ND	ND	ND	ns	ND	ND	ND	10.00
10/21/2009	ND	ND	ns	ns	ND	ND	ND	ND	ND	ND	ND	ns	ns	ns	ND	ND	10.00
1/22/2010	ns	ND	ns	ns	ND	ND	ND	ND	ND	ND	ND	ND	ns	ND	ND	ND	10.00
5/21/2010	ND	ND	ns	ns	ND	ND	ND	ND	ND	ND	ND	ND	ns	ND	ND	ND	10.00
9/24/2010	ns	ND	ns	ns	ND	ND	ND	ND	ND	ND	ND	ns	ns	ns	ND	ND	10.00
6/28/2011	ns	ND	ns	ns	ns	ND	ND	ns	ns	ND	ns	ns	ns	ns	ns	ns	10.00
6/5/2012	ns	ND	ns	ns	ns	ND	ND	ND	ns	ND	ns	ns	ns	ns	ND	ns	10.00
Benzene																	
3/23/2007	12.0	410.0	ND	14.0	ND	ND	1,700.0	6,800.0	ND	ns	ns	ns	ns	ns	ns	ns	1.00
9/12/2007	ns	8.1	ns	ns	ND	ND	605.0	93.5	ND	ND	ns	ns	ns	ns	1.1	ND	1.00
1/8/2008	1.3	ND	ND	ns	0.7	18.2	18.9	1.0	ND	ND	ND	ND	ND	ND	ND	ND	1.00
5/9/2008	31.7	ND	ns	ns	ND	32.7	ND	ND	ND	ND	3.8	ND	ND	ND	3.6	ND	1.00
8/7/2008	ns	ND	ns	ns	ND	ND	ND	ND	ND	ND	8.3	ND	ND	ND	10.0	ND	1.00
11/5/2008	18.3	ND	ns	ns	ND	ND	ND	ND	ND	ND	ND	ns	ns	ns	ND	ND	1.00
3/26/2009	10.7	ND	ns	ns	ND	57.2	ND	ND	ND	ND	ND	ND	ns	ND	2.9	ND	1.00
7/22/2009	17.2	ND	ns	ns	ND	18.7	ND	ND	ND	ND	ND	ND	ns	ND	8.1	ND	1.00
10/21/2009	12.0	ND	ns	ns	ND	ND	1.9	ND	ND	ND	ND	ns	ns	ns	ND	ND	1.00
1/22/2010	ns	ND	ns	ns	ND	ND	ND	ND	ND	ND	ND	ND	ns	ND	ND	ND	1.00
5/21/2010	17.0	ND	ns	ns	ND	34.3	0.7	ND	ND	ND	ND	ND	ns	ND	11.4	ND	1.00
9/24/2010	ns	3.1	ns	ns	ND	ND	2.2	ND	ND	ND	ND	ns	ns	ns	ND	ND	1.00
6/28/2011	ns	ND	ns	ns	ns	43.9	ND	ns	ns	ND	ns	ns	ns	ns	ns	ns	1.00
6/5/2012	ns	ND	ns	ns	ns	ND<70	0.7	ND	ns	ND	ns	ns	ns	ns	2.8	ns	1.00

Table 2
City of Rochester Division of Environmental Quality
935 West Broad Street
Historical VOC Concentrations in Groundwater
(results in ug/L or ppb)

