New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 8
6274 East Avon-Lima Road, Avon, New York 14414-9519
Phone: (585) 226-5353 • **FAX:** (585) 226-8696
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

July 31, 2008

Mr. Mark Gregor
Department of Environmental Services
Division of Environmental Quality
City Hall, Room 300-B
300 Church Street
Rochester, New York 14614

Re: Davidson Collision
Site No. C828091
February 2008 Remedial Action Work Plan
City of Rochester (C), Monroe (C)

Dear Mr. Gregor:

The New York State Department of Environmental Conservation (Department), in conjunction with the New York State Department of Health (NYSDOH) and the Monroe County Health Department (MCHD), has completed their review of the Remedial Action Work Plan (RAWP) dated February 2008 for the former Davidson Collision Site (Site). Based on the information and representations in the revised documents, the RAWP is conditionally approved with the following conditions:

1. The quarterly groundwater monitoring results will be submitted on a quarterly basis and an annual groundwater monitoring report will be submitted for review. The Department in coordination with the NYSDOH and the MCHD will review the data and evaluate if an additional year of monitoring is required and/or monitoring frequency needs to be changed.

2. Section 4.0: The trucks used for off-site transport of the soils for disposal at a permitted landfill will be inspected for soil material on the body, fenders, wheels, etc. prior to exiting the Site. If soil material is found the areas of the trucks will be brushed off on-site in a designated decontamination area. This inspection and cleaning process will greatly decrease the risk of the general public being exposed to the contaminated soils.

   The Department understands that five (5) confirmatory soil samples will be collected in RAOC3.

   The area underneath the impacted soil staging area will be either cleaned (e.g., swept, washed) if staged on asphalt after the removal of the soil material or if staged on a non-concrete/asphalt area the top 2-3 inches of soil material underneath the staged soil pile will be excavated and disposed off-site at a permitted landfill.

The bills of lading will be provided to the Department to document the source(s) of the imported fill material. In addition, soil cover and backfill material must meet the criteria presented in 6 NYCRR Part 375-6.7.

The environmental easement for the Site will indicate that the use of the Site to be restricted residential.

3. Appendix A: The Site No. is C828091. The Site Management Plan may require updating reflect site conditions after the remedial activities have been completed.

   A soil sampling (characterization) frequency needs to be included in the Site Management Plan. The Department's generic soil management plans recommend the following:

   - Visual evidence of contamination (i.e., elevated PID reading or staining) 1 composite sample and duplicate sample will be collected for each 100 cubic yards of stockpiled/staged soil/fill material.

   - For excavated soil/fill material that does not exhibit visual evidence of contamination but must be sent for off-site disposal 1 composite and duplicate sample will be collected for 2000 cubic yards of stockpiled/staged soil/fill material. A minimum of 1 composite sample and a duplicate sample will be collected for a volume less than 2000 cubic yards.

   Groundwater and precipitation water collected during the development process must be containerized and characterized for disposal purposes.

   A sub-slab depressurization work plan will need to be submitted to the Department and the NYSDOH for review and approval prior to the installation of the system. In addition, an Operations, Maintenance, and Management document will need to be submitted for review and approval.

4. Appendix B: The monitoring interval for particulate and VOCs should be 15 minutes based on the NYSDOH Generic Community Air Monitoring Plan.

5. Appendix C: The groundwater monitoring wells will be allowed to equilibrate a minimum of two (2) weeks prior to purging and sampling.

6. Appendix D: The Site number is C828091 not 828091. Charlotte B. Theobald is the Project Manager for the Department. Melissa Menetti is the Project Manager for the NYSDOH. The Monroe County Health Department Project Manager is Jeff Kosmala and his contact number is 585-753-5470. The Hospital Route Map, Figure #2, needs the route to be taken to the nearest hospital to be highlighted and/or the directions should be written out in detail for ease of sight during an emergency. Certain MSDS pages have had holes punched through the HMIS charts. New pages should be added that does not eliminate the HMIS symbols.

As per Section 6 of the May 2004 Draft Brownfield Cleanup Program Guide, the Applicant must notify the NYSDEC in writing within 20 days of receiving this letter that it chooses to accept or reject the modifications presented above. If the Applicant chooses to accept the modifications this letter becomes part of the final approved work plan.

Per the Brownfield Cleanup Agreement (XV.E), the approved work plan must be submitted to the NYSDEC in an acceptable electronic format within 30 days of approval. If any of the documents can not be converted into electronic format, the NYSDEC must be notified and an acceptable alternative format will be determined. Please submit the final RIWP on a compact disk (CD) no later than August 31, 2008.

Sincerely,

Charlotte B. Theobald

Charlotte B. Theobald
Environmental Engineer 1

cc:
Mike Storonsky (Stantec Consulting Services, Inc.)
David Belaskas, P.E. (Stantec Consulting Services, Inc.)
Jeffrey Kosmala (MCHD)
Melissa Menetti (NYS Dept. of Health - Troy)

ec:
B. Putzig (NYSDEC)
R. Knizek (NYSDEC)
J. Charles (NYSDEC)

REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
SITE NO. C828091
ROCHESTER, NEW YORK

Prepared for:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
6274 EAST AVON-LIMA ROAD
AVON, NEW YORK 14414

Prepared on Behalf of:
CITY OF ROCHESTER
30 CHURCH STREET, SUITE 300B
ROCHESTER, NEW YORK 14614

Prepared by:
STANTEC CONSULTING SERVICES INC.
2250 BRIGHTON HENRIETTA TOWN LINE ROAD
ROCHESTER, NEW YORK 14623

FEBRUARY 2008

Stantec Consulting Services Inc.
2250 Brighton-Henrietta Town Line Road
Rochester NY 14623-2706
Tel: (585) 475-1440
Fax: (585) 424-5951

Stantec

February 8, 2008
File: 190500196

Mr. Bart Putzig, P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation
6274 East Avon-Lima Road
Avon NY 14414-9519

Reference: Remedial Action Work Plan
Former Davidson Collision Site
399 Gregory Street
Site No. C828091
City of Rochester, Monroe County

Dear Bart:

On behalf of the City of Rochester, please find enclosed the revised Remedial Action Work Plan (RAWP) for the Former Davidson Collision Site located in the City of Rochester, Monroe County, New York. The report has been revised to account for the new Part 375 soil cleanup objectives and the selection by the City of a restricted residential end use. This work was performed pursuant to the City of Rochester's 2006 Brownfield Assessment Grant from the United States Environmental Protection Agency (EPA) and the City's Brownfield Cleanup Agreement with the New York State Department of Environmental Conservation (DEC). The RAWP has been prepared in accordance with the DEC's Draft Brownfield Cleanup Program Guidelines dated May 2003 and the DEC's Draft DER-10 Technical Guidance for Site Investigation and Remediation dated December 2002.

We look forward to your review and comment on the revised Remedial Action Work Plan. In the meantime, should you have any questions, please contact us.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Michael P. Storonsky
Managing Senior Associate
Tel: (585) 413-5620
Fax: (585) 424-5951
mike.storonsky@stantec.com

David P. Belaskas, P.E.
Associate
Tel: (585) 413-5621
Fax: (585) 424-5951
dave.belaskas@stantec.com

Marc Bouchard, Eng.
Environmental Engineer
Tel: (585) 413-5636
Fax: (585) 424-5951
marc.bouchard@stantec.com

Attachment:

c. Charlotte Theobald (NYSDEC – Avon)
Tamara Girard (NYSDOH – Troy)
Joseph Albert (MCDOH – Rochester)
Mark Gregor (City of Rochester)

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Executive Summary

Stantec's Remedial Investigation and Alternative Analysis Report dated September 2006 (revised January 2008) identified three alternatives for remediation of the former Davidson Collision Site at 399 Gregory Street, Rochester, NY. A location map is included as Figure 1. Alternative A is the no action alternative and includes monitored natural attenuation with an assumed duration of 30 years. Alternative B includes the excavation and off-site disposal of impacted materials from all three Remedial Areas of Concern (RAOCs) with one year of post-excavation groundwater monitoring. Alternative C includes all of the components of Alternative B, plus the direct application of a chemical additive to the open excavation of RAOC1. Based on the limited impacted areas, the contaminants of concerns, and the affected media, the recommended remedial approach was Alternative C.

The proposed remedial action includes the following:

- Decommissioning/ replacement of existing monitoring wells;
- Excavation and off-site disposal of impacted soils from RAOCs 1, 2 and 3;
- Application of an in-situ, bio-augmentation additive to the open RAOC1 excavation to promote enhanced natural attenuation of residual Volatile Organic Compound (VOC) impacted groundwater;
- Conducting one year of post excavation groundwater monitoring for VOCs in RAOC1, with the potential for conducting a second year of monitoring contingent on the first year's results;
- Preparation of an environmental site management plan for future site use and re-development; and
- Implementation of Institutional Controls including a DEC Environmental Easement and incorporating the site into the City BIS flagging system to ensure residual impacts are properly managed in the future, as necessary.

Well Decommissioning/ Replacement

Eleven (11) existing monitoring wells within and around the three RAOCs will need to be properly decommissioned prior to excavation of the impacted soils. After completion of backfilling the excavations, it is anticipated that two (2) monitoring wells (MW-101 and MW-116) in RAOC1 would be replaced.

Excavation and Off-Site Disposal

The proposed remediation of impacted soils includes excavation and off-site disposal of impacted source soils from the three (3) RAOCs including the Former Paint Booth Area (RAOC1), the Former Vehicle Maintenance/Trench Drain Area (RAOC2, subdivided into RAOC2A and RAOC2B) and MW-105 Area (RAOC3). The Former Paint Booth Area and the Former Vehicle Maintenance/Trench Drain Area are located within AOC1 and AOC2 previously identified by the DEC. The MW-105 Area is identified as RAOC3. The proposed areas of excavation are presented on Figures 4 & 5. It is proposed to remove soil as identified in the various investigations with analytical concentrations for contaminants of concern exceeding 6 NYCRR Part 375 restricted use soil cleanup objectives for the protection of public health in a restricted-residential setting (Restricted Residential soil cleanup objective or SCO).

As a part of addressing potential residual soil vapor at the Site, excavation work will include the removal of the entire concrete slab and portions of asphalt paving, and provisions for incorporating a sub-slab depressurization system (SSDS) as part of the Site Management Plan.

In-Situ, Bio-Augmentation Additive

In-situ treatment of groundwater in RAOC1 is proposed to further promote the reduction of residual VOC contaminant concentrations towards groundwater standards and guidance values or acceptable health-risk levels given the intended restricted residential use of the Site. In situ treatment is proposed to include bioremediation with an oxygen-releasing compound. Stantec proposes using EHC-O™, which is a product manufactured by Adventus Americas. This product promotes in situ bioremediation through stimulation of aerobic biodegradation of groundwater contaminants through controlled release oxygen delivery and accelerates the rate of natural attenuation.

Groundwater Monitoring

Up to two years of quarterly post-excavation groundwater monitoring will be conducted in RAOC1 to evaluate the effectiveness of the remedial program in addressing residual VOCs in groundwater. Stantec proposes to use the following six (6) wells for quarterly monitoring: MW-101R, MW-116R, MW-107, MW-108, MW-113 and MW-209.

Site Management Plan

Stantec has prepared a Site Management Plan that will be used to guide future Site development activities, including provisions for a SSDS (See Appendix A).

Institutional Controls

To the extent necessary, institutional controls including an Environmental Easement with the DEC and incorporation of the site into the City of Rochester Building Information System (BIS) flagging system are proposed to address potential residual impacts (See Section 4.22).

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1.0 Introduction

1.1 PURPOSE AND CONTENT OF REPORT

In accordance with the December 2002 Draft DER-10 Technical Guidance for Site Investigation and Remediation published by the New York State Department of Environmental Conservation (DEC) and the May 2004 Draft Brownfield Cleanup Program Guidelines, this report presents the Remedial Action Work Plan (RAWP) for 399 Gregory Street (Former Davidson Collision Site) located in the City of Rochester, Monroe County, New York (Figure 1). The RAWP was prepared by Stantec Consulting Services Inc. (Stantec) on behalf of the City of Rochester (City), pursuant to their 2006 Brownfield Assessment Grant from the United States Environmental Protection Agency (EPA) and the City's Brownfield Cleanup agreement (BCA) with the DEC.

Consistent with Section 5.3 of the Draft DER-10 document, the RAWP will include the following items:

- The location and description of any construction activities and a listing of all applicable soil cleanup objectives (SCOs) relating to the construction including inspection and professional engineering certification;
- A description of soil and sediment erosion control, storm water management and monitoring, and dust, odor and organic vapor control and monitoring procedures to be implemented during remedial activities, if applicable;
- A Health and Safety Plan;
- A detailed description of confirmation sampling and site restoration plans;
- A description of procedures for dismantling and removal of structures and equipment from the site, if applicable;
- A cost estimate, where applicable, of the remedial action;
- A schedule;
- A description of institutional controls to be implemented and written approval from the owner of the property where the institutional control will be placed, if the remedy selected requires implementation of an institutional control at an off-site location or if the person responsible for the remedy is not the site owner. It is assumed that the City will pursue the written approval of such an institutional control with the adjoining landowner(s), if needed; and

- An Operation, Maintenance & Monitoring (OM&M) plan (included as part of the Site Management Plan (SMP) in Appendix A). This will include a schedule for the submittal of the final OM&M plan, which takes into account the proposed initiation of any portion of the remedy subject to the OM&M plan.

1.2 SITE DESCRIPTION AND HISTORY

The former Davidson Collision Site (Site No. C828091) is located at 399 Gregory Street and operated as an auto body shop from the early 1960s until it went out of business in March 1993. The City of Rochester (City) acquired the 399 Gregory Street parcel in November 2004 through delinquent tax foreclosure proceedings (County of Monroe Tax Identification Number 121-650-0001.053.000). The adjacent undeveloped grass-covered 10 Cayuga Street parcel was previously part of Davidson Collision, however, it is currently owned by a third party, Mr. John Trickey. Therefore, 10 Cayuga Street is not part of the Site subject to the BCA.

1.3 INTRODUCTION OF 6 NYCRR PART 375 SCOS

Title 6 NYCRR Part 375 Regulations and Soil Cleanup Objectives (SCOs) came into effect in December 2006. It was agreed with the DEC that TAGM 4046 Recommended SCOs would be utilized for all reporting requirements for the Former Davidson Collision Site up to and including the revised Remedial Investigation and Alternatives Analysis Report first issued in September 2006 and revised in January 2008. Subsequent reports, including the Remedial Design Investigation Report issued in December 2007 and this RAWP, would employ the new Part 375 SCOs instead of TAGM. For this Site, the City of Rochester selected the restricted use soil cleanup objective for the protection of public health in a restricted-residential setting as the recommended soil cleanup objective (Restricted Residential SCO).

1.4 IDENTIFICATION OF SCGS

As per Section 1.3, Restricted Residential SCOs were selected as the Site Standards, Criteria and Guidelines (SCGs) for soil cleanup. Contaminants of concern (CoCs) at the Site are defined as the substances for which the concentrations in soil exceed the associated Restricted Residential SCO.

Even though no potable use of groundwater is allowed in the City of Rochester, as per City code, Class GA drinking water-based standards are the applicable SCG for groundwater. CoCs in groundwater were selected based on exceedances of class GA standards, or TOGS 1.1.1 guidance values.

According to the NYSDOH October 2006 Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, New York State currently does not have any standards, criteria or guidance values for concentrations of compounds in soil vapor. For comparison purposes, however, soil vapor analytical results for the Site were compared to the NYSDOH guidance criteria for sub-slab vapor, the U.S. EPA screening levels for soil vapor, and site-specific and reference background concentrations for outdoor air.

2.0 Summary of Prior Investigations

Environmental studies that have been completed at the 399 Gregory Street Site and the adjacent 10 Cayuga Street parcel and for which reports were either reviewed by or prepared by Stantec include:

- a September 1991 Phase II Investigation[1];
- an August 1995 Preliminary Site Assessment Report[2];
- a March 2003 Site Investigation Report[3];
- a September 2006 Remedial Investigation and Alternatives Analysis Report (revised in January 2008)[4]; and
- a December 2007 Remedial Design Investigation Report[5].

Previous investigations at the Site between 1991 and 1994 identified the disposal of paint waste including paint thinner through a pipe leading from a paint booth inside the shop to a storage container outside the building. In January 1993, some contaminated soil from the waste disposal area was excavated. However, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and 1993 activities were performed without DEC approval or oversight. In 1994, the DEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the Site.

As such, the DEC conducted an investigation in 2000-2002 to obtain additional information regarding the nature and extent of contamination at the Site and to determine if the Site represents a significant threat to human health or the environment. The DEC concluded there was a small, highly impacted Volatile Organic Compound (VOC) source area, but nearby residents were not impacted. The City subsequently obtained an EPA Brownfield grant and applied to the DEC to address the Site through the State's Brownfield Cleanup Program (BCP).

Given the results from the investigations performed prior to Stantec's involvement, Stantec's 2005 Remedial Investigation (RI) (revised in January 2008) focused on two areas of concern (AOCs) previously identified by the DEC, based on TAGM 4046 Recommended SCOs. These two AOCs include the former waste paint disposal area (AOC1) and the former vehicle maintenance/trench drain area (AOC2). A third AOC was identified by the DEC in their 2000-2002 investigation and was further delineated by a Remedial Design Investigation (RDI) performed by Stantec in 2007. In subsequent discussions, AOCs will be referred to as Remedial Areas of Concern (RAOC). The numbering scheme of AOCs and RAOCs has been maintained, such that AOC1 coincides with RAOC1, and so on.

The following summary of analytical results for soils utilizes Restricted Residential SCOs instead of the TAGM 4046 Recommended SCOs used in previous studies.

2.1 SOILS ANALYTICAL RESULTS

A summary of analytical results in excess of Restricted Residential SCOs is presented in Table 4. Also refer to Appendix A (Soil Management Plan) for complete analytical results for Stantec's RI and RDI.

2.1.1 RAOC1

Results from previous site investigations indicate no impacts from VOCs to soils at concentrations above Restricted Residential SCOs outside the previously investigated waste disposal and paint booth area (RAOC 1). Within RAOC1, comparison to Restricted Residential SCOs indicates exceedances for ethylbenzene, toluene and xylenes between 6 and 8 ft. bgs.

2.1.2 RAOC2

Within RAOC2, soil samples collected in B-213, B-216/MW-216 and B-217/MW-217 exceed Restricted Residential SCOs for metals. Cadmium exceeds its SCO in B-213 from ground surface to a depth of 4 feet, lead exceeds its SCO in B-217/MW-217 from 0 to 4 ft. bgs, while copper and lead exceed their respective SCOs in B-216/MW-216 from 0 to 4 ft. bgs. RAOC2 consists of two sub-areas: RAOC2A to the north, encompassing B-213 and B-217/MW-217, and RAOC2B to the south, which includes B-216/MW-216.

2.1.3 RAOC3

A third potential Remedial Area of Concern (RAOC3) was identified at the MW-105 location where metals impacts in excess of Restricted Residential SCOs (arsenic, cadmium and selenium) were reported in a 6-8 ft. bgs soil sample. This boring/monitoring well is located on the City property slightly east of RAOC1 along the common property line with 10 Cayuga Street.

The RDI found no metals impacts in boreholes installed radially at regular intervals around MW-105 (refer to Figure 4 for borehole locations and Appendix A for RDI analytical results).

2.2 GROUNDWATER ANALYTICAL RESULTS

Metals in site-wide groundwater have exhibited elevated concentrations for iron, magnesium, manganese and sodium. These elements are common in regional soils and urban fill and as a result are often elevated in groundwater. In addition, cadmium was reported above its GSGV in one bedrock well, MW-BR3, in March 2001. Given the City's ordinance, which prohibits the use of drinking water wells, and the absence of completed exposure pathways, the site-wide presence of metals in groundwater does not warrant further investigation or remedial measures.

2.2.1 RAOC1

Groundwater samples collected during the RI were reported to contain low-level concentrations of VOCs in RAOC1 within MW-101 and MW-116 above DEC groundwater standards and guidance values (GSGVs). During prior sampling events, VOCs were reported at much higher concentrations in both MW-101 and MW-116 suggesting that natural attenuation may be occurring.

Stantec observed a very thin (< 1/16-inch) light non-aqueous phase liquid (LNAPL) layer in MW-101. During a prior investigation, LNAPL was reported in nearby well MW-116. However, no LNAPL was detected in MW-116 or any other boring or well in the vicinity of MW-101 during the RI. Based upon these limited LNAPL findings, the presence of LNAPL appears to be a localized condition within RAOC1. Given the VOCs and LNAPL observed, remediation of groundwater impacts was recommended in RAOC1.

2.2.2 RAOC2

No VOCs or SVOCs were reported at concentrations above DEC GSGVs in the 2005 RI monitoring wells within RAOC2.

2.2.3 RAOC3

No VOCs or SVOCs were reported at concentrations above DEC GSGVs in the 2005 RI monitoring wells within RAOC3.

2.3 SOIL VAPOR ANALYTICAL RESULTS

A perimeter soil vapor survey was carried out as part of the RDI[5]. Low level chlorinated and petroleum VOC concentrations were reported in both the soil vapor samples and background outdoor air sample collected on June 12, 2007 (refer to Appendix A for a summary of soil vapor analytical results). The results did not identify areas of significantly elevated concentrations of volatile chemicals in soil vapor nor do they indicate significant sources of subsurface vapor contamination that would present a significant risk of potential adverse SVI impacts on the Site or on adjacent properties. A possible explanation for the concentrations detected may be that the concrete slab and the asphalt parking surface are acting as a cap for capturing and containing residual volatile organic vapors.

3.0 Summary of Alternatives Analysis

The following recommended remedies were updated from the original Remedial Investigation and Alternatives Analysis Report[4] to reflect the use of Restricted Residential SCOs, and also to include the results of the Remedial Design Investigation[5]. An updated alternatives analysis matrix is presented in Table 1, followed by a listing of design assumptions in Table 2, an updated Restricted Residential SCO OPC in Table 3, a TAGM Recommended SCO soil cleanup summary in Table 4 (as a reference) and a Restricted Residential SCO soil cleanup summary in Table 5.

3.1 RAOC1 REMEDY

Within RAOC1, soil with VOC and/or SVOC impacts in excess of Restricted Residential SCOs has been reported in MW-101 between 6 and 8 ft. bgs. The maximum anticipated depth of concentrations exceeding SCOs is 11 ft. bgs, accounting for overburden geology. As a result, alternative C is recommended. This alternative entails excavation and off-site disposal of a ±150 sq. ft. area to an estimated depth of 11 ft., totaling an estimated ±70 CY of soil. A ±110 sq. ft. area of asphalt from the parking area immediately west of RAOC1 will need to be removed and disposed of offsite, then restored. Contingent on excavation wall stability, potential 1:1 sloping would require the removal of an additional estimated soil volume of ±160 CY that would be reused onsite as backfill. Removal of the concrete within the pit immediately east of RAOC1 is included in this recommendation. In situ groundwater treatment is also recommended. This would involve applying an estimated 230 lbs. of EHC-O™, an oxygen additive, to the open excavation to assist in addressing residual VOC impacted groundwater.

Following excavation and the application of an oxygen additive to the excavation, up to two years of groundwater monitoring would be conducted to verify the effectiveness of the remedial measures.