	Groundwater Target Compounds Sample Results																T.O.G.s
																	1.1.1
Total BTEX	MW07-1	MW07-2	MW07-3	MW07-4	MW07-5	MW07-6	RW-1	RW-2	RW-3	MW-5	MW-7	MW-10	MW-11	MW-12	MWDR-1	MWDR-2	Guidance Value(1)
3/23/2007	871.0	8,210.0	0.0	138.0	0.0	23,200.0	16,000.0	12,280.0	0.0	ns	ns	ns	ns	ns	ns	ns	N/A
9/12/2007	ns	116.7	ns	ns	0.0	9,693.0	2,600.0	187.1	0.0	2,026.0	ns	ns	ns	ns	1.1	0.0	N/A
1/8/2008	65.1	14.9	0.0	ns	0.7	3,865.2	575.6	1.0	0.0	2,323.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
5/9/2008	4,337.0	3.4	ns	ns	0.0	4,568.7	376.7	0.0	0.0	459.6	52.6	0.0	0.0	0.0	3.6	0.0	N/A
8/7/2008	ns	0.0	ns	ns	0.0	5,540.0	0.0	0.0	0.0	718.9	643.3	0.0	0.0	0.0	10.0	0.0	N/A
11/5/2008	1,134.6	0.0	ns	ns	0.0	6,014.0	139.8	0.0	0.0	868.0	68.3	ns	ns	ns	0.0	0.0	N/A
3/26/2009	707.7	0.0	ns	ns	0.0	6,842.2	0.0	0.0	0.0	457.3	0.0	0.0	ns	0.0	2.9	6.1	N/A
7/22/2009	735.2	6.9	ns	ns	0.0	2,158.7	16.5	0.0	0.0	0.0	0.0	0.0	ns	0.0	8.1	0.0	N/A
10/21/2009	454.0	2.0	ns	ns	0.0	8,607.0	59.7	0.0	0.0	1,103.3	0.0	ns	ns	ns	0.0	0.0	N/A
1/22/2010	ns	0.0	ns	ns	0.0	5,870.0	4.4	0.0	0.0	52.3	0.0	0.0	ns	0.0	0.0	0.0	N/A
5/21/2010	588.0	0.0	ns	ns	0.0	596.0	73.8	0.0	0.0	160.7	0.0	0.0	ns	0.0	11.4	0.0	N/A
9/24/2010	ns	27.3	ns	ns	0.0	17,240.0	52.0	0.0	0.0	400.0	2.0	ns	ns	ns	0.0	0.0	N/A
6/28/2011	ns	ND	ns	ns	ns	1,683.9	78.2	ns	ns	544.9	ns	ns	ns	ns	ns	ns	N/A
6/5/2012	ns	27.5	ns	ns	ns	9,376.0	62.1	0.0	ns	ns	ns	ns	ns	ns	2.8	ns	N/A
Total Volatile Aromatics																	
3/23/2007	1,757.0	8,400.0	0.0	605.0	0.0	25,770.0	18,767.0	12,390.0	15.0	ns	ns	ns	ns	ns	ns	ns	N/A
9/12/2007	ns	170.5	ns	ns	0.0	11,377.0	3,399.6	338.2	0.0	3,372.0	ns	ns	ns	ns	1.1	0.0	N/A
1/8/2008	114.1	14.9	0.0	ns	0.7	5,895.9	1,110.8	1.0	0.0	3,840.0	0.0	0.0	0.0	0.0	0.0	0.0	N/A
5/9/2008	6,814.0	3.4	ns	ns	0.0	7,785.9	593.6	0.0	0.0	1,045.8	52.6	0.0	0.0	0.0	3.6	0.0	N/A
8/7/2008	ns	0.0	ns	ns	0.0	6,790.0	0.0	0.0	0.0	1,935.0	863.3	0.0	0.0	0.0	10.0	0.0	N/A
11/5/2008	1,932.1	0.0	ns	ns	0.0	7,484.0	439.1	0.0	0.0	868.0	86.5	ns	ns	ns	0.0	0.0	N/A
3/26/2009	1,185.7	0.0	ns	ns	0.0	8,866.2	0.0	0.0	0.0	1,050.1	0.0	0.0	ns	0.0	2.9	21.4	N/A
7/22/2009	1,165.0	6.9	ns	ns	53.8	3,340.6	56.5	0.0	0.0	0.0	0.0	0.0	ns	0.0	8.1	0.0	N/A
10/21/2009	803.5	2.0	ns	ns	0.0	10,679.0	298.8	0.0	0.0	5,422.9	0.0	ns	ns	ns	0.0	0.0	N/A
1/22/2010	ns	0.0	ns	ns	0.0	15,036.0	18.3	0.0	0.0	103.7	0.0	0.0	ns	0.0	0.0	0.0	N/A
5/21/2010	846.6	0.0	ns	ns	0.0	1,367.0	273.4	0.0	0.0	160.7	0.0	0.0	ns	0.0	11.4	0.0	N/A
9/24/2010	ns	47.2	ns	ns	0.0	39,331.0	141.1	0.0	0.0	904.3	2.0	ns	ns	ns	0.0	0.0	N/A
6/28/2011	ns	2.8	ns	ns	ns	2,476.5	273.0	ns	ns	812.3	ns	ns	ns	ns	ns	ns	N/A
6/5/2012	ns	123.8	ns	ns	ns	27,096.0	222.8	0.0	ns	ns	ns	ns	ns	ns	2.8	ns	N/A

(1) - New York State Department of Environmental Conservation (NYSDEC) June 1998 Division of Water Technical and Operational and Guidance Series 1.1.1 (TOGS 1.1.1) Ambient Groundwater Standards and

Guidance Values as amended by April 2000 Supplemental Table.

Bold text denotes analyte was detected above NYSDEC Groundwater Standards

"ND" denotes analyte was not detected above the reported laboratory detection limit

"ns" denotes well not sampled

"NA" denotes Not Applicable