3.2 RAOC2 REMEDY

Within RAOC2, impacted soils where copper, cadmium and lead were found above Restricted Residential SCOs are recommended for removal (Alternative C) within fill material in the 0-4 ft. bgs interval. This alternative will involve excavation and off-site disposal of ±150 CY of metals-impacted soil in two sub-areas containing B-213 & B-217/MW-217 (RAOC2A) and B-216/MW-216 (RAOC2B). It is anticipated that approximately ±50 CY of soil excavated within RAOC2A and RAOC2B will be reused on-site as backfill. Soils at depths greater than four feet are considered unlikely to create significant human health or ecological exposure pathways and are therefore not recommended for removal, however confirmatory soil samples will be collected to further evaluate residual concentrations.

3.3 RAOC3 REMEDY

Metals of concern reported in soils in MW-105 (6-8 ft. bgs) above Restricted Residential SCOs involving arsenic, cadmium, and selenium are recommended for physical removal. Boreholes installed radially at regular intervals around MW-105 during the Remedial Design Investigation did not present metals concentrations above SCOs, hence restricting the extent of removal to the limits shown on Figure 4. An estimated 100 CY will require removal to a depth of 8 ft. bgs, ±30 CY of which will need to be disposed of offsite. It is anticipated that the remaining ±70 CY can be reused onsite as backfill.

3.4 SOIL VAPOR REMEDY

To address potential residual vapors, the concrete slab and portions of the asphalt parking surface (refer to Figure 5) will be removed as part of the remedial action at the Site to allow for evaluation of subsurface conditions and to eliminate their potential capping effect. The concrete slab covers an area of approximately 6,970 sq. ft. and is estimated to be approximately 12 inches thick. The surface area of asphalt requiring removal is approximately 1,690 sq. ft. and the asphalt is assumed to be approximately 3 inches thick. An estimated ±260 CY of concrete and ±20 CY of asphalt are estimated for removal and off-site disposal, followed by restoration with up to 12 inches of crushed stone and/or an appropriate asphalt base and top coat contingent upon the anticipated uses at that time. These asphalt quantities exclude asphalt removal and restoration work required to excavate soils from RAOC1 with 1:1 slopes. In addition, it is recommended that future buildings at the Site be designed and constructed such that a sub-slab depressurization system can be operated to address potential volatile organic vapor concerns that may remain following implementation of the remedial action.

4.0 Remedial Action and Remedial Technology

As per Section 3.0, we have identified three (3) RAOCs with contaminants of concern that are believed to warrant remedial measures. Based on the limited impacted areas, the contaminants of concerns, and the affected media, the proposed remedial action includes the following:

- Decommissioning/ replacement of existing monitoring wells;
- Excavation and off-site disposal of impacted soils from RAOCs 1, 2 and 3;
- Application of an in-situ, bio-augmentation additive to the open RAOC1 excavation to promote enhanced natural attenuation of VOC impacted groundwater;
- Conducting one year of post excavation groundwater monitoring for VOCs in and around RAOC1, with the potential for conducting a second year of monitoring contingent on the first year's results;
- Preparation of an environmental site management plan for future site use and re-development; and
- Institutional Controls - Implementation of a DEC Environmental Easement and incorporating the site into the City BIS flagging system to ensure residual impacts are properly managed in the future, as necessary.

4.1 WELL DECOMMISSIONING/ REPLACEMENT

It is anticipated that a total of eleven (11) monitoring wells will need to be decommissioned prior to or during excavation work, as shown on Figure 5.

Three (3) existing monitoring wells in RAOC1 (MW-101, MW-116 and MW-BR-1) will need to be properly decommissioned prior to or during excavation of the impacted soils. It is anticipated that only MW-101 and MW-116 would be replaced (see below).

Two (2) existing monitoring wells in RAOC2 (MW-216 and MW-217) will need to be properly decommissioned prior to excavation of the impacted soils. We do not anticipate replacing these wells.

One (1) existing monitoring well in RAOC3 (MW-105) will need to be properly decommissioned prior to or during excavation of the impacted soils. We do not anticipate replacing this well.

In addition, five (5) monitoring wells located within the anticipated limits of concrete and asphalt removal will need to be decommissioned prior excavation/removal work. These wells include MW-103, MW-104, MW-106, MW-114 and MW-208. We do not anticipate replacing these wells.

The replacement monitoring wells in RAOC1 (MW-101 and MW-116) will be completed with two-inch monitoring wells placed during backfill activities in order to be used in the two-year groundwater monitoring program. The proposed replacement wells will be located in approximately the same locations as the wells being replaced. The wells will be numbered consistently with the previous well IDs followed by an “R” for replacement (MW-101R and MW-116R).

Each groundwater monitoring well will be constructed of 2-inch diameter, schedule-40 PVC with 10-ft. long, 0.010-inch slot well screens. If there is sufficient annular space, sand packs will consist of fine sand extending 24 inches above the well screens. The sand packs will be capped with bentonite seals and the remaining annulus will be grouted to the surface. The wells will be completed with locking, flush-mounted protective casings.

4.2 EXCAVATION

The proposed remediation of impacted soils includes excavation and off-site disposal of impacted source soils from three (3) separate RAOCs including the Former Paint Booth Area (RAOC1), Former Vehicle Maintenance/Trench Drain Area (RAOC2A and RAOC2B) and MW-105 Area (RAOC3), as per Section 3.0. The Former Paint Booth Area and Former Vehicle Maintenance/Trench Drain Area are located within AOC1 and AOC2 previously identified by the DEC. The proposed areas of excavation are presented on Figure 4. These proposed limits are based on laboratory analytical results. It is proposed to remove soil as identified in the various investigations and analytical concentrations of concern exceeding SCGs. Initially, a PID reading of 5 parts per million (ppm) will be used to delineate the excavation limits. However, based on laboratory data from initial confirmatory soil samples, adjustments to the PID field screening criteria upward from 5 ppm would be requested, as supported by laboratory results.

Prior to the excavation work, the Engineer will delineate the approximate excavation areas using a real-time differential global positioning system (DGPS) unit. The Contractor will then excavate the impacted soils to the limits and depths shown and as directed by the Engineer. The Contractor shall comply with local codes, ordinances, and requirements of authorities having jurisdiction to maintain stable excavations. Due to the recommended 1H:1V excavation slopes that have been prescribed to maintain proper slope stability, it is anticipated that not all of the excavated material will require off-Site disposal. The apparent non-impacted soils will be staged near the excavation areas for later use as backfill.

The Contractor will provide means to prevent storm water runoff from entering open excavation areas with placement of soil berms and/or drainage swales.

The Engineer will provide confirmation of Site conditions during excavation activities including observation for visual staining and fill materials, or evidence of free product and odors. The Engineer will perform screening of soils for VOCs using a Photoionization Detector (PID). The PID will also be used to differentiate the anticipated non-impacted soils.

PID field screening will be used to assist in delineating the extent of the impacts within the three RAOCs. An initial cut-off of 5 ppm will be used to determine excavation limits prior to confirmatory sampling.

The Contractor shall immediately relocate the impacted soils to the staging area shown on Figure 5 and keep it segregated from the apparent non-impacted fill-type soils. The Contractor will employ the necessary procedures and precautions during excavation to limit the amount of intermixing of impacted and apparent non-impacted soils.

4.3 IN-SITU, BIO-AUGMENTATION ADDITIVE

In-situ treatment of groundwater in RAOC1 will be used to further reduce VOC contaminant concentrations to groundwater standards and guidance levels or acceptable health-risk levels. In-situ treatment is proposed to include bioremediation with an oxygen-releasing compound. Stantec proposes using EHC-O™, which is a product manufactured by Adventus Americas. This product promotes in situ bioremediation through stimulation of aerobic biodegradation of groundwater contaminants through controlled release oxygen delivery and accelerates the rate of natural attenuation.

EHC-O™ is a product manufactured by Adventus Americas. The EHC-O™ Bioremediation technology is $Ca0_2$ based with trace nutrients added to further support microbial activity, and a pH buffering agent to prevent self-encapsulation and a shorter period of effectiveness, which can occur with other products.

The in-situ groundwater treatment system will consist of the direct application of 230-lbs. of the bioremediation agent to the open excavation following removal of impacted soils.

4.4 GROUNDWATER MONITORING

One year of quarterly post-excavation groundwater monitoring will be conducted in RAOC1 to evaluate the effectiveness of the remedial program in addressing VOCs in groundwater. The results will be reviewed by the DEC to determine if a second year of groundwater may be needed. Stantec proposes to use the following six (6) monitoring wells for sampling: MW-101R, MW-116R, MW-107, MW-108, MW-113 and MW-209.

Prior to groundwater sampling, monitoring wells will be purged utilizing disposable bailers. General water quality field parameters (i.e. turbidity, pH, specific conductance, temperature, and oxidation-reduction potential) will be monitored during purging.

4.5 SITE MANAGEMENT PLAN

Prior to commencement of Site earthwork activities, the Contractor shall review and implement the SMP prepared by Stantec (See Appendix A).

Proper management will require that care be taken in planning, as well as monitoring and characterization of the soil/fill materials and water to confirm their non-hazardous status and allow for proper off-Site disposal or relocation on-Site. The SMP provides guidance for planning and performing such monitoring, testing and management of excavated soil/fill materials or groundwater that may be encountered.

4.6 INSTITUTIONAL CONTROLS

To the extent necessary, institutional controls including an Environmental Easement with the DEC, a site-specific environmental Site Management Plan, and incorporation of the site into the City of Rochester's Building Information System (BIS) flagging system are proposed to address potential long-term exposure (See Section 4.23).

4.7 CONSTRUCTION FACILITIES

4.7.1 Decontamination Pad

The Contractor will construct a temporary decontamination pad that will be used to decontaminate the earthwork related equipment. If well decommissioning is required, the decontamination pad will also be used by the drilling Contractor for decontamination activities. It is expected that trucks used for off-Site transportation of soils will not come in contact with the Site soils and will therefore not require decontamination.

The decontamination pad shall be constructed of two layers of 6-mil polyethylene sheeting with a sump for the purposes of collecting wash waters. Wash waters will be stored in 55-gallon drums and properly disposed of off-Site at the end of the project. Accumulated sediments are proposed to be disposed of with the impacted soils. The Contractor will be responsible for all characterization analysis required for disposal. The decontamination pad will be covered when not in use to limit collection of rainwater.

The decontamination pad will be disposed of off-Site at the completion of the project. The City will approve the proposed disposal facility prior to use by the Contractor. The City will review, approve, and sign all documentation-related paperwork as the generator.

The Contractor will provide a minimum 250-gallon aboveground storage tank for the storage of potable water that will be used for decontamination activities. If necessary, the Contractor will obtain and keep current a hydrant use permit for the duration of the project.

4.7.2 Impacted Soil Staging Area

The Contractor will construct and maintain staging areas comprised of a layer of 6-mil polyethylene sheeting for staging the excavated impacted soil. The Contractor will cover the staged materials during non-working hours with a layer of 6-mil polyethylene sheeting. The covers will be anchored or weighted at the edges to prevent stormwater and wind borne erosion.

Figure 5 shows the proposed location of the equipment decontamination and soil staging areas.

4.7.3 Dewatering Area

It is anticipated that groundwater will be encountered during excavation of RAOC1. Should field conditions be such that groundwater is encountered during earthwork activities, the Contractor shall make arrangements for the use and staging of excavation dewatering and storage equipment. The Contractor will be responsible for characterization, analysis, and disposal of the groundwater collected as part of these RAWP activities. The City will approve the proposed disposal facility prior to use by the Contractor. The City will review, approve, and sign all documentation related paperwork as the generator.

4.7.4 Temporary Perimeter, Excavation, and Staged Soil Pile Fence Installation

The Contractor will erect temporary, 4-foot high, orange construction fence around the perimeter of proposed Site-related work, the staged soil piles and the proposed excavation areas described in Section 3.0 and Figures 4 and 5. The purpose of the fencing will be to prevent accidental entry into the Site, staged soil piles, and excavations. Fencing shall be in place at all times when any excavation is left unattended. The fencing shall remain in place until final backfilling of the area is completed.

4.7.5 Location of Remedial Treatment Units

The remedial technology proposed for this site is excavation with an in-situ, bio-augmentation additive. This technology does not require the use of remedial treatment units.

4.8 RESIDUAL CONTAMINANTS IN EXCESS OF SCGS

Cleanup levels will be reevaluated once the remediation has been managed to the limits of the technology. The cleanup cannot be considered completed unless it is demonstrated that on-site contamination will not migrate off-site at concentrations that adversely impact the ability of off-site groundwater to meet applicable SCGs. If the remediation is operated to its practical limits, and the Department approves ceasing its application and/or continuation, then additional technologies may need to be evaluated to contain these contaminants on-site. These technologies must include appropriate engineering and institutional controls and be protective of public health and the environment.

4.9 WETLANDS, STREAMS AND OTHER HABITATS

Based on previous investigations and current knowledge of the Site, there have been no wetlands, streams or other habitats identified that would be impacted by the proposed remedial action.

4.10 CONFIRMATORY SAMPLES

Based upon requirements within Draft DER-10 document, confirmatory samples for subsurface spills, 20 to 300 feet in perimeter, require the following number of samples:

- One sample from the bottom of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

Using this information, the following number of confirmatory samples is anticipated:

RAOC1 – Five (5) samples, including four (4) sidewalls and one (1) floor.

RAOC2A & 2B – Ten (10) samples, including eight (8) sidewalls and two (2) floors.

RAOC3 – Five (4) samples, including four (4) sidewalls and one (1) floor.

The Engineer will proposes to submit the soil samples plus the required QA/QC samples (MS/MSD and blind field duplicate) to a New York State Department of Health (NYSDOH) certified laboratory with current ELAP certification for analysis as follows:

- Target Compound List (TCL) and VOCs plus Tentatively Identified Compounds (TICs) using USEPA Method OLM 4.2.

All soils will be subject to ASP category B deliverables.

Proposed waste characterization sampling of the segregated, staged, impacted soil includes the following: one (1) sample from RAOC1, two (2) from RAOC2 and one (1) from RAOC3.

4.11 SITE RESTORATION PLANS

The Site restoration activities include backfill of excavations with apparent non-impacted excavated soils, backfill with imported clean fill, Installation of up to 12 inches of crusher run stone over excavation areas and areas where concrete and asphalt required permanent removal, restoration of asphalt parking areas (RAOC1), proper off-site disposal of staging area materials and impacted soil/groundwater and removal off-site of all other site construction facilities as directed by the Site Management Plan (See Appendix A).

4.12 SOIL AND SEDIMENT CONTROL

The Contractor will install and maintain a silt fence (Mirafi 100X or equivalent) keyed into the existing ground along the down slope side of the proposed excavations. The silt fence will be removed and disposed of off-Site at the completion of the project.

4.13 STORM WATER MANAGEMENT AND MONITORING

Due to the relatively shallow nature of the RAOC2 and RAOC3 excavations (i.e. 4 to 8 feet below ground surface) and the apparent depth to groundwater of approximately 10 feet below ground surface, it is considered unlikely that groundwater will collect within these excavations. However, groundwater may be encountered in RAOC1 given the proposed depth of excavation of 11 feet.

If groundwater is encountered or rainwater accumulates in the excavations, it could be transported and disposed off-Site at a properly permitted facility or potentially discharged to the Monroe County Pure Waters (MCPW) sewer system. As a precautionary measure, the Contractor may be required to mobilize a frac tank to the Site, which could be used to contain up to 20,000 gallons of groundwater or rainwater that may be encountered during the excavation program. The following steps will be taken to receive permission from MCPW to discharge the accumulated groundwater; if deemed appropriate:

- Written notification to MCPW of intent to discharge to their sewer system;
- Completion of a Permit Application for the discharge of accumulated groundwater;
- Sampling and analysis of accumulated groundwater as required and specified by MCPW;

- If required by MCPW (based on laboratory data), treatment of groundwater by activated carbon adsorption or other methods;
- Following approval, conduct a Site visit with a MCPW representative and select a sewer manhole for discharge of accumulated groundwater; and
- Discharge of accumulated groundwater to the selected MCPW manhole.

4.14 DUST, ODOR AND ORGANIC VAPOR CONTROL

A Community Air Monitoring Plan (CAMP) is included as Appendix B.

4.15 QUALITY ASSURANCE (QAPP)

A Quality Assurance Project Plan (QAPP) is included as Appendix C.

4.16 OPERATIONS MAINTENANCE & MONITORING (OM&M) PLAN

Provisions for periodic certifications and identifications of restrictions for site use, soil excavations and groundwater use are included as part of the Site Management Plan (Appendix A).

4.17 HEALTH AND SAFETY PLAN

A Health and Safety Plan (HASP) is included as Appendix E.

4.18 PROJECT MANAGEMENT

The Project Manager has primary responsibility for the development and implementation of the BCP Remedial Action Work Plan, including coordination among the task leaders. The Project Manager will identify staff requirements, direct and monitor site progress, and be responsible for project performance within the established budget and schedule. He or she will also coordinate the activities of the task leaders, support staff, acquisition of engineering or specialized technical support, and all other aspects of the day-to-day activities associated with the project.

Project Engineers will be responsible for management of construction and installation activities, in addition to overall project quality, including the development of the SAP, review of task-specific QA/QC procedures, review of laboratory, vendor, and contractor plans and procedures, review of draft and final reports, and auditing of specific tasks at established intervals. They will also be responsible for management of on-site operations including sampling and well installation activities. Project Engineers will ensure that the subcontractor laboratories perform analyses as described in the QAPP, in conformance with QA/QC requirements. They will be responsible for proper collection, packaging, preservation, and shipping of samples in accordance with the QAPP and other Department guidelines, and for reviewing validated data and transmitting them to the project team for use in evaluations, analyses, and reports. Project Engineers will report directly to the Project Manager.

One or more ELAP accredited analytical laboratories will provide analytical services during remediation of the Site.

A specialty environmental contractor, which is knowledgeable about soil excavation and application of an in-situ, bio-augmentation additive, will perform the remediation. They will be responsible for the mobilization and setup of the system on site, with observation from the Engineer.

4.19 PERMITS

A sewer discharge permit will be required from Monroe County Pure Waters to discharge collected water, if necessary. In addition, an excavation permit, a construction permit, a demolition permit, a fill permit, a roadway obstruction permit and/or a hydrant use permit may be required from the City of Rochester. The required permits will be obtained by the contractor prior to commencement of work.

4.20 COST ESTIMATE

Stantec previously prepared an Opinion of Probable Range of Remedial Costs (OPRC) as part of the RI/AA[4] report. An updated revised OPC for the Restricted Residential SCO option is included as Table 3.

4.21 SCHEDULE

The anticipated project schedule for implementation of remedial activities at the Site is shown in Figure 7. In developing this schedule, a 45-day period has been assumed for Department review and approval of the RAWP, including the public comment period, followed by an additional 30-day period to complete the Record of Decision. It has also been assumed that the required permits (e.g., sewer discharge permit for discharge of treated groundwater) can be obtained in a timely fashion.

4.22 INSTITUTIONAL CONTROLS

An environmental easement will be granted the Department restricting use of the Site to commercial/industrial uses and prohibiting the use of the groundwater until the remedial measures are completed with the Department's approval. However, the City does not permit the use of groundwater in this area as a drinking water supply. If the then-applicable SCGs for unrestricted use are not attained at completion of the remedial measures, it is anticipated that an environmental easement will continue to be in effect with such modifications as the Department deems appropriate, based upon the degree of cleanup attained. In addition, a Site Management Plan has been prepared for any future excavations at the Site.

Given the lack of use of the property for a number of years, the current land use will be unaffected by the recommended remedy. Following completion of the remedial measures, it is anticipated the property will be able to be reused to its full potential consistent with zoning regulations. Any potential limitations associated with residual metals or other potential low level contaminants, as defined in an Environmental Easement and the City's BIS flagging program, are not expected to adversely affect future land use.

4.23 FLAGGING SYSTEM

The City of Rochester has established a procedure for "flagging" the tax account numbers of properties that require special environmental reviews as a result of hazardous waste or hazardous substance contamination. The reviews are conducted as referrals to the City's Division of Environmental Quality (DEQ) for any permit applications for properties where soil management plans or environmental contingency plans need to be followed during construction activities.

Once the Soil and Groundwater Management Plan is approved by the DEC, the City will "flag" the parcels that comprise the Site and they will be subject to a special environmental review prior to issuance of a permit. A special notation will be added to the City's mainframe computer database of property information.

The notation will appear as a "flag" to City staff that receive various building and site preparation permit applications. The flag will require a referral to the City's DEQ before the application can be processed for approval. DEQ staff will review the permit application for consistency with the Soil Management Plan, limited-use areas and land-use restrictions. A notification to the DEC can be included at the time the permit is reviewed if warranted given the scope of the proposed work and other Site-specific factors.

References

[1] "Phase II Investigation, Davidson's Collision, 399 Gregory Street, Rochester, New York. Prepared by Day Environmental, Inc., September 21, 1991."
[2] "Preliminary Site Assessment Report, Davidson's Collision, DEC Site No. 828091, Rochester, New York. Prepared by ABB Environmental Services, August 1995."

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[3] "Site Investigation Report, Davidson's Collision, Site No. 828091, Rochester, New York. Prepared by Frank Sowers, PE, New York State Department of Environmental Conservation, Division of Environmental Remediation, Region 8, March 2003."
[4] "Remedial Investigation and Alternative Analysis Report, Former Davidson Collision Site, 399 Gregory Street, Rochester, New York. Prepared by Stantec Consulting Services Inc., September 2006, revised January 2008."
[5] "Remedial Design Investigation Report, Former Davidson Collision Site, 399 Gregory Street, Site No. C828091, City of Rochester, Monroe County. Prepared by Stantec Consulting Services Inc., December 2007."

Figures

Geographic Information Systems

Cartographic Design By: Marc Bouchard

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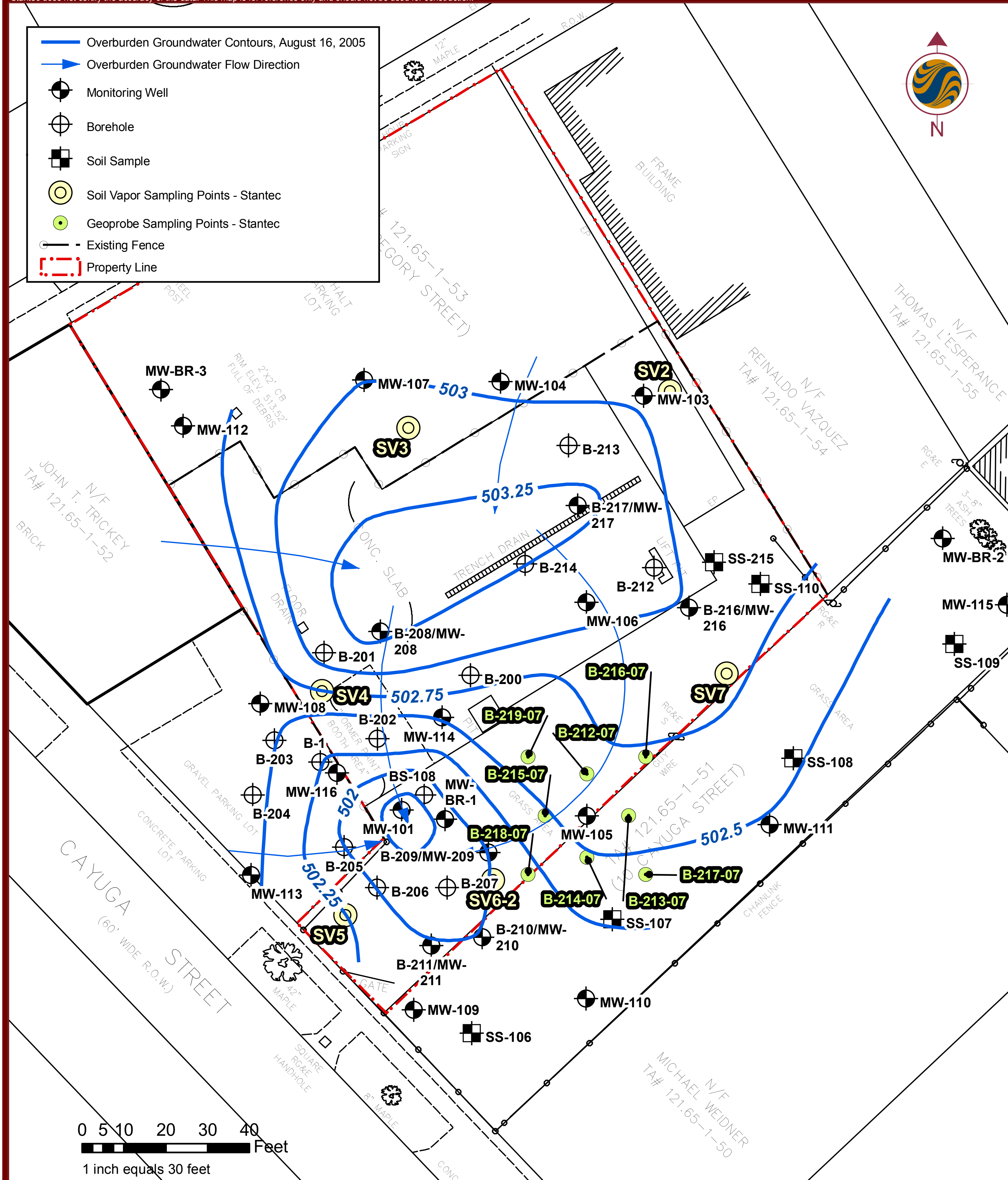
\\us1275-f02\shared_projects\190500196\drawing\RAWP_January2008\Figure1_RAWP_Site_Location_Jan08.mxd

Stantec Consulting
2250 Brighton Henrietta Townline Road
Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
www.stantec.com

Figure 1 - Site Location
Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

This map may contain data from a variety of sources. This map is not intended to replace a survey by a Licensed Surveyor.
Stantec does not certify the accuracy of the data. This map is for reference only and should not be used for construction.



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Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
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Figure 2 - Overburden Groundwater Contours - August 16, 2005

Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

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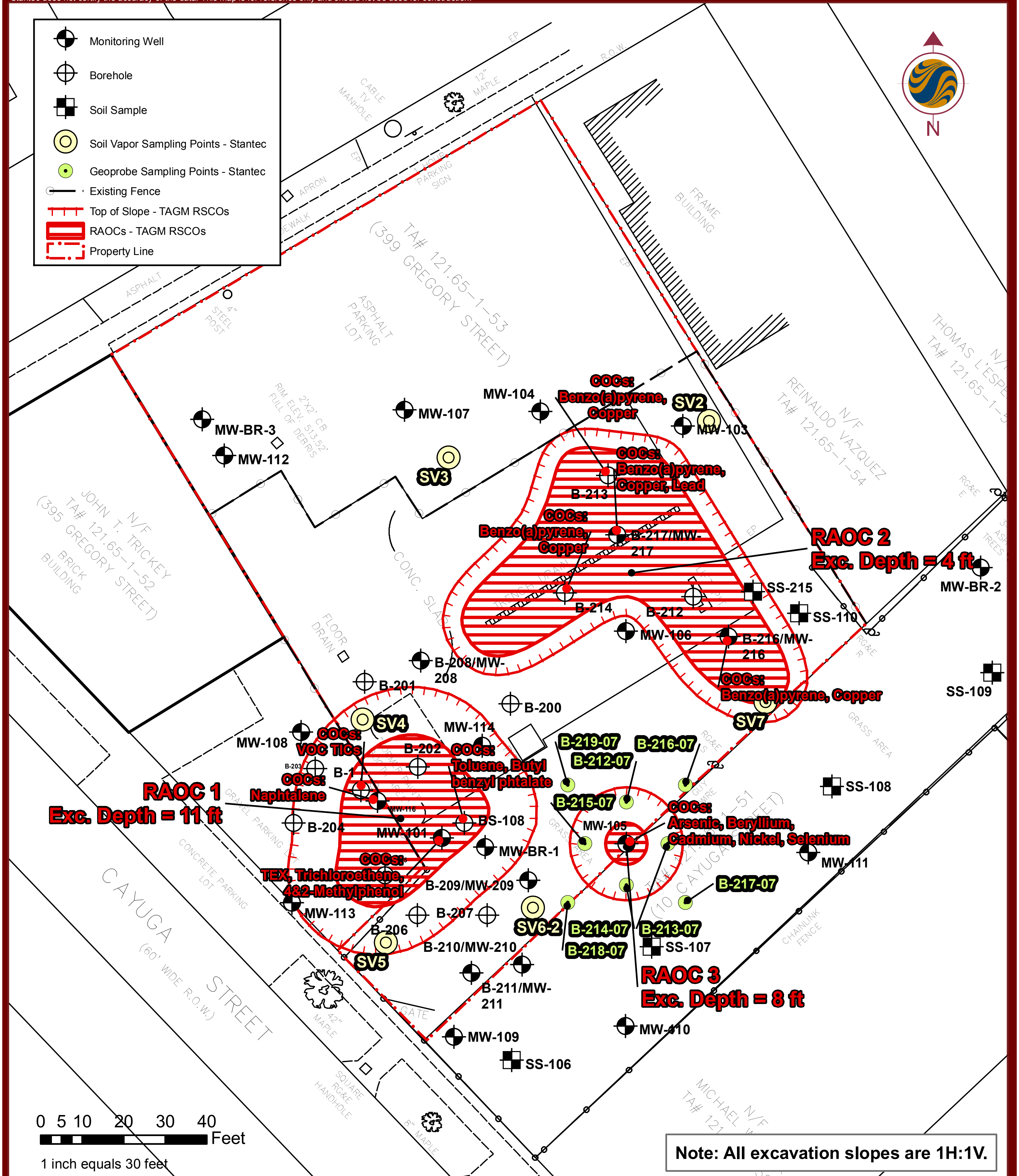

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Rochester, NY 14623
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Figure 3 - TAGM RSCO Excavation Plan

Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

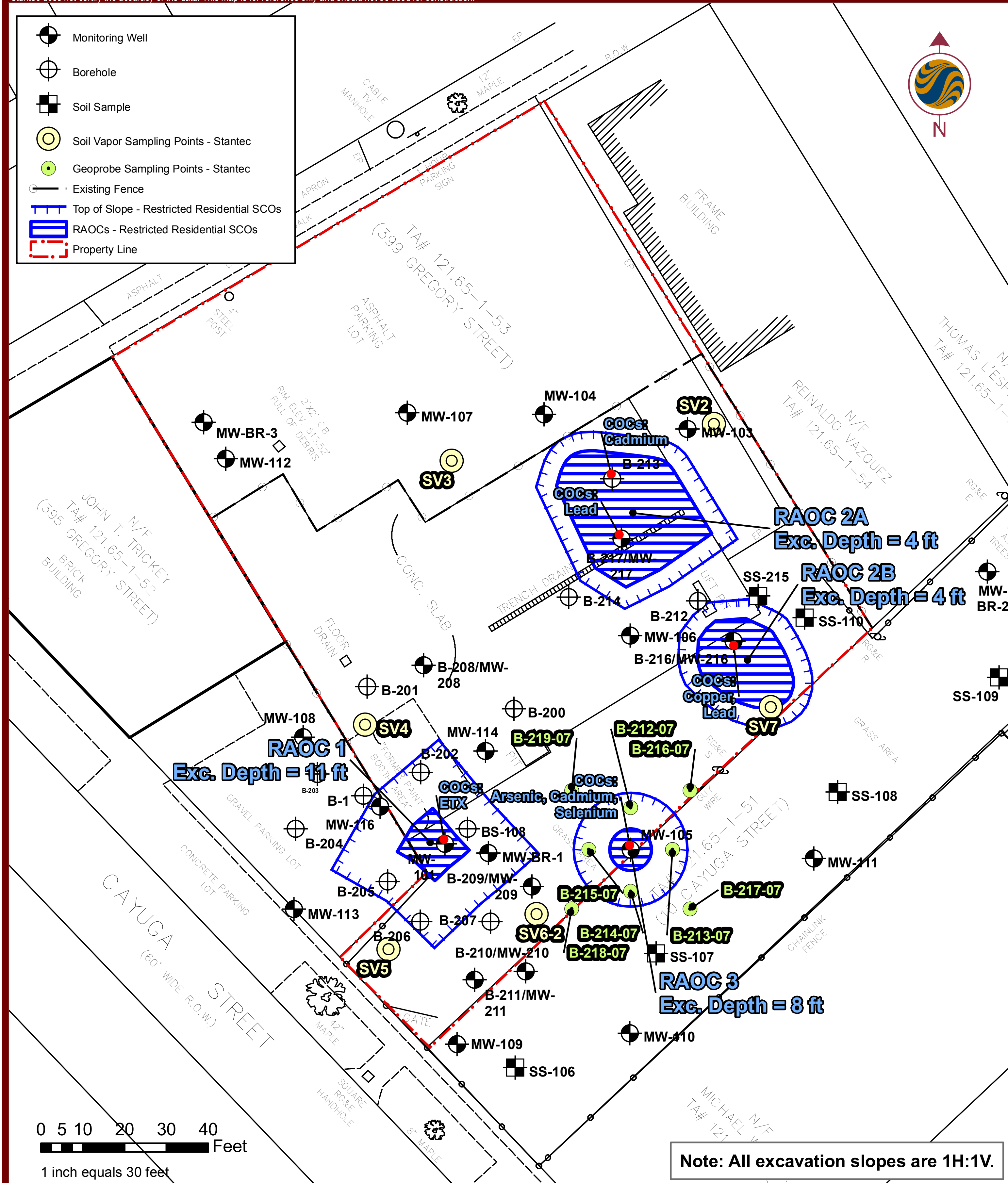

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Figure 4 - Restricted Residential SCO Excavation Plan
Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

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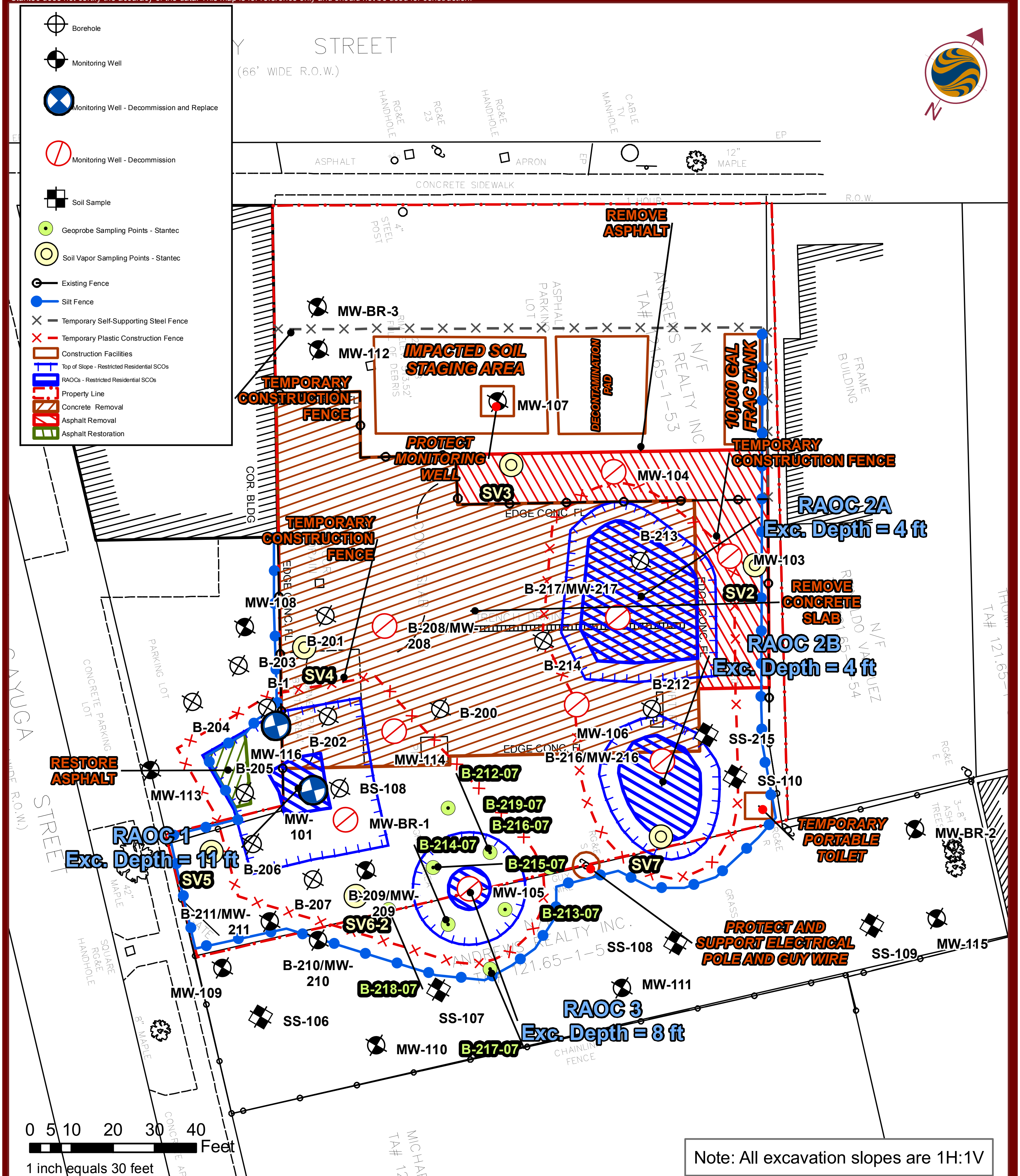

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Rochester, NY 14623
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Figure 5 - Construction Facilities

Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

GENERAL NOTES:

1. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, SERVICES AND EQUIPMENT NECESSARY TO PERFORM THE WORK AS DESCRIBED IN THE REMEDIAL ACTION WORK PLAN.

2. THE CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION FENCING AROUND OPEN EXCAVATION AREAS DURING NON-WORKING HOURS.

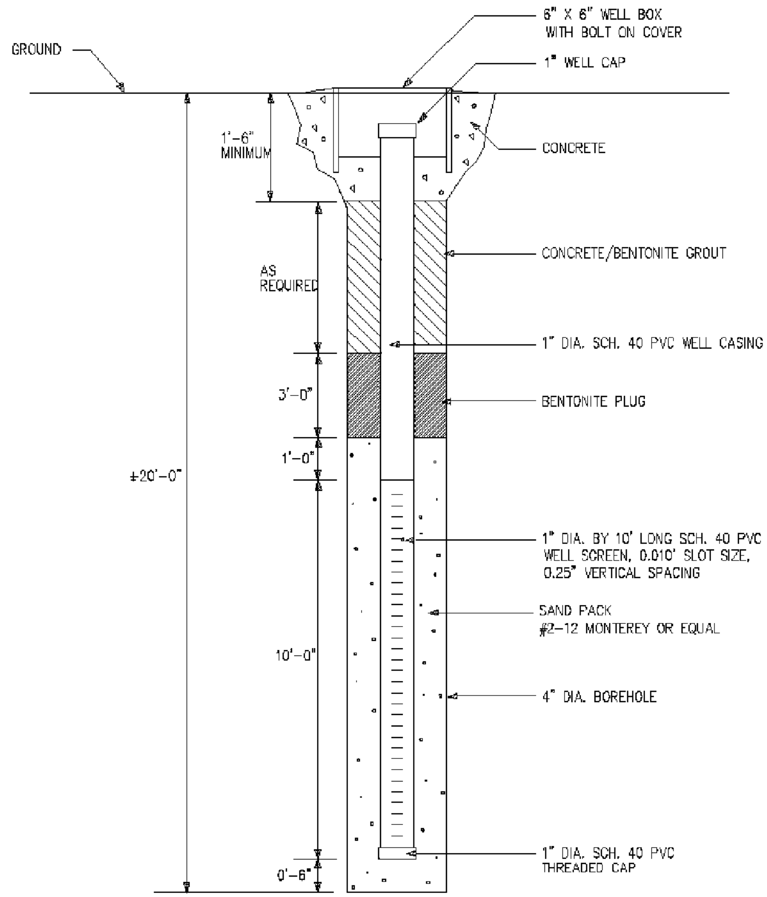
3. WATER, SEWER AND ELECTRIC SERVICE ARE NOT AVAILABLE AT THE SITE.

4. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND MATERIALS ON ADJACENT LOTS TO THE SITE. IF DAMAGED DURING PERFORMANCE OF THE WORK, THESE STRUCTURES AND MATERIALS SHALL BE REPLACED BY THE CONTRACTOR AT THEIR OWN EXPENSE IN ACCORDANCE WITH STANTEC'S DIRECTION.

5. THE CONTRACTOR WILL PERFORM EXCAVATION AND SHORING/BRACING OF THE EXCAVATION AREAS TO PROTECT BUILDING ELEMENTS, WORKERS, STREETS, WALKWAYS, UTILITIES AND OTHER IMPROVEMENTS AGAINST LOSS OF GROUND OR CAVING EMBANKMENTS, IN ACCORDANCE WITH OSHA REGULATIONS.

6. PERSONAL PROTECTION AIR MONITORING SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THEIR HEALTH AND SAFETY PLAN. CONTRACTOR TO PROVIDE ALL EQUIVALENT PERSONAL PROTECTION EQUIPMENT FOR STANTEC'S, DEC'S AND CITY OF ROCHESTER'S USE.

7. CONTRACTOR TO COLLECT AND ANALYZE SAMPLES FOR WASTE CHARACTERIZATION PURPOSES FROM STAGED MATERIAL. AFTER LABORATORY TESTING RESULTS ARE RECEIVED BY THE CONTRACTOR FOR SAMPLES FROM THE STAGED MATERIALS, AS DIRECTED BY STANTEC, LOAD, TRANSPORT AND DISPOSE OFFSITE AT FACILITIES PROPERLY PERMITTED IN ACCORDANCE WITH WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.



DETAIL
REPLACEMENT MONITORING WELL
N.T.S.

NOTE:

1. THE TARGET DEPTH FOR THE REPLACEMENT GROUNDWATER MONITORING WELLS MW-101R AND MW-116R IS 20 FEET BELOW GROUND SURFACE.

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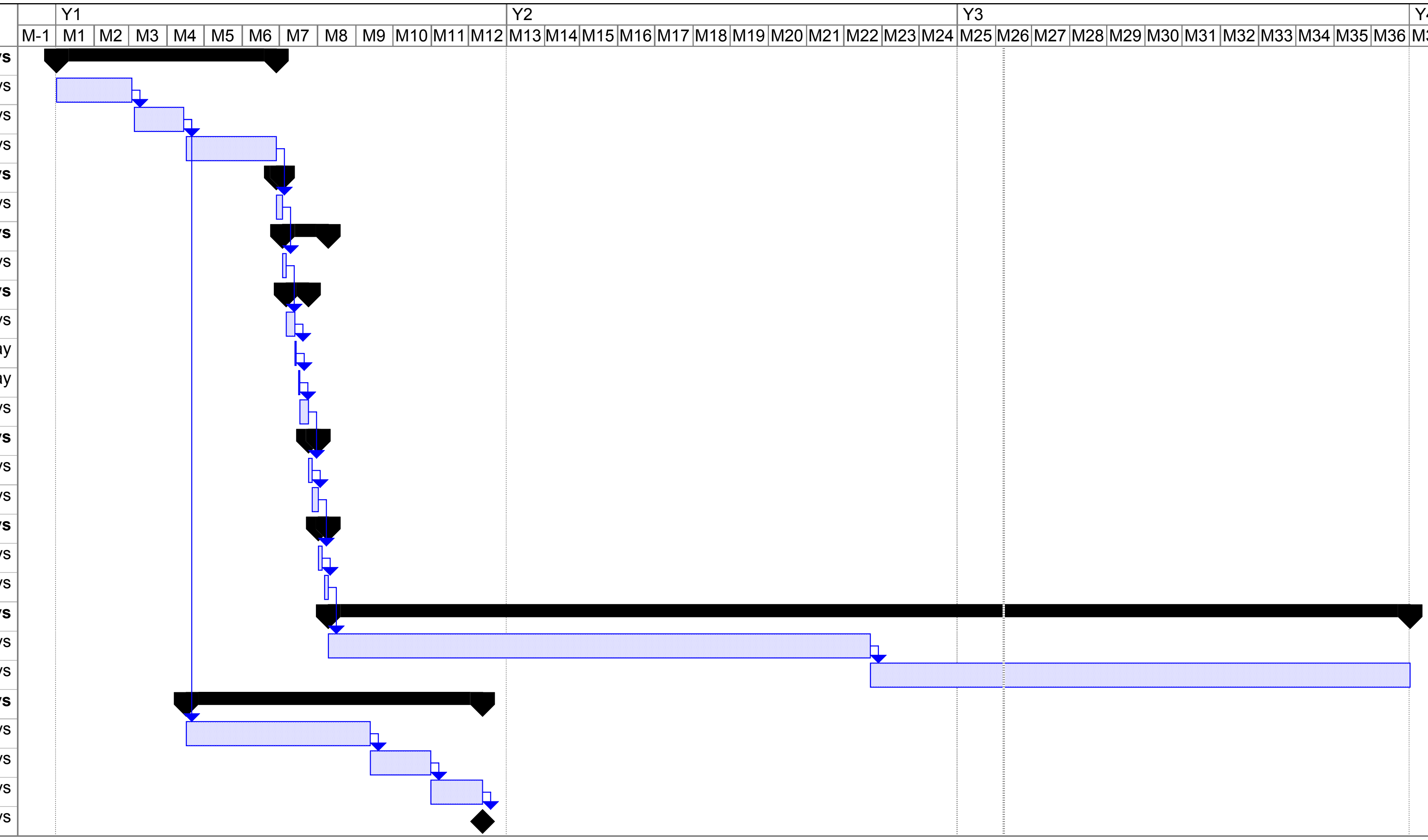
Figure 6 - General Notes and Details
Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

Figure 7: Project Schedule - Gregory Street RAWP

ID	Task Name	Duration
1	**RAWP Review and Approval**	**128 days**
2	DEC Review and Approval of RAWP / Public Comment Period	45 days
3	DEC Record of Decision	30 days
4	Bid Process	53 days
5	**Well Decommissioning/ Installations**	**3 days**
6	Decommission eleven (11) wells	3 days
7	**Excavation**	**27 days**
8	**Remove & Stockpile Concrete and Asphalt**	3 days
9	**RAOC 1**	**12 days**
10	Remove & Stockpile Impacted & Non-Impacted Soil from RAOC 1	5 days
11	Direct Application of In-Situ, Bio-Augmentation Additive in RAOC1	1 day
12	Install Two (2) Monitoring Wells in RAOC1	1 day
13	Backfill with Non-Impacted & Imported Fill in RAOC1	5 days
14	**RAOC 2**	**6 days**
15	Remove & Stockpile Impacted & Non-Impacted Soil from RAOC 2	3 days
16	Backfill with Non-Impacted & Imported Fill in RAOC 2	3 days
17	**RAOC 3**	**6 days**
18	Remove & Stockpile Impacted & Non-Impacted Soil from RAOC 3	3 days
19	Backfill with Non-Impacted & Imported Fill in RAOC 3	3 days
20	**Groundwater Monitoring**	**626 days**
21	One Year of Quarterly Post-Excavation Groundwater Monitoring	313 days
22	Second Year of Quarterly GW Monitoring Contingent on First Year's Results	313 days
23	**Certificate of Completion**	**172 days**
24	Environmental Easement	107 days
25	Final Engineering Report	35 days
26	DEC Review of Final Engineering Report	30 days
27	Obtain Certificate of Completion	0 days



Project: Gregory Street RAWP
Date: 2/7/08

Task | Progress | Summary | External Tasks | Deadline

Split | Milestone | Project Summary | External Milestone

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2/7/08
Stantec Consulting Services Inc.

Tables

TABLE 1
REMEDIAL ACTION WORK PLAN
BROWNFIELD ASSESSMENT SITE
399 Gregory Street, Rochester NY

Alternatives Analysis Matrix

Remedial Alternative[1]		Description	1 - Protection of Human Health and the Environment		2 - Standards, Criteria, & Guidance (SCG)		3 - Short-term Effectiveness & Impacts		4 - Long-term Effectiveness & Permanence		5 - Reduction of Toxicity, Mobility, or Volume	
			Score	Discussion	Score	Discussion	Score	Discussion	Score	Discussion	Score	Discussion
Scoring System			0 = Least protective 10 = Most protective		0 = Least likely to meet SCOs 10 = Most likely to meet SCOs		0 = Least effectiveness & most impact 10 = Most effectiveness & least impact		0 = Least effectiveness & permanence 10 = Most effectiveness & permanence		0 = Least reduction 10 = Most reduction	
A	No Action: Monitored Natural Attenuation (MNA)	**- MNA with 30 years of annual monitoring.**	0	- Risks associated with off-Site migration of VOCs are not mitigated. - Potential on-Site exposure risks to occupational workers.	2	- Compliance with SCGs will not be achieved for an extended period of time; - Will depend heavily on institutional controls.	2	- No short-term effectiveness or impacts.	2	- Wastes and residuals will remain on-Site following implementation of MNA, but long-term reduction is expected. - Natural processes that induce attenuation of contaminant impacts to the subsurface are dependent upon several factors such as subsurface conditions, amount of contaminant present and possible presence of free product (DNAPL or LNAPL). Given this uncertainty, exposure risks outlined in criteria 1 are most likely to persist for an undetermined period of time; - Monitoring alone will not mitigate exposure risks but will provide some quantification; - Given the future intended use of the Site as a commercial facility, land use controls are likely to be reliably implemented; - Uncertainty associated with meeting remedial action objectives in the future.	0	- No control of short-term and long-term contaminant toxicity, mobility or volume.
B	Excavation	**- Excavation and off-site disposal of soils exceeding Restricted Residential SCOs;**	7	- Potential off-Site exposure risks are significantly mitigated by the aggressive source removal approach of this alternative combined with a site management plan. - Excavation and disposal of impacted soils increases temporary exposure risks to humans, fish and wildlife due to handling of contaminated materials and potential for dispersion of contamination in air.	7	- Removal of most significant impacted soils will allow compliance with SCGs for VOCs and metals in soils. Site management plan will be used to address low level residual impacts.	7	- Heavy truck traffic and associated decontamination, dust control and soil tracking measures required due to excavation of soils. - Staging area required. - Limited short duration construction and contaminated soil manipulation impacts. - Short-term effectiveness of this alternative is good due to soil excavation.	7	- The significantly impacted soils will be removed from this site. Low level impacts remaining on-Site following removal action would be mitigated through site management plan.	8	- Removal of the significantly impacted soils will effectively addresses toxicity, mobility and volume of most significant impacts with maximum certainty; - Low level impacts in groundwater and some metals in soil will remain. A site management plan would be used to address low level residual impacts.
C	Excavation and Enhanced Monitored Natural Attenuation (EMNA)	**- Combines Alternative B with EMNA; - Direct Application of EHC-O or ORC to open excavation of AOC1 (former paint booth area) to accelerate contaminant degradation in groundwater;**	8	- Refer to discussion of alternative B. - In addition, in-situ groundwater remediation provides additional protection for human habitat and the environment.	8	- Refer to discussion of alternative B. EMNA will provide quicker compliance with VOC SCGs for groundwater	7	- Refer to discussion of alternative B.	9	- Refer to discussion of alternative B. EMNA would provide benefit in reducing remediation timelines by addressing the low levels of VOC groundwater impacts remaining on-Site.	9	- Removal of the significantly impacted soils will effectively addresses toxicity, mobility and volume of most significant impacts with maximum certainty. A site management plan would be used to address low level residual impacts. - More control of VOC groundwater contaminant toxicity, mobility and volume resulting from EMNA..

Notes:
1 Design assumptions for alternative are presented in Table 2.
2 Ranked based on the opinion of probable costs for that alternative in proportion to the range of opinions of probable cost for all three alternatives
3 Evaluated based on the Draft BCP Program Guide Appendix 2 15 factors to be considered when evaluating land use criterion.
4 Opinions of probable costs include a 10% contingency

Definitions:

1 -	Protection of Human Health and the Environment	This criterion is an evaluation of the remedy's ability to protect public health and the environment, assessing how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, engineering controls or institutional controls. The remedy's ability to achieve each of the RAOs is evaluated
2 -	Standards, Criteria, & Guidance (SCG)	Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance. All SCGs for the site will be listed along with a discussion of whether or not the remedy will achieve compliance. For those SCGs that will not be met, provide a discussion and evaluation of the impacts of each, and whether waivers are necessary.
3 -	Short-term Effectiveness & Impacts	The potential short-term adverse impacts and risks of the remedy upon the community, the workers, and the environment during the construction and/or implementation are evaluated. A discussion of how the identified adverse impacts and health risks to the community or workers at the site will be controlled, and the effectiveness of the controls, should be presented. Provide a discussion of engineering controls that will be used to mitigate short term impacts (i.e. dust control measures). The length of time needed to achieve the remedial objectives is also estimated.
4 -	Long-term Effectiveness & Permanence	This criterion evaluates the long-term effectiveness of the remedy after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: i. The magnitude of the remaining risks (i.e. will there be any significant threats, exposure pathways, or risks to the community and environment from the remaining wastes or treated residuals?), ii. The adequacy of the engineering and institutional controls intended to limit the risk, iii. The reliability of these controls, and; iv. The ability of the remedy to continue to meet RAOs in the future.
5 -	Reduction of Toxicity, Mobility, or Volume	The remedy's ability to reduce the toxicity, mobility or volume of site contamination is evaluated. Preference should be given to remedies that permanently and significantly reduce the toxicity, mobility, or volume of the wastes at the site.
6 -	Implementability	The technical and administrative feasibility of implementing the remedy is evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc. Includes the evaluation of the reliability and viability of implementation of the industrial or engineering controls necessary for a remedy.
7 -	Cost Effectiveness	Includes both short-term costs of implementation, including engineering/design and long-term costs of operation, maintenance and monitoring activities to maintain engineering controls.
8 -	Community Acceptance (see CPP)	Provide a summary of the public participation program that was followed for the project, see section 1.10 for requirements. The public's comments, concerns and overall perception of the remedy are evaluated in a format that responds to all questions that are raised (i.e. responsiveness summary).
9 -	Land Use	Evaluation of the reasonable anticipated future use of the site and its surroundings when unrestricted levels would not be achieved and should consider the factors presented in Appendix 2 of the BCP Guidance (2004) including applicable zoning laws and maps.

TABLE 1
REMEDIAL ACTION WORK PLAN
BROWNFIELD ASSESSMENT SITE
399 Gregory Street, Rochester NY

Alternatives Analysis Matrix

Remedial Alternative[1]	6 - Implementability		7 - Cost Effectiveness			8 - Community Acceptance (see CPP)		9 - Land Use		Overall (sum of all scores)		
	Score	Discussion	Score[2]	Opinion of Probable Costs[4]	Discussion	Score	Discussion	Score	Discussion	Total Score (%)	Total Opinion of Probable Cost	Conclusions and recommendations
Scoring System	0 = Least implementable 10 = Most implementable		0 = Least cost effective 10 = Most cost effective			0 = Least accepted 10 = Most accepted		0 = Worst based on 15 criteria[3] 10 = Best based on 15 criteria[3]		0 = Worst overall 100 = Best overall		
A	7	- Successful implementation depends largely on presence of natural processes at the Site that are degrading contaminants. These processes are considered present at the Site due to the reduced VOC groundwater concentrations when compared to prior sampling results.	0	$618,700	- Low capital costs. - Highest OM&M costs of all alternatives, due to the possible 30 year monitoring program. (See Table 28A).	NA	- The community acceptance process has been initiated by the City and has included two public meetings. The Community acceptance process is anticipated to be completed by the New York State Department of Environmental Conservation (DEC)	4	- Anticipated land use at the Site is commercial. - Institutional controls, which are not currently in place, will be required at the Site under this alternative.	**17**	**$618,700**	- Most costly of the alternatives due to OM&M costs of 30 year monitoring program; - Least favorable alternative overall due to poor performance with the 'protection of human health and the environment', 'SCG', 'long-term effectiveness and permanence' and 'reduction of toxicity, mobility or volume' criteria. - Poor remedial 'value' : costs of this alternative exceed that of an aggressive remedial program that is more likely to comply with regulatory agency requirements.
B	8	- Soil excavation and disposal is widely used successfully and reliably; - The areas to be excavated are located in open areas; - Sufficient staging area is available at the Site to process excavated soils.	10	$320,600	- Cost includes excavation, sampling and analysis, waste disposal monitoring, and reporting. - Costs based on Alternative C minus application of EHC-O and groundwater monitoring costs. - Costs include 10% contingency	NA	- Refer to discussion of alternative A.	6	- Anticipated land use at the Site is commercial; - Institutional controls, which are not currently in place, will be required but will be less significant than Alternate A due to greater compliance with SCGs;	**60**	**$320,600**	- Excavation alone is least costly and more favorable than MNA but less favorable than Excavation with EMNA since it is less protective of human health and the environment, reduced compliance with SCGs, it has reduced long-term effectiveness and less reduction in toxicity, mobility and volume.
C	8	- Refer to discussion of Alternative B.	9	$362,100	- Minor increase in capital costs due to EMNA. - OM&M costs are less than MNA due to decreased monitoring time. - Costs based include 10% contingency.	NA	- Refer to discussion of alternative A.	6	- Refer to discussion of alternative B.	**64**	**$362,100**	- More favorable alternative relative to Excavation alone as it is more likely to comply with regulatory agency requirements including more protection to human health and the environment, greater compliance with SCGS, greater long term effectiveness and perseverance and greater reduction in toxicity, mobility and volume.

Notes

1 Design assumptions for alternative are presented in Table 2.
2 Ranked based on the opinion of probable costs for that alternative in proportion to the range of opinions of probable cost for all three alternatives
3 Evaluated based on the Draft BCP Program Guide Appendix 2 15 factors to be considered when evaluating land use criterion.
4 Opinions of probable costs include a 10% contingency

Definitions:

1 -	Protection of Human Health and the Environment	This criterion is an evaluation of the remedy's ability to protect public health and the environment, assessing how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, engineering controls or institutional controls. The remedy's ability to achieve each of the RAOs is evaluated
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3 -	Short-term Effectiveness & Impacts	The potential short-term adverse impacts and risks of the remedy upon the community, the workers, and the environment during the construction and/or implementation are evaluated. A discussion of how the identified adverse impacts and health risks to the community or workers at the site will be controlled, and the effectiveness of the controls, should be presented. Provide a discussion of engineering controls that will be used to mitigate short term impacts (i.e. dust control measures). The length of time needed to achieve the remedial objectives is also estimated.
4 -	Long-term Effectiveness & Permanence	This criterion evaluates the long-term effectiveness of the remedy after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: i. The magnitude of the remaining risks (i.e. will there be any significant threats, exposure pathways, or risks to the community and environment from the remaining wastes or treated residuals?), ii. The adequacy of the engineering and institutional controls intended to limit the risk, iii. The reliability of these controls, and; iv. The ability of the remedy to continue to meet RAOs in the future.
5 -	Reduction of Toxicity, Mobility, or Volume	The remedy's ability to reduce the toxicity, mobility or volume of site contamination is evaluated. Preference should be given to remedies that permanently and significantly reduce the toxicity, mobility, or volume of the wastes at the site.
6 -	Implementability	The technical and administrative feasibility of implementing the remedy is evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc. Includes the evaluation of the reliability and viability of implementation of the industrial or engineering controls necessary for a remedy.
7 -	Cost Effectiveness	Includes both short-term costs of implementation, including engineering/design and long-term costs of operation, maintenance and monitoring activities to maintain engineering controls.
8 -	Community Acceptance (see CPP)	Provide a summary of the public participation program that was followed for the project, see section 1.10 for requirements. The public's comments, concerns and overall perception of the remedy are evaluated in a format that responds to all questions that are raised (i.e. responsiveness summary).
9 -	Land Use	Evaluation of the reasonable anticipated future use of the site and its surroundings when unrestricted levels would not be achieved and should consider the factors presented in Appendix 2 of the BCP Guidance (2004) including applicable zoning laws and maps.

TABLE 2
REMEDIAL ACTION WORK PLAN
BROWNFIELD ASSESSMENT SITE
399 GREGORY STREET
ROCHESTER, NEW YORK

REMEDIAL DESIGN ASSUMPTIONS

Enhanced Monitored Natural Attenuation

- One-time direct application to open excavation of chemical and biological enhancements only in RAOC 1 where elevated VOCs were observed. Anticipate up to 2 years of quarterly groundwater sampling to evaluate contaminant reduction progress from source removal and EHC-O enhancements.

Soil Excavation and Off-Site Disposal

- Non-hazardous soil excavation production rate is assumed to be 200 Tons/day.
- Hazardous soil excavation production rate is assumed to be 100 Tons/day.
- Backfill production rate is assumed to be 200 CY/day.
- Sufficient staging area is assumed to be available.
- All excavated soils are assumed to meet treatment standards based on observed contaminant concentrations.
- Asphalt removal is included with soil excavation costs
- Excavation volumes are based on 1:1 slopes

General Assumptions:

- All costs are in constant fiscal year 2007 dollars.
- Soil density is assumed to be 1.7 Tons/CY.
- Concrete or asphalt density is assumed to be 2 Tons/CY.
- Prevailing wage rates are assumed
- The OPC was prepared without the formal solicitation of contractor bids, and is therefore based upon related project experience, anticipated field conditions, and the estimated scope of work
- Project-specific unit rates will need to be developed once regulatory review and approval processes are completed
- Costs for implementation of a sub-slab depressurization system in a future building are not included.

TABLE 3
REMEDIAL ACTION WORK PLAN
BROWNFIELD ASSESSMENT SITE
399 GREGORY STREET
ROCHESTER, NY

OPINION OF PROBABLE REMEDIAL COST - RESTRICTED RESIDENTIAL SCOs

					RAOC 1						RAOC 2A			RAOC 2B			RAOC 3		
		Overall Overall			(11-feet deep) Former Paint Booth Area			(11-feet deep) Former Paint Booth Area			(4-feet deep) North Trench Drain Area			(4-feet deep) South Trench Drain Area			(8-feet deep) MW-105 Area		
					Non-Hazardous - Scenario #1			Hazardous - Scenario #2			Non-Hazardous			Non-Hazardous			Non-Hazardous		
	UNIT	**QTY**	**UNIT COST $**	**COST $**	**QTY**	**UNIT COST $**	**COST $**	**QTY**	**UNIT COST $**	**COST $**	**QTY**	**UNIT COST $**	**COST $**	**QTY**	**UNIT COST $**	**COST $**	**QTY**	**UNIT COST $**	**COST $**
Implementation																			
Equipment Mob/ Demob	LS	1	$3,000	$3,000															
Decon/Staging Areas/HASP	LS	1	$4,500	$4,500				1	$8,500	$8,500									
Monitoring Well Decommissioning (MW-BR-1, MW-208, MW-114, MW-106, MW-216, MW 217, MW-105, MW-103, MW-104, MW-101 and MW-116)	LS	11	$1,000	$11,000															
Removal Concrete Slab and Staging (12 inches thick)	CY	260	$15	$3,900															
Removal of Asphalt and Staging (3 inches thick)	CY	20	$15	$300															
Soil Excavation and Staging	CY				225	$10	$2,250	225	$20	$4,500	115	$10	$1,150	80	$10	$800	100	$10	$1,000
Interim Soil Sampling	EA				5	$200	$1,000	5	$200	$1,000	5	$400	$2,000	5	$150	$750	5	$150	$750
Confirmatory Soil Sampling	EA				5	$200	$1,000	5	$200	$1,000	10	$400	$4,000	5	$150	$750	5	$150	$750
Dewatering to sewer	LS	1	$10,000	$10,000															
Install temporary self-supporting steel fencing north of impacted soil staging area	LF	120	$10	$1,200															
Install temporary plastic fencing (~ 5 ft away from perimeter of excavation)	LF				150	$3	$450	150	$3	$450	150	$3	$450	150	$3	$450	100	$3	$300
Install silt fence	LF	450	$2	$900															
Backfill with ORC/EHC-O	Pounds				230	$10	$2,300	230	$10	$2,300	0	$10	$0	0	$10	$0	0	$10	$0
Import, Install and Compact clean backfill from off-site borrow source	CY				69	$22	$1,518	69	$22	$1,518	90	$22	$1,980	58	$22	$1,276	30	$22	$660
Install and compact clean backfill from on-site	CY				156	$7	$1,092	156	$7	$1,092	25	$7	$175	22	$7	$154	70	$7	$490
Site Restoration (12-inches crusher run stone over excavated areas, excluding areas to be asphalted, 3 inches over areas where asphalt was permanently removed)	CY	280	$30	$8,400	40	$30	$1,200	40	$30	$1,200	50	$30	$1,500	30	$30	$900	25	$30	$750
Asphalt Restoration, including 10-inch subbase	SQ. FT.				110	$10	$1,100	110	$10	$1,100									
2-inch dia. Monitoring Well Installation (replacements for MW-101 and MW-116)	EACH	2	$1,500	$3,000															
Up to 2 Years of Quarterly Groundwater Monitoring plus baseline (6 wells for USEPA 8260) includes standard T.A.T.	EACH	56	$150	$8,400															
Waste Characterization	EACH				1	$1,000	$1,000	1	$1,000	$1,000	1	$1,000	$1,000	1	$1,000	$1,000	1	$1,000	$1,000
					Solid Waste Facility			Hazardous Waste Facility			Solid Waste Facility			Solid Waste Facility			Solid Waste Facility		
Load, Transport, and Dispose of Soils	Tons				120	$65	$7,800	120	$300	$36,000	160	$65	$10,400	100	$65	$6,500	60	$65	$3,900
Concrete	Tons	520	$65	$33,800															
Total Implementation				$88,400			$20,710			$59,660			$22,655			$12,580			$9,600
Total Implementation plus 8.25% tax				**$95,693**			**$22,419**			**$64,582**			**$24,524**			**$13,618**			**$10,392**
Engineering																			
Construction/Bid Documents	LS	1	$10,000	$10,000															
Construction Oversight	DAY	8	$1,500	$12,000	4	$1,700	$6,800	5	$3,500	$17,500	2	$1,700	$3,400	2	$1,700	$3,400	2	$1,700	$3,400
Remedial Construction Report for each Excavation Area					1	$7,500	$7,500	1	$12,500	$12,500	1	$5,000	$5,000	1	$1,500	$1,500	1	$1,500	$1,500
Groundwater Monitoring Events	EACH	8	$3,000	$24,000															
Total Engineering				$46,000			$14,300			$30,000			$8,400			$4,900			$4,900
Construction Management (12.5%)				$11,962			$2,802			$8,073			$3,066			$1,702			$1,299
Total Engineering including Construction Management Markup				**$57,962**			**$17,102**			**$38,073**			**$11,466**			**$6,602**			**$6,199**
Opinion of Probable Cost				**$153,655**			**$39,521**			**$102,655**			**$35,990**			**$20,220**			**$16,591**

SCENARIO	DISPOSAL COST			TOTAL IMPLEMENTATION PLUS 8.25% TAX	TOTAL ENGINEERING	TOTAL CONSTRUCTION MANAGEMENT (12.5%)	TOTAL COST	
	Soil Disposal Cost	Concrete Dispsoal Cost	Total soil and concrete				without contingency	with 10% contingency
1 - Non-Hazardous	$28,600	$33,800	$62,400	$166,645	$78,500	$20,831	$265,976	$292,574
2 - Hazardous	$56,800	$33,800	$90,600	$208,809	$94,200	$26,101	$329,110	**$362,021**

Notes:
1.7 tons/yard for soil
2 tons/yard for concrete
Non-hazardous soil excavation production rate of 200 Tons/day.
Hazardous soil excavation production rate of 100 Tons/day.
Backfill production rate of 200 CY/day.
Refer to Figure 3 for the Restricted Residential excavation plan

TABLE 4
REMEDIAL ACTION WORK PLAN
BROWNFIELD ASSESSMENT SITE
399 GREGORY STREET
ROCHESTER, NEW YORK

SOIL CLEANUP SUMMARY - TAGM

<table>
<tr><th colspan="3">Location</th><th>Depth (feet)</th><th>Contaminant of Concern</th><th>Detection (µg/kg)</th><th>SCO (µg/kg)</th><th>Proposed Excavation Depth</th><th>Estimated Total Off-Site Soil Disposal Volume (CY)</th><th>Estimated Total On-Site Soil Reuse Volume (CY)</th></tr>
<tr><td rowspan="11">Former Paint Booth Area</td><td rowspan="11">RAOC 1</td><td rowspan="6">MW-101</td><td rowspan="6">6-8</td><td>Ethylbenzene</td><td>59,000</td><td>5,500</td><td rowspan="11">11</td><td rowspan="11">425</td><td rowspan="11">330</td></tr>
<tr><td>Toluene</td><td>230,000</td><td>700</td></tr>
<tr><td>Trichloroethene</td><td>1,800</td><td>700</td></tr>
<tr><td>Xylene</td><td>310,000</td><td>700</td></tr>
<tr><td>4-Methylphenol</td><td>0.93</td><td>0.9</td></tr>
<tr><td>2-Methylphenol</td><td>0.87</td><td>0.1</td></tr>
<tr><td rowspan="2">BS-108</td><td rowspan="2">8-10</td><td>Toluene</td><td>15,000</td><td>700</td></tr>
<tr><td>Butyl benzyl phthalate</td><td>260,000</td><td>50,000</td></tr>
<tr><td>B-1</td><td>9-17.5</td><td>TICS</td><td>1,064-10,460</td><td>10,000</td></tr>
<tr><td>B-205</td><td>4-8</td><td>TICS</td><td>3080</td><td>10,000</td></tr>
<tr><td>MW-116</td><td>8-11</td><td>Naphthalene</td><td>17,000</td><td>13,000</td></tr>
<tr><td rowspan="9">Trench Drain Area</td><td rowspan="9">RAOC 2</td><td rowspan="2">GR-B213-S</td><td rowspan="2">0-4</td><td>Benzo(a)pyrene</td><td>170</td><td>61</td><td rowspan="9">4</td><td rowspan="9">275</td><td rowspan="9">45</td></tr>
<tr><td>Copper</td><td>38</td><td>1-50 or 25</td></tr>
<tr><td rowspan="2">GR-B214-S</td><td rowspan="2">0-4</td><td>Benzo(a)pyrene</td><td>96</td><td>61</td></tr>
<tr><td>Copper</td><td>231</td><td>1-50 or 25</td></tr>
<tr><td rowspan="2">GR-B216-S</td><td rowspan="2">0-4</td><td>Benzo(a)pyrene</td><td>110</td><td>61</td></tr>
<tr><td>Copper</td><td>905</td><td>1-50 or 25</td></tr>
<tr><td rowspan="3">GR-B217-S</td><td rowspan="3">0-4</td><td>Benzo(a)pyrene</td><td>110</td><td>61</td></tr>
<tr><td>Copper</td><td>100</td><td>1-50 or 25</td></tr>
<tr><td>Lead</td><td>588</td><td>200-500</td></tr>
<tr><td rowspan="5">MW-105 Area</td><td rowspan="5">RAOC 3</td><td rowspan="5">MW-105</td><td rowspan="5">6-8</td><td>Arsenic</td><td>112</td><td>7.5 or SB</td><td rowspan="5">8</td><td rowspan="5">30</td><td rowspan="5">70</td></tr>
<tr><td>Beryllium</td><td>3.26</td><td>0.16 (HEAST) or SB</td></tr>
<tr><td>Cadmium</td><td>4.29</td><td>1 or SB</td></tr>
<tr><td>Nickel</td><td>44</td><td>13 or SB</td></tr>
<tr><td>Selenium</td><td>94.5</td><td>2 or SB</td></tr>
<tr><td colspan="7"></td><td>Estimated Total</td><td>730</td><td>445</td></tr>
</table>

TABLE 5
REMEDIAL ACTION WORK PLAN
BROWNFIELD ASSESSMENT SITE
399 GREGORY STREET
ROCHESTER, NEW YORK

SOIL CLEANUP SUMMARY - RESTRICTED RESIDENTIAL

Location			Depth (feet)	Contaminant of Concern	Detection (µg/kg)	SCO (µg/kg)	Proposed Excavation Depth	Estimated Total Off-Site Soil Disposal Volume (CY)	Estimated Total On-Site Soil Reuse Volume (CY)
Former Paint Booth Area	RAOC 1	MW-101	6-8	Ethylbenzene	59,000	30,000	11	69	156
				Toluene	230,000	100,000			
				Xylene	310,000	100,000			
North Trench Drain Area	RAOC 2A	GR-B213-S	0-4	Cadmium	7,300	2,500	4	90	25
		GR-B217-S	0-4	Lead	588,000	400,000			
South Trench Drain Area	RAOC 2B	GR-B216-S	0-4	Copper	905,000	270,000	4	58	22
				Lead	402,000	400,000			
MW-105 Area	RAOC 3	MW-105	6-8	Arsenic	112,000	16,000	8	30	70
				Cadmium	4,290	2,500			
				Selenium	94,500	36,000			
							Estimated Total	**247**	**273**

Appendix A

Site Management Plan

APPENDIX A
SITE MANAGEMENT PLAN
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK

Prepared for:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
6274 EAST AVON-LIMA ROAD
AVON, NEW YORK 14414

Prepared on Behalf of:
CITY OF ROCHESTER
30 CHURCH STREET, SUITE 300B
ROCHESTER, NEW YORK 14614

Prepared by:
STANTEC CONSULTING SERVICES INC.
2250 BRIGHTON HENRIETTA TOWN LINE ROAD
ROCHESTER, NEW YORK 14623

Stantec

FEBRUARY 2008

Stantec

APPENDIX A
SITE MANAGEMENT PLAN
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK

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APPENDIX A
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SITE MANAGEMENT PLAN
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK

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Appendices

1.0 Introduction

1.1 PURPOSE

This Site Management Plan (SMP) has been developed at the request of the City of Rochester and pertains to the Remedial Action Work Plan activities at 399 Gregory Street, Rochester, New York (Figure 1). It has been developed to assist in planning for monitoring, management and characterization of impacted materials and groundwater that may be encountered during subsurface activities that will occur during the proposed remedial action.

New York State Department of Environmental Conservation (NYSDEC) regulations require management of hazardous and non-hazardous solid waste as contained in 6 NYCRR Parts 371-376 and 6 NYCRR Part 360, respectively. Proper management will require that care be taken in planning, monitoring and characterizing the soil/fill materials and water to confirm their non-hazardous status and allow for proper off-site disposal or relocation on-site. This SMP provides guidance for planning and performing such monitoring, testing and management of excavated soil/fill materials or groundwater that may be encountered at 399 Gregory Street (hereafter referred to as the Site).

1.2 BACKGROUND

The former Davidson Collision Site (Site No. 828091) is located at 399 Gregory Street and operated as an auto body shop from the early 1960s until it went out of business in March 1993. The City of Rochester (City) acquired the 399 Gregory Street parcel (County of Monroe Tax ID No. 121-650-0001.053.000) in November 2004 through delinquent tax foreclosure proceedings. The adjacent undeveloped grass-covered 10 Cayuga Street parcel was also part of Davidson Collision, however, it was purchased by a third party, Mr. John Trickey. Therefore, 10 Cayuga Street is not part of the site subject to the BCA.

Previous investigations at the site between 1991 and 1994 identified the disposal of a consequential amount of hazardous waste (primarily paint waste including paint thinner) through a pipe leading from a paint booth inside the shop to a storage container outside the building. This method of discharging paints and paint thinner, contaminated soil near the southwestern corner of the auto body shop. In January 1993, some contaminated soil from the waste disposal area was excavated, however, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and 1993 activities were performed without NYSDEC approval or oversight. In 1994 the NYSDEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the site. As such, the NYSDEC conducted an investigation in

2000-2002 to obtain additional information regarding the nature and extent of contamination at the site and to determine if the site represents a significant threat to human health or the environment.

1.3 INTRODUCTION OF 6 NYCRR PART 375 SCOS

NYSDEC 6 NYCRR Part 375 Regulations and Soil Cleanup Objectives came into effect in December 2006. It was agreed with the NYSDEC that TAGM 4046 RSCOs would be utilized for all reporting requirements for the Former Davidson Collision Site up to and including the revised Remedial Investigation and Alternatives Analysis Report[4] first issued in September 2006 and revised in January 2008. Subsequent reports, including the Remedial Design Investigation Report[5] issued in December 2007, would employ the new Part 375 SCOs instead of TAGM. For this Site, the City of Rochester selected the restricted use soil cleanup objective for the protection of public health in a restricted-residential setting as the recommended soil cleanup objective (Restricted Residential SCO).

2.0 Summary of Prior Investigations

Environmental studies that have been completed at the 399 Gregory Street Site and the adjacent 10 Cayuga Street parcel and for which reports were either reviewed by or prepared by Stantec include:

- a September 1991 Phase II Investigation[1];
- an August 1995 Preliminary Site Assessment Report[2];
- a March 2003 Site Investigation Report[3];
- a September 2006 Remedial Investigation and Alternatives Analysis Report (revised in January 2008)[4]; and
- a December 2007 Remedial Design Investigation Report[5].

Previous investigations at the Site between 1991 and 1994 identified the disposal of paint waste including paint thinner through a pipe leading from a paint booth inside the shop to a storage container outside the building. In January 1993, some contaminated soil from the waste disposal area was excavated. However, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and

1993 activities were performed without NYSDEC approval or oversight. In 1994, the NYSDEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the Site.

As such, the NYSDEC conducted an investigation in 2000-2002 to obtain additional information regarding the nature and extent of contamination at the Site and to determine if the Site represents a significant threat to human health or the environment. The NYSDEC concluded there was a small, highly impacted Volatile Organic Compound (VOC) source area, but nearby residents were not impacted. The City subsequently obtained an EPA Brownfield grant and applied to the NYSDEC to address the Site through the State's Brownfield Cleanup Program (BCP).

Given the results from the investigations performed prior to Stantec's involvement, Stantec's 2005 Remedial Investigation (RI) (revised in January 2008) focused on two areas of concern (AOCs) previously identified by the NYSDEC, based on TAGM 4046 Recommended SCOs. These two AOCs include the former waste paint disposal area (AOC1) and the former vehicle maintenance/trench drain area (AOC2). A third AOC was identified by the NYSDEC in their 2000-2002 investigation and was further delineated by a Remedial Design Investigation (RDI) performed by Stantec in 2007. In subsequent discussions, AOCs will be referred to as Remedial Areas of Concern (RAOC). The numbering scheme of AOCs and RAOCs has been maintained, such that AOC1 coincides with RAOC1, and so on.

The following summary of analytical results for soils utilizes Restricted Residential SCOs instead of the TAGM 4046 Recommended SCOs used in previous studies.

2.1 SOILS ANALYTICAL RESULTS

A summary of analytical results in excess of Restricted Residential SCOs is presented in Table 4. Also refer to Appendix A (Soil Management Plan) for complete analytical results for Stantec's RI and RDI.

2.1.1 RAOC1

Results from previous site investigations indicate no impacts from VOCs to soils at concentrations above Restricted Residential SCOs outside the previously investigated waste disposal and paint booth area (RAOC 1). Within RAOC1, comparison to Restricted Residential SCOs indicates exceedances for ethylbenzene, toluene and xylenes between 6 and 8 ft. bgs.

2.1.2 RAOC2

Within RAOC2, soil samples collected in B-213, B-216/MW-216 and B-217/MW-217 exceed Restricted Residential SCOs for metals. Cadmium exceeds its SCO in B-213 from ground surface to a depth of 4 feet, lead exceeds its SCO in B-217/MW-217 from 0 to 4 ft. bgs, while copper and lead exceed their respective SCOs in B-216/MW-216 from 0 to 4 ft. bgs. RAOC2 consists of two sub-areas: RAOC2A to the north, encompassing B-213 and B-217/MW-217, and RAOC2B to the south, which includes B-216/MW-216.

2.1.3 RAOC3

A third potential Remedial Area of Concern (RAOC3) was identified at the MW-105 location where metals impacts in excess of Restricted Residential SCOs (arsenic, cadmium and selenium) were reported in a 6-8 ft. bgs soil sample. This boring/monitoring well is located on the City property slightly east of RAOC1 along the common property line with 10 Cayuga Street. The RDI found no metals impacts in boreholes installed radially at regular intervals around MW-105 (refer to Figure 4 for borehole locations and Appendix A for RDI analytical results).

2.2 GROUNDWATER ANALYTICAL RESULTS

Metals in site-wide groundwater have exhibited elevated concentrations for iron, magnesium, manganese and sodium. These elements are common in regional soils and urban fill and as a result are often elevated in groundwater. In addition, cadmium was reported above its GSGV in one bedrock well, MW-BR3, in March 2001. Given the City's ordinance, which prohibits the use of drinking water wells, and the absence of completed exposure pathways, the site-wide presence of metals in groundwater does not warrant further investigation or remedial measures.

2.2.1 RAOC1

Groundwater samples collected during the RI were reported to contain low-level concentrations of VOCs in RAOC1 within MW-101 and MW-116 above NYSDEC groundwater standards and guidance values (GSGVs). During prior sampling events, VOCs were reported at much higher concentrations in both MW-101 and MW-116 suggesting that natural attenuation may be occurring.

Stantec observed a very thin (< 1/16-inch) light non-aqueous phase liquid (LNAPL) layer in MW-101. During a prior investigation, LNAPL was reported in nearby well MW-116. However, no LNAPL was detected in MW-116 or any other boring or well in the vicinity of MW-101 during the RI. Based upon these limited LNAPL findings, the presence of LNAPL appears to be a localized condition within RAOC1. Given the VOCs and LNAPL observed, remediation of groundwater impacts was recommended in RAOC1.

2.2.2 RAOC2

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC2.

2.2.3 RAOC3

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC3.

2.3 SOIL VAPOR ANALYTICAL RESULTS

A perimeter soil vapor survey was carried out as part of the RDI[5]. Low level chlorinated and petroleum VOC concentrations were reported in both the soil vapor samples and background outdoor air sample collected on June 12, 2007 (refer to Appendix A for a summary of soil vapor analytical results). The results did not identify areas of significantly elevated concentrations of volatile chemicals in soil vapor nor do they indicate significant sources of subsurface vapor contamination that would present a significant risk of potential adverse SVI impacts on the Site or on adjacent properties. A possible explanation for the concentrations detected may be that the concrete slab and the asphalt parking surface are acting as a cap for capturing and containing residual volatile organic vapors.

3.0 Development and Pre-Excavation Planning

3.1 EXISTING INFORMATION

Site development and excavation planning will need to incorporate information from the previous investigations, documented subsurface contamination, and the intended location of proposed construction/development. Site development and excavation planning activities will require environmental review prior to issuance of any City permit. Once the Site Management Plan has been approved by the NYSDEC, the Site will be flagged for review by the City's Division of Environmental Quality in the City of Rochester Building Information System (BIS) in order to protect potential developers, contractors and future occupants, and establish proper management of construction activities prior to their commencement. This flagging system provides an institutional control mechanism. Further information regarding the BIS flagging system is provided in Section 7.0 of this report.

Copies of select figures and summary tables of field screening, soil and groundwater analytical results from previous investigations conducted on the Site are attached to this SMP. Copies of select soil boring logs for the Site are presented in Appendix A.

3.1.1 Geology

Based on the penetrative investigations completed to date, the site geology consists of unconsolidated sandy silt glacial till deposits that overlie Silurian age dolomite bedrock assigned to the Lockport Group. A thin veneer (1-6 ft.) of compacted silty sand and gravel fill and/or miscellaneous fill and/or miscellaneous fill with brick, cinders, and concrete fragments overlies native surficial deposits. Miscellaneous fill thicknesses ranged from 0.0 to 6.4 ft. thick and averaged 2.5 ft. Based upon previous site investigations, the depth to bedrock within the area of the investigation ranges between 18.8 ft. and 19.1 ft. below ground surface. A stratigraphic summary of overburden units for the RI borings is presented in Table 7.

3.1.2 Groundwater

Measured groundwater elevations are presented in Table 4. For calculation purposes the average groundwater depth is estimated to be 10 feet below the ground surface.

3.1.3 Field Screening of Soils

Extensive, documented PID headspace readings are available for this Site. This information is summarized in Tables 1 and 28: PID headspace readings are also indicated on the boring logs presented in Appendix A.

3.1.4 Soil Analytical Data

The soil analytical results are summarized in Stantec tables 2, 8-14, 27, 29, 30 and 33-37.

3.1.5 Groundwater Analytical Data

The groundwater analytical results are summarized in Stantec tables 3, 4, 5, 6 and 15-21.

3.1.6 Air Analytical Data

Soil vapor, indoor air and outdoor air analytical results are summarized in Stantec tables 22-25, 31 and 32.

3.2 CONSTRUCTION/DESIGN CONSIDERATIONS

The previous investigations have shown that the materials present at the Site appear to consist of non-hazardous solid waste. More specifically, the subject property contains soil impacted above restricted residential SCOs by VOCs, arsenic, cadmium, lead, copper and selenium. The subject property also contains groundwater impacted by VOCs. The possibility that hazardous materials exist on Site cannot be ruled out. Any waste material that is excavated during construction or Site development must therefore be properly characterized and managed. The development process can be simplified by pre-planning how the fill will be handled during necessary excavation and construction.

If hazardous waste is encountered as part of the excavation program, it cannot be replaced on the Site and must be properly characterized, managed and disposed of off-site at a permitted facility. Management of impacted materials is discussed in Section 6.0 of this SMP.

As the project progresses, developers and design engineers for the planned development will need to consider that the following construction elements may be affected by soil/fill management and waste characterization:

- Schedules: Scheduling of construction will need to allow for management of waste fill material that is excavated during the course of construction. Should unanticipated materials or conditions be observed during excavation work, sampling may be required. Sampling will entail laboratory analysis, which typically takes from several days to several weeks to be completed. Therefore, construction schedules and design plans should allow for adequate flexibility for sampling, segregation, and temporary stockpiling of unanticipated materials on-site.

- Fill and Subsurface Variability: Construction schedules should also provide both contingency time and measures to address variability in fill conditions and the presence of groundwater. For example if hazardous conditions are encountered, additional safety measures and use of personal protection gear may be required. Excavation dewatering and work stoppage could also affect construction schedules and costs.

Measures designed to address these situations are described in further detail in Sections 3.0, 4.0 and 5.0 of this SMP.

4.0 Soil-Fill Characterization

4.1 CONSTRUCTION SAMPLING

Sampling of excavated fill or subsurface materials during construction efforts should be considered if either of the following conditions are encountered:

- If conditions during construction are significantly different than those observed during pre-construction exploration, including unusual odors or visual observations such as stained soils, drums, containers, etc.; or
- If concerns such as sheens or free-product are identified within soil or groundwater.

In these situations, sampling frequency and analyses would vary based on the types and quantities of material encountered and anticipated use/disposal of removed materials. Analysis must adequately characterize materials in light of current NYSDEC 6 NYCRR Part 375 Recommended Soil Cleanup Objectives and/or permitted disposal facility requirements, depending on intended destination of materials.

Typical waste disposal analyses are:

- Toxicity Characteristic Leaching Procedure (TCLP) VOCs,
- TCLP SVOCs,
- TCLP Metals,
- PCBs, Pesticides and Herbicides,
- Ignitability,
- Reactivity,
- Modified Paint Filter Test, and
- pH.

5.0 Groundwater Characterization

5.1 PRE-CONSTRUCTION SAMPLING

Sufficient data are available at this time such that it does not appear necessary to perform additional groundwater sampling prior to construction activities. Monitoring wells have been installed throughout the subject property and appear to provide sufficient coverage for the portions of the Site affected by the petroleum and chlorinated solvent compounds. If excavation activities are proposed outside the three RAOCs identified in the Work Plan and are expected to extend to the depth of the water table, pre-construction sampling is recommended. In such cases, pre-construction sampling frequency and analyses would vary based on the location of proposed work in relation to the characterized areas and on the anticipated quantity and handling of groundwater (see also Appendix B, Sewer Use Permit Information).

5.2 CONSTRUCTION SAMPLING

Sampling of groundwater during construction efforts should be considered if either of the following conditions are encountered:

- If conditions during construction are significantly different than those observed during pre-construction exploration, including unusual odors or visual observations such as stained soils, drums, containers, etc.; or
- If concerns such as sheens or free-product are identified within soil or groundwater.

In these situations, sampling frequency and analyses would vary based on the condition and quantity of groundwater encountered and handling options. In order to obtain approval to discharge potentially impacted groundwater to the Monroe County sewer system, the typical analyses that may be required are identified in Appendix B (Sewer Use Permit Information).

6.0 Monitoring During Excavation

Monitoring of materials encountered during construction is generally needed for three purposes:

- To protect the health and safety of Site workers during construction;

- To determine that soil/fill materials and groundwater are consistent with pre-construction characterization; or

- If no pre-construction characterization was performed.

6.1 HEALTH AND SAFETY MONITORING

Past investigations have shown that fill materials will be encountered during construction activities. Based on the historical uses of the Site, hazardous materials may potentially be encountered. These include materials that could be associated with the fill as well as materials that may be present in groundwater.

General groups of chemicals that are associated with the fill and are considered as potentially hazardous materials subject to health and safety planning include:

- Volatile organic compounds (VOCs) – related to the former painting operations;

- Semi-volatile organic compounds (SVOCs)- these include polycyclic aromatic hydrocarbons (PAHs) which commonly result from the incomplete combustion of organic matter including fossil fuels, such as coal or fuel oil, and are often found in ash, cinders and soot, and coal tar pitch; and

- Metals - Review of the metals analysis revealed that arsenic, cadmium, copper, lead and selenium were found in some samples at concentrations higher than Restricted Residential SCOs.

VOCs are also associated with the groundwater and are considered potentially hazardous materials subject to health and safety planning.

Health and safety planning should also give consideration to other construction-related issues, such as use of heavy equipment, weather conditions, confined space entry, excavation safety and other construction-related OSHA regulations.

Health and safety planning should be performed prior to construction activities. This should include the preparation of a written Health and Safety Plan (HASP) for construction activities. The HASP would be based on the results of the previous chemical analyses, information specific to the proposed development, specific construction tasks to be completed and the potential for exposure of Site workers to the Site contaminants.

The use of OSHA-trained hazardous waste site workers during earthwork activities should be considered. Previous investigations show that overall, the potential for worker exposure exists, but is relatively low. However, all contractors and developers involved in earth moving and excavation activities should consider the need for health and safety planning relative to their specific tasks and planned activities.

6.2 SOIL/FILL/GROUNDWATER MONITORING

Monitoring of soil and fill materials that are excavated and groundwater that is pumped during construction should be performed for two reasons:

- To determine that the material encountered during construction is consistent with the material encountered during previous investigations; and
- To allow characterization of the non-hazardous or hazardous nature of material encountered in the event that no previous investigation results are available for a specific area.

Monitoring should generally consist of documentation of visible characteristics of the soil, fill and groundwater encountered, including obvious staining, sheens, odors, or other indicators of contamination such as oils, tars or containers. It is recommended that construction monitoring by a trained individual such as an environmental engineer, scientist, or geologist be performed during all earth moving, excavation and groundwater work.

Several portable monitoring instruments are available to assist in field monitoring of materials. Such instruments are primarily used for detection of volatile organic compounds or dust and particulates. Since volatile organics and metals have been detected in the past at the Site, this type of instrumentation is appropriate for construction excavation monitoring. Types of instruments available for this purpose include:

- Photoionization detector instruments (PID) - these instruments operate by pumping a sample of ambient air into a chamber where the air is ionized using a light source of specific energy (either 10.2, 10.6, or 11.7 eV). Such instruments are manufactured by HNu and Microtip.
- Flame ionization detector instruments (FID) - these instruments operate on a similar principle as the PIDs; however, ionization is caused by a flame produced by combusting hydrogen. The OVA manufactured by Foxboro is such an instrument.

- Colorimetric tubes - these are small glass tubes which contain chemical salts formulated to react with specific volatile and some non-volatile compounds. A sample of air is drawn through a tube with the use of a hand pump. The presence of the target chemical causes a reaction and a color change to the chemical salts in the tube. The Draeger Tube system is such an instrument.

- Combustible gas meters/gas monitors – these instruments are capable of measuring combustible gases such as methane and hydrogen sulfide and would be used during construction activities if large amounts of organic materials such as railroad timbers or peat are encountered.

- Dust/Particulate Meters – these instruments are capable of measuring dust and particulates in ambient air. An example of an aerosol monitor is the MIE PDE-1000.

These types of instruments are readily available in the Rochester area and can be rented or purchased from several sources. However, these instruments should be operated by individuals trained and experienced in their use, limitations and capability for data generation. Readings generated from monitoring instruments should be recorded in the field along with visual observations. As long as excavation monitoring shows soil, fill, and groundwater material to be consistent with previous investigations, then the material should be manageable as determined prior to construction. If conditions are different from those anticipated, then sampling and additional characterization may be necessary.

7.0 Management of Impacted Material

At this time, there is no preferred method for the management of soil/fill excavated during construction activities. In general, it is recommended that non-hazardous soil/fill excavated during remedial measures, grading foundation work, utility trenching work and other earth moving activities, if permitted and in accordance with regulations, be reused on-site covered with either clean soil or an impervious surface, or be hauled off-Site to a properly licensed and permitted facility. However, if hazardous wastes are encountered, they cannot be reused on-site and will need to be disposed properly at an approved, off-Site facility.

If groundwater is pumped at the Site, a temporary sewer use permit would be required for sewer disposal from the Monroe County Department of Environmental Services (MCDES) – Division of Pure Waters (DPW). The required information to be supplied to the MCDES-DPW is included in Appendix B.

7.1 ON-SITE RE-USE OF EXCAVATED MATERIALS

Impacted materials that will be re-used on-Site will need to be segregated based upon field screening, previous investigation findings, and/or additional pre-construction and/or construction sampling and analyses. The analysis results will be compared to Restricted Residential SCOs. If concentrations are below Restricted Residential SCOs, the soil can be reused on-Site. If the concentrations are elevated above Restricted Residential SCOs, the results shall be shared with the NYSDEC and approval obtained prior to their specified reuse on-Site. It should be noted the NYSDEC may require the highly impacted materials to be transported off-Site and disposed of at a permitted landfill facility. Impacted materials that are determined acceptable for re-use on-Site to backfill excavations should be covered with clean soil or an impervious surface. Staging and stockpiling management of materials should be conducted as described in the sections below.

7.2 OFF-SITE DISPOSAL OF EXCAVATED MATERIALS

Management of materials that will be disposed off-site will need to include characterization (sampling and laboratory analysis as required by the chosen landfill), management, and off-site transportation and disposal at an approved landfill. Appropriate measures for management of excavated materials will need to include temporarily stockpiling excavated soils and solids, as well as measures to prevent them from contaminating other materials or migrating off-site. Measures that should be incorporated into such plans include:

- Stockpile locations away from storm sewers, downwind property boundaries, and drainage courses;
- Dust suppression techniques, as necessary;
- Placement of stockpiles of contaminated soils, fill or hazardous materials (e.g. drums, containers, odiferous fill) on 6-mil polyethylene (poly) with perimeter berms; and
- Covering stockpiles of contaminated soils, fill, or hazardous materials (e.g. drums, containers, odiferous fill) with weighted down poly at the end of each day of placement to prevent migration by wind-blown dust or stormwater runoff until final placement and final cover is established.

7.3 OFF-SITE DISPOSAL OF IMPACTED WATER

Management of water will include characterization (sampling and laboratory analysis as required by the MCDES-DPW), management, and disposal to the Monroe County sewer system. Appropriate measures for management of water will need to include temporary containerization and measures to prevent water from contaminating other materials or migrating off-site. Measures that should be incorporated into such plans include:

- Containerize water prior to pumping off-site;
- Stage containers away from downwind property boundaries and drainage sources;
- Pump water directly into containers;
- Perform necessary sampling prior to disposal; and
- Coordinate with MCDES-DPW to receive permission for disposal.

The sewer use permit information is included in Appendix B.

8.0 Flagging System & Environmental Easement

Once this Site Management Plan is approved by the NYSDEC, an Environmental Easement will be established in conjunction with the NYSDEC. The Environmental Easement will identify use restrictions, institutional controls, engineering controls, site access, and operation and maintenance requirements for the Site, in conjunction with the conditions set forth in this Site Management Plan.

The City of Rochester has established a procedure for “flagging” the tax account numbers of properties that require special environmental reviews as a result of hazardous waste or hazardous substance contamination. The reviews are conducted as referrals to the City’s Division of Environmental Quality (DEQ) for any permit applications for properties where soil management plans or environmental contingency plans need to be established and followed during construction activities.

Once the Site Management Plan is approved by the NYSDEC, the City will “flag” the parcels that comprise the Site and they will be subject to a special environmental review prior to issuance of a permit. A special notation will be added to the City’s mainframe computer database of property information for County of Monroe Tax ID No. 121-650-0001.053.000.

The notation will appear as a “flag” to City staff that receive various building and site preparation permit applications. The flag will require a referral to the City’s DEQ before the application can be processed for approval. DEQ staff will review the permit application for consistency with the Site Management Plan, limited-use areas and land-use restrictions. A notification to the NYSDEC can be included at the time the permit is reviewed if warranted given the scope of the proposed work and other Site-specific factors.

9.0 Management of Soil Vapor Impacts

An active sub-slab depressurization system may be required for proposed structures to minimize the potential for volatile organic vapors and nuisance petroleum odors, associated with residual petroleum-impacted soil or groundwater, to enter the building, as per NYSDOH Guidance[6].

The design of this system will be the responsibility of the new owner and/or developer. Generally, the system would consist of a clean stone layer with slotted piping to facilitate collection of sub-slab vapors; a vapor retarding liner (such as 6mil polyethylene sheeting) to trap vapors in the stone layer and to prevent vapors from escaping through cracks and joints in the floor; header piping to connect horizontal piping to a depressurization fan; and a vent to the exterior above the building roof elevation/air intakes.

Sample collection, monitoring and reporting shall be contingent on NYSDOH requirements.

References

[1] "Phase II Investigation, Davidson's Collision, 399 Gregory Street, Rochester, New York. Prepared by Day Environmental, Inc., September 21, 1991."
[2] "Preliminary Site Assessment Report, Davidson's Collision, NYSDEC Site No. 828091, Rochester, New York. Prepared by ABB Environmental Services, August 1995."
[3] "Site Investigation Report, Davidson's Collision, Site No. 828091, Rochester, New York. Prepared by Frank Sowers, PE, New York State Department of Environmental Conservation, Division of Environmental Remediation, Region 8, March 2003."
[4] "Remedial Investigation and Alternative Analysis Report, Former Davidson Collision Site, 399 Gregory Street, Rochester, New York. Prepared by Stantec Consulting Services Inc., September 2006, revised January 2008."
[5] "Remedial Design Investigation Report, Former Davidson Collision Site, 399 Gregory Street, Site No. C828091, City of Rochester, Monroe County. Prepared by Stantec Consulting Services Inc., December 2007."
[6] "Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Prepared by the New York State Department of Health, Center for Environmental Health, Bureau of Environmental Exposure Investigation. Final, October 2006."

Figures

Geographic Information Systems

Cartographic Design By: Marc Bouchard

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Stantec Consulting
2250 Brighton Henrietta Townline Road
Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
www.stantec.com

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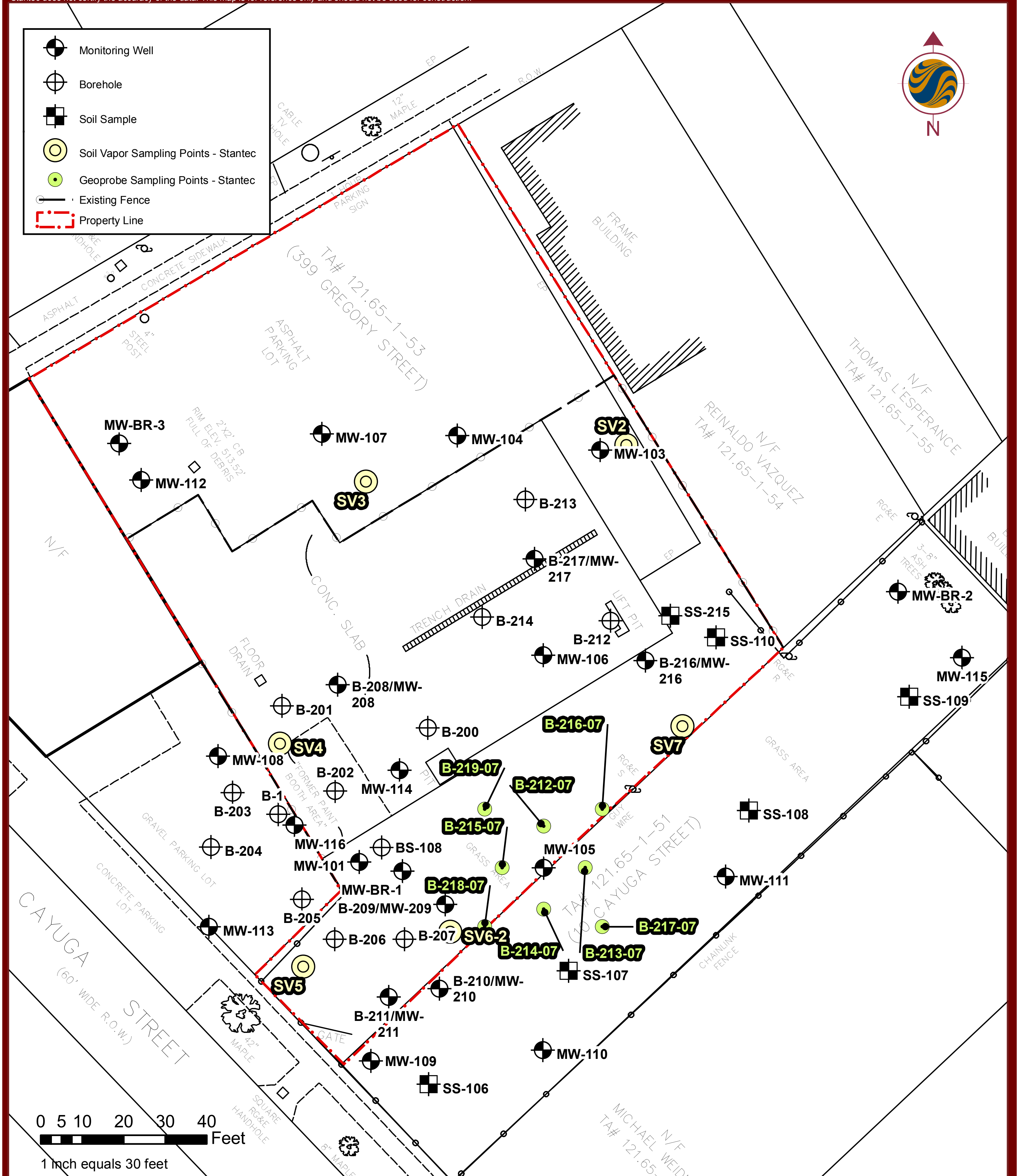
Figure 1 - Site Location

Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY



Geographic Information Systems

Cartographic Design By: Marc Bouchard

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Stantec Consulting
2250 Brighton Henrietta Townline Road
Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
www.stantec.com

Figure 2 - Soil Boring and Monitoring Well Locations

Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

Tables

TABLE 1
SUMMARY OF PID HEADSPACE READINGS (ppm)
Remedial Investigation
399 Gregory Street
Rochester, NY

Borehole	Depth (ft. bgs)	PID Readings Peak (ppm)	PID Readings Background (ppm)
AOC - 1			
B-200	0-4	0.8	0.0
	4-8	0.0	0.0
	8-12	0.0	0.0
	12-15	0.0	0.0
B-201	0-4	0.6	0.0
	4-8	0.5	0.0
	8-12	0.4	0.0
B-202	0-4	1.2	0.0
	4-8	0.7	0.0
	8-12	0.4	0.0
	12-15	0.2	0.0
B-203	0-4	1.3	0.0
	4-8	0.8	0.0
	8-12	0.6	0.0
	12-15	0.6	0.0
B-204	0-4	0.8	0.0
	4-8	0.8	0.0
	8-12	0.6	0.0
	12-15	0.6	0.0
B-205	0-4	1.0	0.0
	4-8	89.1	0.0
	8-12	13.1	0.0
	12-15	0.7	0.0
B-206	0-4	1.5	0.0
	4-8	1.2	0.0
	8-12	1.1	0.0
B-207	0-4	1.5	0.0
	4-6	0.8	0.0
B-208	0-4	0.5	0.0
	4-8	0.4	0.0
	8-12	0.3	0.0
	12-15	0.4	0.0
B-209	0-4	0.4	0.0
	4-8	0.0	0.0
	8-12	0.0	0.0
	12-15	0.0	0.0

TABLE 1
SUMMARY OF PID HEADSPACE READINGS (ppm)

Remedial Investigation

399 Gregory Street

Rochester, NY

Borehole	Depth (ft. bgs)	PID Readings Peak (ppm)	Background (ppm)
B-210	0-4	10.0	0.0
	4-8	9.4	0.0
	8-12	1.1	0.0
	12-15	0.4	0.0
B-211	0-4	0.4	0.0
	4-8	34.1	0.0
	8-12	0.0	0.0
	12-15		
AOC - 2			
B-212	0-4	0.9	0.0
	4-8	1.4	0.0
	8-12	1.3	0.0
B-213	0-4	6.5	0.0
	4-8	0.5	0.0
	8-12	0.2	0.0
	12-15	0.4	0.0
B-214	0-4	27.1	0.0
	4-8	0.7	0.0
	8-12	0.5	0.0
	12-15	0.7	0.0
B-215	0-4	1.0	0.0
	4-8	1.3	0.0
	8-12	0.5	0.0
B-216	0-4	0.7	0.0
	4-8	0.8	0.0
	8-12	0.3	0.0
	12-15	0.3	0.0
B-217	0-4	22.5	0.0
	4-8	1.0	0.0
	8-12	0.5	0.0
	12-15	0.0	0.0

Notes:
1. ft. bgs = feet below ground surface.
2. ppm = parts per million.
3. PID data collected with Mini-Rae 2000 equipped with 10.6 eV lamp.

TABLE 2
SOIL SAMPLE SUMMARY
Remedial Investigation
399 Gregory Street
Rcohester, NY

Sample ID	Location	Date	Depth (ft. bgs)	Parameters
AOC - 1				
GR-B200-S	B-200	8/4/2005	8-12	TCL VOCs plus TICs by OLM 4.2
GR-B201-S	B-201	8/3/2005	8-12	TCL VOCs plus TICs by OLM 4.2
GR-B202-S ms/msd	B-202	8/3/2005	12-15	TCL VOCs plus TICs by OLM 4.2
GR-B203-S	B-203	8/3/2005	4-8	TCL VOCs plus TICs by OLM 4.2
GR-B204-S	B-204	8/3/2005	12-16	TCL VOCs plus TICs by OLM 4.2
GR-B205-S	B-205	8/3/2005	4-8	TCL VOCs plus TICs by OLM 4.2
GR-B206-S	B-206	8/3/2005	8-12	TCL VOCs plus TICs by OLM 4.2
GR-B207-S	B-207	8/3/2005	0-4	TCL VOCs plus TICs by OLM 4.2
GR-B208-S	B-208	8/4/2005	8-12	TCL VOCs plus TICs by OLM 4.2
GR-B209-S	B-209	8/5/2005	12-15	TCL VOCs plus TICs by OLM 4.2
GR-B210-S	B-210	8/4/2005	4-8	TCL VOCs plus TICs by OLM 4.2
GR-B211-S	B-211	8/5/2005	4-8	TCL VOCs plus TICs by OLM 4.2
AOC - 2				
GR-B212-S	B-212	8/4/2005	8-12	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-B213-S	B-213	8/4/2005	0-4	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1

TABLE 2
SOIL SAMPLE SUMMARY
Remedial Investigation
399 Gregory Street
Rcohester, NY

Sample ID	Location	Date	Depth (ft. bgs)	Parameters
GR-B214-S	B-214	8/3/2005	0-4	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-XX-S-DUP	duplicate of GR-B214-S	8/3/2005	0-4	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-B215-S	B-215	8/4/2005	4-8	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-B216-S	B-216	8/4/2005	0-4	TCL VOCs plus TICs by OLM 4.2 MSMSD-TCL SVOCs plus TICs by OLM 4.2 MS/MSD-PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-B217-S	B-217	8/4/2005	0-4	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 MS/MSD-TAL Metals by ILM 5.1

Notes:
1. ft. bgs = feet below ground surface.
2. GR-XX-S-DUP is a duplicate of GR-B214-S.

TABLE 3
WELL COMPLETION SUMMARY
Remedial Investigation
399 Gregory Street
Rochester, NY

Well	**Northing**	**Easting**	**Reference Elevation**	**Ground Elevation**	**Well Diameter** (in.)	**Bentonite Seal** (ft. bgs)	**Sandpack Interval** (ft. bgs)	**Screened(3) Interval** (ft. bgs)	**Total Depth** (ft. bgs)
Existing Wells									
MW-101	1146597.652	1410450.095	512.74	513.2	2.0	5-7	7-19.5	9.1-19.1	19.5
MW-103	1146696.876	1410508.056	512.32	513.0	2.0	4.9-6.9	6.9-18.9	8.9-18.9	18.9
MW-104	1146700.312	1410473.75	513.01	513.3	2.0	5-7	7-19.2	9.2-19.2	19.2
MW-105	1146596.225	1410494.472	512.00	512.4	2.0	1.5-4	4-16	6-16	16
MW-106	1146647.445	1410494.407	512.98	513.1	1.0	3-5.5	5.5-12.5	7.5-12.5	12.5
MW-107	1146700.74	1410441.062	512.68	513.3	2.0	1.5-4	4-16	6-16	16
MW-108	1146623.149	1410416.138	515.29	512.5	2.0	2-4	4-16.5	6-16	16.5
MW-109	1146549.725	1410452.941	511.40	511.8	2.0	1.5-4	4-16.5	6.5-16.5	16.5
MW-110	1146552.389	1410494.258	511.60	512.1	2.0	1.5-4	4-16.5	6-16	16.5
MW-111	1146594.16	1410538.25	511.80	512.2	2.0	1.5-3.5	3.5-16	6-16	16
MW-112	1146689.696	1410397.639	513.08	510.5	2.0	1.5-4	4-16	6-16	16
MW-113	1146582.014	1410413.948	511.81	512.4	2.0	1.5-4	4-16.5	6.5-16.5	16.5
MW-114	1146619.797	1410459.77	513.00	513.4	1.0	3-5	5-12.5	7.3-12.3	12.5
MW-115	1146646.857	1410595.146	515.64	513.2	2.0	3-4	4-16	6-16	16
MW-116	1146606.522	1410434.54	516.16	513.7	1.0	3-6	6-18	8-18	18
MW-BR-1	1146595.46	1410460.481	512.72	513.1	4.0	0-21	NA	21-31.3	31.3
MW-BR-2	1146662.759	1410579.78	512.98	513.5	4.0	0-21	NA	21-30.7	30.7
MW-BR-3	1146698.398	1410392.329	513.23	513.5	4.0	0-21	NA	21-30.8	30.8
New Wells									
MW-208	1146640.385	1410444.935	512.93	513.3	1.0	1-4	4-15	5-15	15
MW-209	1146587.456	1410470.834	512.62	513.0	1.0	1-4	4-15	5-15	15
MW-210	1146567.133	1410469.357	511.66	512.0	1.0	1-3	3-15	5-15	15
MW-211	1146565.14	1410457.168	512.09	512.4	1.0	1-4	4-11.9	6.9-11.9	11.9
MW-216	1146646.113	1410519.009	512.20	512.7	1.0	1-3	3-15	5-15	15
MW-217	1146670.628	1410492.255	512.92	513.1	1.0	1-3.5	3.5-15	5-15	15

Notes:
1. Reference elevations based upon August 10,2005 survey performed by Stantec.
Horizontal datum is referenced to NYS Plane Coordinate System NAD 83, Vertical datum is referenced to North American Vertical Datum of 1988.
2. ft. bgs = feet below ground surface.
3. Screened Interval in MW-BR-1 to MW-BR-3 equals the open corehole interval

TABLE 4
WATER LEVEL SUMMARY
Remedial Investigation

399 Gregory Street
Rochester, NY

Well	Northing	Easting	Reference Elevation	August 16, 2005		October 27, 2005		November 4, 2005		May 23, 2006	
				Water Level (ft. btoc)	Water Level (elevation)	Water Level (ft. btoc)	Water Level (elevation)	Water Level (ft. btoc)	Water Level (elevation)	Water Level (ft. btoc)	Water Level (elevation)
Existing Wells											
MW-101	1146597.652	1410450.095	512.74	11.12	501.62	8.38	504.36	NM	-	8.79	503.95
MW-103	1146696.876	1410508.056	512.32	9.33	502.99	7.75	504.57	NM	-	7.51	504.81
MW-104	1146700.312	1410473.750	513.01	10.12	502.89	8.34	504.67	NM	-	8.32	504.69
MW-105	1146596.225	1410494.472	512.00	9.35	502.65	5.59	506.41	NM	-	7.08	504.92
MW-106	1146647.445	1410494.407	512.98	NM	-	7.82	505.16	NM	-	7.94	505.04
MW-107	1146700.740	1410441.062	512.68	9.68	503.00	7.23	505.45	NM	-	7.89	504.79
MW-108	1146623.149	1410416.138	515.29	12.68	502.61	10.87	504.42	NM	-	11.17	504.12
MW-109	1146549.725	1410452.941	511.40	9.32	502.08	8.08	503.32	NM	-	8.05	503.35
MW-110	1146552.389	1410494.258	511.60	9.56	502.04	7.70	503.90	NM	-	8.07	503.53
MW-111	1146594.160	1410538.250	511.80	9.29	502.51	6.98	504.82	NM	-	7.14	504.66
MW-112	1146689.696	1410397.639	513.08	10.41	502.67	8.57	504.51	NM	-	8.85	504.23
MW-113	1146582.014	1410413.948	511.81	9.26	502.55	8.89	502.92	NM	-	7.84	503.97
MW-114	1146619.797	1410459.770	513.00	10.47	502.53	6.74	506.26	NM	-	8.38	504.62
MW-115	1146646.857	1410595.146	515.64	13.45	502.19	11.71	503.93	NM	-	10.75	504.89
MW-116	1146606.522	1410434.540	516.16	14.00	502.16	11.18	504.98	NM	-	12.00	504.16
MW-BR-1	1146595.460	1410460.481	512.72	11.50	501.22	9.55	503.17	NM	-	9.95	502.77
MW-BR-2	1146662.759	1410579.780	512.98	13.10	499.88	11.80	501.18	NM	-	11.40	501.58
MW-BR-3	1146698.398	1410392.329	513.23	11.00	502.23	9.25	503.98	NM	-	9.41	503.82
New Wells											
MW-208	1146640.385	1410444.935	512.93	9.45	503.48	7.53	505.40	8.10	504.83	7.53	505.40
MW-209	1146587.456	1410470.834	512.62	10.65	501.97	6.74	505.88	8.13	504.49	6.74	505.88
MW-210	1146567.133	1410469.357	511.66	9.65	502.01	7.45	504.21	8.00	503.66	7.45	504.21
MW-211	1146565.140	1410457.168	512.09	10.08	502.01	8.29	503.80	8.54	503.55	8.29	503.80
MW-216	1146646.113	1410519.009	512.20	9.21	502.99	6.54	505.66	7.06	505.14	6.54	505.66
MW-217	1146670.628	1410492.255	512.92	9.61	503.31	NM	-	7.77	505.15	NM	-

Notes:
1. Reference elevations based upon the August 10,2005 survey performed by licensed Stantec survey crew.
   Horizontal datum is referenced to NYS Plane Coordinate System NAD 83; Vertical datum NAVD 1988.
2. ft. btoc = feet below top of casing.
3. NM = not measured.

TABLE 5
FIELD PARAMETER SUMMARY
Remedial Investigation
399 Gregory Street
Rochester, NY

Well	Date	Water Level (ft. btor)	Time	Volume Purged (gal)	pH (SU)	Conductivity (us/cm)	Temperature (^oC)	Turbidity (NTU)	ORP (eV)	Dissolved Oxygen mg/l
August, 2005										
MW-101	08/08/05	10.81	17:02	1.25	6.32	786.4	13.9	44.8	-223	NM
			17:06	2.5	8.44	789.1	13.7	22.4	-219	NM
			17:10	3.75	8.64	804.7	13.3	11.6	-232	NM
MW-104	08/09/05	9.89	14:12	1.5	6.25	1094	16.7	1000+	-193	NM
			14:16	3	7.21	1083	15.8	1000+	-139	NM
			14:20	4.5	7.71	1073	15.1	1000+	-175	NM
MW-105	08/08/05	8.75	16:17	0.75	7.05	751	16.5	1000+	-164	NM
			16:23	1.5	7.25	723.1	17.5	1000+	-107	NM
			16:32	2.25	7.23	602.1	17.8	1000+	-37	NM
MW-106	08/09/05	9.50	8:10	0.11	7.03	747.9	15.6	1000+	-167	NM
				dry at 0.11 gallons						
MW-108	08/05/05	12.34	16:18	1.0	6.75	1189	15.6	1000+	-283	NM
			16:22	2.0	7.71	1195	15.4	1000+	-165	NM
			16:25	3.0	6.89	1186	14.7	1000+	-146	NM
MW-110	08/08/05	9.32	16:00	1.0	6.81	983.5	15.9	1000+	-246	NM
			16:02	2.0	7.24	990.8	14.6	1000+	-185	NM
			16:05	3.0	7.36	990.1	14.8	1000+	-141	NM
MW-111	08/09/05	9.10	15:20	1.0	6.27	809.7	14.7	1000+	-256	NM
			15:22	2.0	6.31	868.6	13.6	1000+	-143	NM
			15:25	3.0	6.29	921.8	12.9	1000+	-63	NM
MW-113	08/09/05	9.08	13:16	1.0	6.62	2774	16.3	1000+	-110	NM
			13:25	2.0	7.79	2754	16.4	841.0	-136	NM
			13:34	3.0	7.08	2731	16.1	1000.0	-115	NM
MW-114	08/09/05	10.31	8:30	0.02	7.30	863.6	16.6	1000+	-228	NM
				dry @ 0.02 gallons						

TABLE 5
FIELD PARAMETER SUMMARY
Remedial Investigation
399 Gregory Street
Rochester, NY

Well	Date	Water Level (ft. btor)	Time	Volume Purged (gal)	pH (SU)	Conductivity (us/cm)	Temperature (^oC)	Turbidity (NTU)	ORP (eV)	Dissolved Oxygen mg/l
MW-116	08/05/05	13.58	15:55	0.25	6.56	1015	16.9	1000+	-246	NM
			16:01	0.50	6.59	1050	20.3	1000+	-289	NM
				dry @ 0.5 gallons						
MW-208	08/08/05	9.30	8:49	0.17	6.89	789.2	14.8	1000+	-198	NM
development			8:53	0.34	7.46	783.7	14.3	1000+	-218	NM
			8:56	0.51	8.00	791.7	14.0	1000+	-233	NM
			8:59	0.68	8.21	812.3	13.9	1000+	-225	NM
			9:01	0.85	8.05	810.3	14.6	1000+	-190	NM
sampling	08/09/05	9.32	8:50	0.17	7.55	826.9	14.5	1000+	-221	NM
			8:53	0.34	7.38	823.7	14.4	1000+	-231	NM
			8:57	0.51	7.46	830.2	14.7	1000+	-227	NM
MW-209	08/08/05	10.38	8:27	0.14	7.32	716.8	16.6	1000+	-242	NM
development			8:31	0.28	7.45	982.9	16.0	1000+	-202	NM
			8:36	0.42	7.48	1036	16.2	1000+	-176	NM
				dry @ 0.42 gallons						
sampling	08/09/05	10.40	9:20	0.14	6.65	1070	16.7	1000+	-47	NM
			9:25	0.28	6.77	1055	17.0	1000+	-49	NM
			9:33	0.42	6.69	1046	17.4	1000+	-55	NM
MW-210	08/08/05	9.51	7:50	0.16	7.36	1000	15.5	1000+	-355	NM
development			7:54	0.32	7.49	904.7	15.2	1000+	-433	NM
			7:59	0.48	7.72	763.7	15.8	1000+	-484	NM
sampling	08/09/05	9.45	9:46	0.16	6.71	1168	16.5	1000+	-38	NM
			9:54	0.32	6.83	1198	17.4	1000+	-69	NM
			10:00	0.48	6.82	1201	17.6	1000+	-77	NM
MW-211	08/08/05	9.90	7:30	0.1	7.39	1315	16.8	1000+	-265	NM
development				dry @ 0.1 gallons						

TABLE 5
FIELD PARAMETER SUMMARY
Remedial Investigation
399 Gregory Street
Rochester, NY

Well	Date	Water Level (ft. btor)	Time	Volume Purged (gal)	pH (SU)	Conductivity (us/cm)	Temperature (^oC)	Turbidity (NTU)	ORP (eV)	Dissolved Oxygen mg/l
MW-211 (cont.) sampling	08/09/05	9.91	12:57	0.06	6.95	1268	21.6	100.0	-77	NM
			13:00	0.12	7.31	1276	19.8	1000+	-121	NM
			13:02	0.18	7.30	1274	19.4	1000+	-135	NM
MW-216 development	08/08/05	8.92	11:46	0.18	6.85	693	14.8	1000+	-667	NM
			11:49	0.36	7.23	420.1	16.1	1000+	-385	NM
			11:54	0.54	7.44	704.6	18.4	1000+	-135	NM
				dry @ 0.54 gallons						
sampling	08/09/05	9.02	7:30	0.18	7.32	827.5	14.2	1000+	-192	NM
			7:33	0.36	7.33	815.1	14.1	1000+	-212	NM
			7:38	0.54	7.43	812.4	14.2	1000+	-204	NM
MW-217 development	08/08/05	9.41	12:12	0.18	6.19	1282	15.7	1000+	-121	NM
			12:14	0.36	6.63	1363	16.2	1000+	-86	NM
			12:16	0.54	6.91	1284	15.5	1000+	-90	NM
			12:18	0.72	6.93	1312	14.9	1000+	-51	NM
			12:21	0.90	6.62	1326	15.1	1000+	-54	NM
sampling	08/09/05	9.44	7:52	0.18	7.08	1243	15.1	1000+	-181	NM
			7:58	0.36	7.44	1355	14.4	1000+	-198	NM
			8:01	0.54	7.47	1356	14.6	1000+	-201	NM
November, 2005										
MW-208	11/04/05	8.40	10:10	0.24	6.05	1206	16.0	200+	211	NM
			10:16	0.48	6.24	1165	15.5	200+	128	NM
			10:22	0.72	6.50	1155	15.4	200+	168	NM
MW-209	11/04/05	8.40	10:54	0.26	6.27	1735	15.2	200+	154	NM
			11:08	0.52	6.67	1748	15.1	200+	156	NM
			11:22	0.78	6.94	1750	15.2	200+	152	NM
MW-210	11/04/05	8.00	12:04	0.26	5.55	1125	15.9	200+	62	NM
			12:10	0.52	6.42	1152	16.0	200+	36	NM
				dry @ 0.52 gallons						

TABLE 5
FIELD PARAMETER SUMMARY
Remedial Investigation
399 Gregory Street
Rochester, NY

Well	Date	Water Level (ft. btor)	Time	Volume Purged (gal)	pH (SU)	Conductivity (us/cm)	Temperature (^{o}C)	Turbidity (NTU)	ORP (eV)	Dissolved Oxygen mg/l
MW-211	11/04/05	8.54	12:30	0.11	6.52	1281	16.4	200+	-29	NM
			12:34	0.22	6.62	1287	16.2	200+	-26	NM
				dry @ 0.22 gallons						
MW-216	11/04/05	7.06	10:45	-						
low stress		7.44	10:50	-	5.64	970	15.2	105.0	183	8.56
150 ml/min		7.44	10:55	-	5.63	970	15.5	49.5	180	5.48
		7.46	11:00	-	5.65	970	15.5	24.8	177	4.69
		7.45	11:05	-	5.68	960	15.5	<1	176	3.91
		7.44	11:10	-	5.70	960	15.6	<1	176	3.61
		7.44	11:15	-	5.71	960	15.7	<1	177	3.42
		7.44	11:20	-	5.71	960	15.7	<1	177	3.37
		7.44	11:25	-	5.71	960	15.7	<1	178	3.19
MW-217	11/04/05	7.77	9:20	-						
low stress		7.92	9:25	-	5.15	1370	15.4	99.0	266	10.42
140 ml/min		7.92	9:30	-	5.47	1330	15.5	<10	220	4.51
		7.92	9:35	-	5.82	1320	15.4	<10	140	2.02
		7.92	9:40	-	6.05	1320	15.5	<10	94	1.65
		7.92	9:45	-	6.14	1320	15.7	<10	67	1.28
		7.92	9:50	-	6.16	1320	15.7	<10	59	1.14
		7.92	9:55	-	6.19	1320	15.6	<10	49	0.78
		7.92	10:00	-	6.21	1320	15.7	<10	41	0.47
		7.92	10:05	-	6.21	1320	15.7	<10	37	0.3
		7.92	10:10	-	6.22	1320	15.6	<10	34	0.08

Notes:
1. ft btor = feet below top of riser.
2. SU = standard units.
3. us/cm = microsiemens per centimeter.
4. (^{o}C) = degrees Celsius.
5. NTU = Nephelometric Turbidity Units.
6. eV = electrovolts.
7. Mg/l= milligramper liter

TABLE 6
GROUNDWATER SAMPLE SUMMARY
Remedial Investigation
399 Gregory Street
Rochester, NY

Sample ID	Location	Date	Method	Parameters
August 2005				
GR-XX-GW-RB-GW	Rinse blank	8/8/2005	NA	TCL VOCs plus TICs by OLM 4.2
GR-MW101-GW	MW-101	8/8/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW101-LNAPL	MW-101	8/8/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TPH by NYSDOH Method 310.13
GR-MW104-GW (MS/MSD)	MW-104	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-MW105-GW	MW-105	8/8/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW106-GW	MW-106	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-MW108-GW	MW-108	8/5/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW110-GW	MW-110	8/8/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW111-GW	MW-106	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-MW113-GW	MW-110	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW114-GW	MW-110	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW116-GW	MW-116	8/5/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW208-GW	MW-208	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW209-GW	MW-209	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW210-GW	MW-210	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2

TABLE 6
GROUNDWATER SAMPLE SUMMARY
Remedial Investigation
399 Gregory Street
Rochester, NY

Sample ID	Location	Date	Method	Parameters
GR-MW211-GW	MW-211	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2
GR-MW216-GW	MW-216	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-MW217-GW	MW-217	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
GR-XX-DUP	MW-217	8/9/2005	poly bailer	TCL VOCs plus TICs by OLM 4.2 TCL SVOCs plus TICs by OLM 4.2 PCBs by OLM 4.2 TAL Metals by ILM 5.1
Trip Blank	NA	8/9/2005	NA	TCL VOCs plus TICs by OLM 4.2
November 2005				
GR-MW208-GW	MW-208	11/4/2005	poly bailer	TCL VOCs plus TICs by EPA 8260
GR-MW209-GW	MW-209	11/4/2005	poly bailer	TCL VOCs plus TICs by EPA 8260
GR-MW210-GW	MW-210	11/4/2005	poly bailer	TCL VOCs plus TICs by EPA 8260
GR-MW211-GW	MW-211	11/4/2005	poly bailer	TCL VOCs plus TICs by EPA 8260
GR-MW216-GW	MW-216	11/4/2005	low stress	TCL VOCs plus TICs by EPA 8260 TAL Metals by ILM 5.1
GR-DUP-GW	MW-216	11/4/2005	low stress	TAL Metals by ILM 5.1
GR-MW217-GW (MS/MSD- TAL Metals only)	MW-217	11/4/2005	low stress	TCL VOCs plus TICs by EPA 8260 TAL Metals by ILM 5.1
Trip Blank	NA	11/4/2005	NA	TCL VOCs plus TICs by OLM 4.2

Notes:
1. GR-XX-DUP is a duplicate sample of GR-MW217-GW collected on 8/9/2005.
2. GR-Dup-GW is a duplicate sample of GR-MW216-GW collected on 11/4/2005

TABLE 7
STRATIGRAPHIC SUMMARY
Remedial Investigation
399 Gregory Street
Rochester, NY

Boring Number	Misc. Fill	Fill	Native Sand	Silt/Clay	Till
AOC-1					
B-200	-	0 - 8.3	8.3 - 9.5	-	9.5 - 15.0
B-201	0 - 1.2	1.2 - 4.3	4.3 - 8.4	-	8.4 - 12.0
B-202	0 - 6.4	-	6.4 - 8.0	-	8.0 - 15.0
B-203	0 - 1.7	1.7 - 3.7	3.7 - 10.0	-	10.0 - 15.0
B-204	0 - 3.3	3.3 - 4.0	4.0 - 6.5	6.5 - 10.3	10.3 - 16.0
B-205	-	0.0 - 7.4	7.4 - 10.0	-	10.0 - 15.0
B-206	0 - 4.0	4.0 - 6.5	6.5 - 9.8	-	9.8 - 12.0
B-207	0 - 1.5	1.5 - 4.0	4.0 - 6.0	-	-
B-208	0 - 1.3	-	1.3 - 9.0	-	9.0 - 15.0
B-209	-	0.0 - 4.1	4.1 - 9.3	7.8 - 8.0	9.3 - 15.0
B-210	0 - 2.7	-	2.7 - 9.0	-	9.0 - 15.0
B-211	0 - 2.7	2.7 - 4.4	4.4 - 7.7	-	7.7 - 11.9
AOC-2					
B-212	0 - 1.8	-	1.8 - 5.5	5.5 - 9.5	9.5 - 12.0
B-213	0 - 3.6	-	3.6 - 10.0	-	10.0 - 15.0
B-214	-	0.0 - 2.2	2.2 - 10.4	10.4 - 11.2	11.2 - 15.0
B-215	0 - 1.5	-	1.5 - 6.6	6.6 - 7.2	9.0 - 10.3
B-216	0 - 1.0	-	1.0 - 6.5	6.5 - 8.7	9.7 - 15.0
B-217	0 - 1.6	-	1.6 - 3.0	3.0 - 6.6	11.5 - 15.0

Notes:
1. Stratigraphic depth intervals interpreted from individual boring logs. See boring logs for soil descriptions.

TABLE 8
SUMMARY OF TCL VOLATILE ORGANIC COMPOUNDS IN SOIL
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 1										
Sample ID		**GR-B200-S**	**GR-B201-S**	**GR-B202-S**	**GR-B203-S**	**GR-B204-S**	**GR-B205-S**	**GR-B206-S**	**GR-B207-S**	**GR-B208-S**	**GR-B209-S**	**NYSDEC Recommeded Soil Cleanup Objectives (1)**
Lab Sample Number		**T4080-12**	**T4080-09**	**T4080-06**	**T4080-03**	**T4080-01**	**T4080-02**	**T4080-04**	**T4080-05**	**T4080-13**	**T4091-01**	
Sampling Date		**08/04/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/04/05**	**08/05/05**	
Sample Depth		**8-12'**	**8-12'**	**12-15'**	**4-8'**	**12-16'**	**4-8'**	**8-12'**	**0-4'**	**8-12'**	**12-15'**	
Matrix		**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
Dichlorodifluoromethane	75-71-8	11 UJ	11 UJ	12 UJ	11 UJ	12 U	12 U	11 UJ	11 UJ	12 UJ	11 U	10,000 *
Chloromethane	74-87-3	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
Vinyl Chloride	75-01-4	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	200
Bromomethane	74-83-9	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
Chloroethane	75-00-3	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	1,900
Trichlorofluoromethane	75-69-4	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
1,1,2-Trichlorotrifluoroethane	76-13-1	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
1,1-Dichloroethene	75-35-4	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	400
Acetone	67-64-1	**11** J	57 U	59 U	57 U	**11** J	**27** J	**18** J	55 U	**15** J	55 U	200
Carbon Disulfide	75-15-0	**1.3** J	11 UJ	12 UJ	11 UJ	12 U	12 U	**1.3** J	11 UJ	**3.6** J	11 UJ	2,700
Methyl tert-butyl Ether	1634-04-4	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	120
Methyl Acetate	79-20-9	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
Methylene Chloride	75-09-2	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	100
trans-1,2-Dichloroethene	156-60-5	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	300
1,1-Dichloroethane	75-34-3	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	200
Cyclohexane	110-82-7	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
2-Butanone	78-93-3	55 U	57 U	59 U	57 U	58 U	60 U	54 U	55 U	59 U	55 U	300
Carbon Tetrachloride	56-23-5	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	600
cis-1,2-Dichloroethene	156-59-2	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
Chloroform	67-66-3	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	300
1,1,1-Trichloroethane	71-55-6	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	800
Methylcyclohexane	108-87-2	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
Benzene	71-43-2	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	60 or MDL
1,2-Dichloroethane	107-06-2	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	100
Trichloroethene	79-01-6	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	700
1,2-Dichloropropane	78-87-5	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
Bromodichloromethane	75-27-4	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
4-Methyl-2-Pentanone	108-10-1	55 U	57 U	59 U	57 U	58 U	60 U	54 U	55 U	59 U	55 U	1,000
Toluene	108-88-3	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	1,500
t-1,3-Dichloropropene	10061-02-6	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
cis-1,3-Dichloropropene	10061-01-5	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
1,1,2-Trichloroethane	79-00-5	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
2-Hexanone	591-78-6	55 U	57 U	59 U	57 U	58 U	60 U	54 U	55 U	59 U	55 U	10,000 *
Dibromochloromethane	124-48-1	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
1,2-Dibromoethane	106-93-4	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
Tetrachloroethene	127-18-4	**1.5** J	11 UJ	12 UJ	11 UJ	12 U	**1.3** J	11 UJ	11 UJ	12 UJ	11 U	1,400

TABLE 8
SUMMARY OF TCL VOLATILE ORGANIC COMPOUNDS IN SOIL
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 1										
Sample ID		**GR-B200-S**	**GR-B201-S**	**GR-B202-S**	**GR-B203-S**	**GR-B204-S**	**GR-B205-S**	**GR-B206-S**	**GR-B207-S**	**GR-B208-S**	**GR-B209-S**	**NYSDEC Recommeded Soil Cleanup Objectives (1)**
Lab Sample Number		**T4080-12**	**T4080-09**	**T4080-06**	**T4080-03**	**T4080-01**	**T4080-02**	**T4080-04**	**T4080-05**	**T4080-13**	**T4091-01**	
Sampling Date		**08/04/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/04/05**	**08/05/05**	
Sample Depth		**8-12'**	**8-12'**	**12-15'**	**4-8'**	**12-16'**	**4-8'**	**8-12'**	**0-4'**	**8-12'**	**12-15'**	
Matrix		**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
Chlorobenzene	108-90-7	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	1,700
Ethyl Benzene	100-41-4	**1.4** J	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	5,500
m/p-Xylenes	136777-61-2	**2.1** J	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	1,200 **
o-Xylene	95-47-6	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	1,200 **
Styrene	100-42-5	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
Bromoform	75-25-2	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
Isopropylbenzene	98-82-8	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	2,300
1,1,2,2-Tetrachloroethane	79-34-5	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	600
1,3-Dichlorobenzene	541-73-1	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	1,600
1,4-Dichlorobenzene	106-46-7	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	8,500
1,2-Dichlorobenzene	95-50-1	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	7,900
1,2-Dibromo-3-Chloropropane	96-12-8	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	10,000 *
1,2,4-Trichlorobenzene	120-82-1	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	3,400
Total TICs		0	0	0	**6.6** JN	0	**3,080**	0	0	0	0	10,000 *

Notes:
1. NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046). Revised July 2001.
2. All values expressed in micrograms per kilogram (ug/Kg), which is equivalent to parts per billion (ppb).
3. **Bold** values are concentrations that have been reported above the detection limits.
4. **Bold**, Underlined, and *Italicized* values are reported concentrations that exceed the NYSDEC recommended soil cleanup objective.
5. * = As per TAGM 4046, both individual VOCs and the sum of VOCs may not exceed 10,000 ug/Kg.
6. ** = total xylenes.
7. "U " indicates that the concentration is below the detection limit.
8. "J" = indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
9. "N" = indicates presumptive evidence of a compound. It applies to all TIC results.
10. MDL = Metal Detection Limit.

TABLE 8
SUMMARY OF TCL VOLATILE ORGANIC COMPOUNDS IN SOIL
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 1		AOC 2							
Sample ID		**GR-B210-S**	**GR-B211-S**	**GR-B212-S**	**GR-B213-S**	**GR-B214-S**	**GR-XX-S-DUP**	**GR-B215-S**	**GR-B216-S**	**GR-B217-S**	**NYSDEC Recommeded Soil Cleanup Objectives (1)**
Lab Sample Number		**T4080-19**	**T4091-02**	**T4080-16**	**T4080-14**	**T4080-10**	**T4080-11**	**T4080-17**	**T4080-18**	**T4080-15**	
Sampling Date		**08/04/05**	**08/05/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	
Sample Depth		**4-8'**	**4-8'**	**8-12'**	**0-4'**	**0-4'**	**0-4'**	**4-8'**	**0-4'**	**0-4'**	
Matrix		**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
Dichlorodifluoromethane	75-71-8	11 UJ	1.0 U	12 UJ	12 UJ	12 UJ	12 UJ	12 UJ	12 UJ	11 UJ	10,000 *
Chloromethane	74-87-3	11 U	2.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
Vinyl Chloride	75-01-4	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	200
Bromomethane	74-83-9	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
Chloroethane	75-00-3	11 U	1.5 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	1,900
Trichlorofluoromethane	75-69-4	11 U	1.5 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
1,1,2-Trichlorotrifluoroethane	76-13-1	11 U	1.4 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
1,1-Dichloroethene	75-35-4	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	400
Acetone	67-64-1	11 U	12 U	**1.4** J	59 U	**130**	***230***	62 U	60 U	56 U	200
Carbon Disulfide	75-15-0	11 UJ	1.5 U	12 UJ	**1.9** J	**4.0** J	**5.1** J	12 UJ	12 UJ	**1.8** J	2,700
Methyl tert-butyl Ether	1634-04-4	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	120
Methyl Acetate	79-20-9	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
Methylene Chloride	75-09-2	11 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	100
trans-1,2-Dichloroethene	156-60-5	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	300
1,1-Dichloroethane	75-34-3	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	200
Cyclohexane	110-82-7	11 U	1.6 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
2-Butanone	78-93-3	53 U	6.4 U	59 U	59 U	**18** J	**33** J	62 U	60 U	56 U	300
Carbon Tetrachloride	56-23-5	11 U	2.5 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	600
cis-1,2-Dichloroethene	156-59-2	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
Chloroform	67-66-3	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	300
1,1,1-Trichloroethane	71-55-6	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	800
Methylcyclohexane	108-87-2	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
Benzene	71-43-2	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	60 or MDL
1,2-Dichloroethane	107-06-2	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	100
Trichloroethene	79-01-6	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	700
1,2-Dichloropropane	78-87-5	11 U	0.93 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
Bromodichloromethane	75-27-4	11 U	0.97 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
4-Methyl-2-Pentanone	108-10-1	53 U	4.8 U	59 U	59 U	59 U	58 U	62 U	60 U	56 U	1,000
Toluene	108-88-3	11 U	1.3 U	12 U	**1.3** J	**1.3** J	12 U	12 U	**4.3** J	**1.2** J	1,500
t-1,3-Dichloropropene	10061-02-6	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
cis-1,3-Dichloropropene	10061-01-5	11 U	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
1,1,2-Trichloroethane	79-00-5	11 U	1.4 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
2-Hexanone	591-78-6	53 U	7.1 U	59 U	59 U	59 U	58 U	62 U	60 U	56 U	10,000 *
Dibromochloromethane	124-48-1	11 U	1.0 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
1,2-Dibromoethane	106-93-4	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
Tetrachloroethene	127-18-4	11 UJ	1.4 U	12 UJ	12 UJ	**1.9** J	12 UJ	12 UJ	12 U	**2.0** J	1,400

TABLE 8
SUMMARY OF TCL VOLATILE ORGANIC COMPOUNDS IN SOIL

Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 1		AOC 2							
Sample ID		**GR-B210-S**	**GR-B211-S**	**GR-B212-S**	**GR-B213-S**	**GR-B214-S**	**GR-XX-S-DUP**	**GR-B215-S**	**GR-B216-S**	**GR-B217-S**	**NYSDEC Recommeded**
Lab Sample Number		**T4080-19**	**T4091-02**	**T4080-16**	**T4080-14**	**T4080-10**	**T4080-11**	**T4080-17**	**T4080-18**	**T4080-15**	**Soil Cleanup**
Sampling Date		**08/04/05**	**08/05/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**Objectives [1]**
Sample Depth		**4-8'**	**4-8'**	**8-12'**	**0-4'**	**0-4'**	**0-4'**	**4-8'**	**0-4'**	**0-4'**	
Matrix		**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
Chlorobenzene	108-90-7	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	1,700
Ethyl Benzene	100-41-4	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	5,500
m/p-Xylenes	136777-61-2	11 U	3.3 U	12 U	12 U	12 U	12 U	12 U	12 U	1.3 J	1,200 **
o-Xylene	95-47-6	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	1,200 **
Styrene	100-42-5	11 U	1.7 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
Bromoform	75-25-2	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
Isopropylbenzene	98-82-8	11 U	1.3 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	2,300
1,1,2,2-Tetrachloroethane	79-34-5	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	600
1,3-Dichlorobenzene	541-73-1	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	1,600
1,4-Dichlorobenzene	106-46-7	11 U	1.0 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	8,500
1,2-Dichlorobenzene	95-50-1	**27**	1.1 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	7,900
1,2-Dibromo-3-Chloropropane	96-12-8	11 U	1.2 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	10,000 *
1,2,4-Trichlorobenzene	120-82-1	11 U	1.7 U	12 U	12 U	12 U	12 U	12 U	12 U	11 U	3,400
Total TICs		**799**	**78.6**	**29.5**	**1,621**	**2,290**	**1,990**	0	0	**1,930**	10,000 *

Notes:
1. NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046). Revised July 2001.
2. All values expressed in micrograms per kilogram (ug/Kg), which is equivalent to parts per billion (ppb).
3. **Bold** values are concentrations that have been reported above the detection limits.
4. **Bold**, Underlined, and *Italicized* values are reported concentrations that exceed the NYSDEC recommended soil cleanup objective.
5. * = As per TAGM 4046, both individual VOCs and the sum of VOCs may not exceed 10,000 ug/Kg.
6. ** = total xylenes.
7. "U " indicates that the concentration is below the detection limit.
8. "J" = indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
9. GR-XX-S-DUP is a duplicate of GR-B214-S.
10. MDL = Metal Detection Limit.

TABLE 9
SUMMARY OF TCL SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 2							
Sample ID		**GR-B212-S**	**GR-B213-S**	**GR-B214-S**	**GR-XX-S-DUP**	**GR-B215-S**	**GR-B216-S**	**GR-B217-S**	**NYSDEC**
Lab Sample Number		**T4080-16**	**T4080-14**	**T4080-10**	**T4080-11**	**T4080-17**	**T4080-18**	**T4080-15**	**Recommeded**
Sampling Date		**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**Soil Cleanup**
Sample Depth		**8-12'**	**0-4'**	**0-4'**	**0-4'**	**4-8'**	**0-4'**	**0-4'**	**Objectives [(1)]**
Matrix		**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	
Dilution Factor		**1**	**1**	**1**	**1**	**1**	**1**	**1**	
Units	**CAS #**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
Benzaldehyde	100-52-7	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Phenol	108-95-2	390 U	390 U	390 U	380 U	410 U	400 U	370 U	30 or MDL
bis(2-Chloroethyl)ether	111-44-4	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
2-Chlorophenol	95-57-8	390 U	390 U	390 U	380 U	410 U	400 U	370 U	800
2-Methylphenol	95-48-7	390 U	390 U	390 U	380 U	410 U	400 U	370 U	100 or MDL
2,2-oxybis(1-Chloropropane)	108-60-1	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Acetophenone	98-86-2	390 U	**81** J	**120** J	**92** J	410 U	**65** J	**63** J	50,000 *
3+4-Methylphenols	106-44-5	390 U	390 U	390 U	380 U	410 U	400 U	370 U	900
N-Nitroso-di-n-propylamine	621-64-7	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Hexachloroethane	67-72-1	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Nitrobenzene	98-95-3	390 U	390 U	390 U	380 U	410 U	400 U	370 U	200 or MDL
Isophorone	78-59-1	390 U	390 U	390 U	380 U	410 U	400 U	370 U	4,400
2-Nitrophenol	88-75-5	390 U	390 U	390 U	380 U	410 U	400 U	370 U	330 or MDL
2,4-Dimethylphenol	105-67-9	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
bis(2-Chloroethoxy)methane	111-91-1	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
2,4-Dichlorophenol	120-83-2	390 U	390 U	390 U	380 U	410 U	400 U	370 U	400
Naphthalene	91-20-3	390 U	390 U	390 U	380 U	410 U	400 U	370 U	13,000
4-Chloroaniline	106-47-8	390 U	390 U	390 U	380 U	410 U	400 U	370 U	220 or MDL
Hexachlorobutadiene	87-68-3	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Caprolactam	105-60-2	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
4-Chloro-3-methylphenol	59-50-7	390 U	390 U	390 U	380 U	410 U	400 U	370 U	240 or MDL
2-Methylnaphthalene	91-57-6	390 U	**50** J	**92** J	**91** J	410 U	400 U	**79** J	36,400
Hexachlorocyclopentadiene	77-47-4	390 UJ	390 UJ	390 UJ	380 UJ	410 UJ	400 UJ	370 UJ	50,000 *
2,4,6-Trichlorophenol	88-06-2	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
2,4,5-Trichlorophenol	95-95-4	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	100
1,1-Biphenyl	92-52-4	390 U	390 U	**48** J	**46** J	410 U	400 U	**44** J	50,000 *
2-Chloronaphthalene	91-58-7	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
2-Nitroaniline	88-74-4	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	430 or MDL
Dimethylphthalate	131-11-3	390 U	390 U	390 U	380 U	410 U	400 U	370 U	2,000
Acenaphthylene	208-96-8	390 U	390 U	390 U	380 U	410 U	400 U	370 U	41,000
2,6-Dinitrotoluene	606-20-2	390 U	390 U	390 U	380 U	410 U	400 U	370 U	1,000
3-Nitroaniline	99-09-2	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	500 or MDL
Acenaphthene	83-32-9	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
2,4-Dinitrophenol	51-28-5	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	200 or MDL
4-Nitrophenol	100-02-7	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	100 or MDL
Dibenzofuran	132-64-9	390 U	390 U	390 U	380 U	410 U	400 U	370 U	6,200
2,4-Dinitrotoluene	121-14-2	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Diethylphthalate	84-66-2	390 U	390 U	390 U	380 U	410 U	400 U	370 U	7,100

TABLE 9
SUMMARY OF TCL SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 2							
Sample ID		**GR-B212-S**	**GR-B213-S**	**GR-B214-S**	**GR-XX-S-DUP**	**GR-B215-S**	**GR-B216-S**	**GR-B217-S**	**NYSDEC**
Lab Sample Number		**T4080-16**	**T4080-14**	**T4080-10**	**T4080-11**	**T4080-17**	**T4080-18**	**T4080-15**	**Recommeded**
Sampling Date		**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**Soil Cleanup**
Sample Depth		**8-12'**	**0-4'**	**0-4'**	**0-4'**	**4-8'**	**0-4'**	**0-4'**	**Objectives** (1)
Matrix		**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	
Dilution Factor		**1**	**1**	**1**	**1**	**1**	**1**	**1**	
Units	**CAS #**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
4-Chlorophenyl-phenylether	7005-72-3	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Fluorene	86-73-7	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
4-Nitroaniline	100-01-6	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	50,000 *
4,6-Dinitro-2-methylphenol	534-52-1	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	50,000 *
N-Nitrosodiphenylamine	86-30-6	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
4-Bromophenyl-phenylether	101-55-3	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Hexachlorobenzene	118-74-1	390 U	390 U	390 U	380 U	410 U	400 U	370 U	410
Atrazine	1912-24-9	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Pentachlorophenol	87-86-5	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	1,000 or MDL
Phenanthrene	85-01-8	390 U	**210** J	**250** J	**220** J	410 U	**88** J	**350** J	50,000 *
Anthracene	120-12-7	390 U	**48** J	390 U	380 U	410 U	400 U	370 U	50,000 *
Carbazole	86-74-8	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Di-n-butylphthalate	84-74-2	390 U	390 U	390 U	380 U	410 U	400 U	370 U	8,100
Fluoranthene	206-44-0	390 U	**370** J	**220** J	**170** J	410 U	**190** J	**290** J	50,000 *
Pyrene	129-00-0	390 U	**270** J	**160** J	**120** J	410 U	**160** J	**180** J	50,000 *
Butylbenzylphthalate	85-68-7	390 U	390 U	390 U	380 U	410 U	**110** J	370 U	50,000 *
3,3-Dichlorobenzidine	91-94-1	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Benzo(a)anthracene	56-55-3	390 U	**160** J	**83** J	**65** J	410 U	**100** J	**130** J	224 or MDL
Chrysene	218-01-9	390 U	**150** J	**86** J	**69** J	410 U	**96** J	**130** J	400
bis(2-Ethylhexyl)phthalate	117-81-7	390 U	**45** J	**62** J	**65** J	410 U	**47** J	370 U	50,000 *
Di-n-octyl phthalate	117-84-0	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Benzo(b)fluoranthene	205-99-2	390 U	**270** J	**170** J	**110** J	410 U	**140** J	**170** J	1,100
Benzo(k)fluoranthene	207-08-9	390 U	**110** J	**52** J	**47** J	410 U	**81** J	**86** J	1,100
Benzo(a)pyrene	50-32-8	390 U	***170*** J	***96*** J	***64*** J	410 U	***110*** J	***110*** J	61 or MDL
Indeno(1,2,3-cd)pyrene	193-39-5	390 U	390 U	390 U	380 U	410 U	400 U	370 U	3,200
Dibenz(a,h)anthracene	53-70-3	390 U	390 U	390 U	380 U	410 U	400 U	370 U	14 or MDL
Benzo(g,h,i)perylene	191-24-2	390 U	390 U	390 U	380 U	410 U	400 U	370 U	50,000 *
Total TICs		**2,500**	**12,590**	**18,880**	**19,240**	**2,692**	**1,014**	**22,470**	500,000 *

Notes:
1. NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046). Revised July 2001.
2. All values expressed in micrograms per kilogram (ug/Kg), which is equivalent to parts per billion (ppb).
3. **Bold** values are concentrations that have been reported above the detection limits.
4. **Bold**, Underlined, and *Italicized* values are reported concentrations that exceed the NYSDEC recommended soil cleanup objective.
5. * = As per TAGM 4046, individual SVOCs may not exceed 50,000 ug/Kg and total SVOCs may not exceed 500,000 ug/Kg.
6. "U " indicates that the concentration is below the detection limit.
7. "J" = indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
8. GR-XX-S-DUP is a duplicate of GR-B214-S.
9. MDL = Metal Detection Limit.

TABLE 10
SUMMARY OF TAL METALS IN SOIL
Remedial Investigation
399 Gregory Street
Rochester, NY

Sample ID		AOC 2							Eastern USA Background Range	NYSDEC Recommeded Soil Cleanup Objectives [1]
Sample ID		GR-B212-S	GR-B213-S	GR-B214-S	GR-XX-S-DUP	GR-B215-S	GR-B216-S	GR-B217-S		
Lab Sample Number		T4080-16	T4080-14	T4080-10	T4080-11	T4080-17	T4080-18	T4080-15		
Sampling Date		08/03/05	08/03/05	08/03/05	08/03/05	08/03/05	08/03/05	08/03/05		
Sample Depth		8-12'	0-4'	0-4'	0-4'	4-8'	0-4'	0-4'		
Matrix		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
Dilution Factor		1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Units	CAS #	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Aluminum	7429-90-5	**1,920**	**7,390**	**5,930**	**5,260**	**3,310**	**7,630**	**4,940**	3,300	SB
Antimony	7440-36-0	**14.0** NJ	**13.9** NJ	**1.2** NJ	**14.0** NJ	**14.5** NJ	**14.4** NJ	**13.6** NJ	NA	SB
Arsenic	7440-38-2	**0.51** NEJ	**5.8** NEJ	**10.6** NEJ	**10.1** NEJ	**1.7** NEJ	**11.0** NEJ	**8.3** NEJ	3-12	7.5 or SB
Barium	7440-39-3	**14.8** NJ	**130** NJ	**157** NJ	**135** NJ	**26.5** NJ	**165** NJ	**125** NJ	15-600	300 or SB
Beryllium	7440-41-7	**0.09** NJ	**0.39** NJ	**0.60** NJ	**0.38** NJ	**0.17** NJ	**0.55** NJ	**0.31** NJ	0-1.75	0.16 (Heast) or SB
Cadmium	7440-43-9	***1.2*** *NJ*	***7.3*** NJ	**0.26** NJ	**0.47** NJ	***1.2*** *NJ*	**1.0** NJ	**0.25** NJ	0.1-1	1 or SB
Calcium	7440-70-2	**28,800**	**13,800**	**17,600**	**25,100**	**29,300**	**8,990**	**19,800**	130-35,000	SB
Chromium	7440-47-3	**2.8** NJ	**9.9** NJ	**10.6** NJ	**8.3** NJ	**5.0** NJ	**11.0** NJ	**7.7** NJ	1.5-40	10 or SB
Cobalt	7440-48-4	**1.9** NJ	**5.1** NJ	**6.8** NJ	**5.4** NJ	**4.1** NJ	**5.9** NJ	**5.1** NJ	2.5-60	30 or SB
Copper	7440-50-8	**7.8**	**37.8**	***87.5***	***231***	**10.5**	***905***	***99.9***	1-50	25 or SB
Iron	7439-89-6	**4,440**	**11,500**	**17,200**	**10,900**	**8,300**	**13,700**	**10,800**	2,000-550,000	2,000 or SB
Lead	7439-92-1	**3.1**	**238**	**295**	**306**	**5.4**	**402**	***588***	200-500 urban	SB *
Magnesium	7439-95-4	***6,430***	**4,990**	***6,070***	***12,900***	***9,390***	**2,840**	***6,660***	100-5,000	SB
Manganese	7439-96-5	**170**	**197**	**347**	**307**	**234**	**269**	**254**	100-5,000	SB
Mercury	7439-97-6	**0.118** NJ	***0.316*** NJ	***0.363*** NJ	***0.365*** NJ	**0.123** NJ	***0.787*** NJ	**0.185** NJ	0.001-0.2	0.1
Nickel	7440-02-0	**3.4** NJ	**9.6** NJ	**10.9** NJ	**10.2** NJ	**8.2** NJ	**13.0** NJ	**8.8** NJ	0.5-25	13 or SB
Potassium	7440-09-7	**497** EJ	**709** EJ	**762** EJ	**771** EJ	**624** EJ	**722** EJ	**757** EJ	8,000-8,500	SB
Selenium	7782-49-2	***8.2*** *NJ*	**1.2** NJ	**1.4** NJ	**0.98** NJ	***8.4*** *NJ*	**1.4** NJ	**1.1** NJ	0.1-3.9	2 or SB
Silver	7440-22-4	**2.3** NJ	**2.3** NJ	**2.3** NJ	**2.3** NJ	**2.4** NJ	**2.4** NJ	**2.3** NJ	NA	SB
Sodium	7440-23-5	**1,160**	**265**	**309**	**335**	**1,210**	**132**	**686**	6,000-8,000	SB
Thallium	7440-28-0	**5.8** NJ	**5.8** NJ	**5.8** NJ	**5.8** NJ	**6.0** NJ	**6.0** NJ	**5.7** NJ	NA	SB
Vanadium	7440-62-2	**4.6** NJ	**17.6** NJ	**29.2** NJ	**16.7** NJ	**7.3** NJ	**24.6** NJ	**13.3** NJ	1-300	150 or SB
Zinc	7440-66-6	**17.7** NJ	***121*** NJ	***183*** NJ	***187*** NJ	**30.0** NJ	***395*** NJ	***220*** NJ	9-50	20 or SB

Notes:
1. NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046) Revised July 2001.
2. mg/Kg = all values expressed in milligrams per kilogram (mg/Kg), which are equivalent to parts per million (ppm).
3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced,** Underlined**,** and *Italicized* values are reported concentrations that exceed both the NYSDEC recommended soil cleanup objective and Eastern USA background ranges.
5. * = Rural lead averages 4 - 61 mg/Kg; urban lead averages 200 - 500 mg/Kg.
6. SB = Site Background.
7. "J" = indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
8. "N" = Spiked sample recovery not within control limits.
9. "E" = The reported value is estimated because of the presence of interference.
10. GR-XX-S-DUP is a duplicate of GR-B214-S.

TABLE 11
SUMARY OF TCL PCBs IN SOIL
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 2							
Sample ID		**GR-B212-S**	**GR-B213-S**	**GR-B214-S**	**GR-XX-S-DUP**	**GR-B215-S**	**GR-B216-S**	**GR-B217-S**	**NYSDEC**
Lab Sample Number		**T4080-16**	**T4080-14**	**T4080-10**	**T4080-11**	**T4080-17**	**T4080-18**	**T4080-15**	**Recommended**
Sampling Date		**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**08/03/05**	**Soil Cleanup**
Sample Depth		**8-12'**	**0-4'**	**0-4'**	**0-4'**	**4-8'**	**0-4'**	**0-4'**	**Objectives (1)**
Matrix		**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	**SOIL**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**	**ug/Kg**
Aroclor-1016	12674-11-2	39 U	39 U	39 U	38 U	41 U	40 U	37 U	1,000 (Surface); 10,000 (Subsurface)
Aroclor-1221	11104-28-2	79 U	79 U	79 U	78 U	83 U	81 U	76 U	1,000 (Surface); 10,000 (Subsurface)
Aroclor-1232	11141-16-5	39 U	39 U	39 U	38 U	41 U	40 U	37 U	1,000 (Surface); 10,000 (Subsurface)
Aroclor-1242	53469-21-9	39 U	39 U	39 U	38 U	41 U	40 U	37 U	1,000 (Surface); 10,000 (Subsurface)
Aroclor-1248	12672-29-6	39 U	39 U	39 U	38 U	41 U	40 U	37 U	1,000 (Surface); 10,000 (Subsurface)
Aroclor-1254	11097-69-1	39 U	39 U	39 U	38 U	41 U	40 U	37 U	1,000 (Surface); 10,000 (Subsurface)
Aroclor-1260	11096-82-5	39 U	39 U	39 U	38 U	41 U	40 U	37 U	1,000 (Surface); 10,000 (Subsurface)

Notes:
1. NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046). Revised July 2001.
2. ug/Kg = All values expressed in micrograms per kilogram (ug/Kg), which is equivalent to parts per billion (ppb).
3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced,** Underlined**,** and *Italicized* values are reported concentrations that exceed the NYSDEC recommended soil cleanup objective.
5. "U " indicates that the concentration is below the detection limit.
6. GR-XX-S-DUP is a duplicate of GR-B214-S.

TABLE 12
HISTORICAL SUMMARY OF DETECTED TCL VOLATILE ORGANIC COMPOUNDS IN SOIL: 2000-2002 and 2005
Remedial Investigation
399 Gregory Street
Rochester, NY

	2000-2002 NYSDEC SITE INVESTIGATION (ug/Kg)																	
Sample ID **Sample Depth (ft. bgs)**	**B-1** **9-10'**	**B-1** **10-11'**	**B-1** **12-14'**	**B-1 (dup)** **12-14'**	**B-1** **16-17.5'**	**B-4** **6-8'**	**MW-105** **6-8'**	**MW-107** **8-10'**	**MW-107** **12-14'**	**MW-108** **6-8'**	**MW-109** **6-8'**	**MW-110** **8-10'**	**MW-111** **8-10'**	**MW-112** **6-8'**	**MW-112** **12-14'**	**MW-113** **6-8'**	**MW-115** **6-8'**	**NYSDEC Recommeded** **Soil Cleanup Objectives (ug/Kg)**
Acetone					**18**		**21** BJ	**16** BJ	**13** BJ	**5**	**9** BJ	**12** BJ	**6** BJ	**25** B	**15** B	**6**	**4** JB	200
Benzene																	**4** J	60 or MDL
Ethyl Benzene	**50** J				**10** J													5,500
Isopropylbenzene	**11** J				**2** J													2,300
Methyl tert-butyl Ether																	**8** J	120
Methylene Chloride	**55** JB	**48** JB		**47** JB														100
Toluene													**31** J				**29** J	1,500
Trichloroethene							**10** J			**6**								700
1,2,4 Trimethylbenzene													**4** J				**4** J	10,000*
m/p-Xylenes					**12**			**9** J					**43** J				**39** J	1,200 **
Total TICs	**7,550**	***<u>10,640</u>***	**139**	**5,510**	**1,064**	**6**	**4**						**7**		**15**			10,000*

Notes:
1. NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046). Revised July 2001.
2. All values expressed in micrograms per kilogram (ug/Kg), which is equivalent to parts per billion (ppb).
3. **Bold** values are concentrations that have been reported above the detection limits.
4. **Bold**, <u>Underlined,</u> and *Italicized* values are reported concentrations that exceed the NYSDEC recommended soil cleanup objective.
5. * = As per TAGM 4046, both individual VOCs and the sum of VOCs may not exceed 10,000 ug/Kg.
6. ** = total xylenes.
7. Blank space = not detected.
8. "J" = indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
9. "B" = compound is identified in the associated blank.

TABLE 12
HISTORICAL SUMMARY OF DETECTED TCL VOLATILE ORGANIC COMPOUNDS IN SOIL: 2000-2002 and 2005
Remedial Investigation
399 Gregory Street
Rochester, NY

	2005 REMEDIAL INVESTIGATION (ug/Kg)																			
	AOC 1												AOC 2							NYSDEC Recommeded Soil Cleanup Objectives (ug/Kg)
Sample ID	**GR-B200-S**	**GR-B201-S**	**GR-B202-S**	**GR-B203-S**	**GR-B204-S**	**GR-B205-S**	**GR-B206-S**	**GR-B207-S**	**GR-B208-S**	**GR-B209-S**	**GR-B210-S**	**GR-B211-S**	**GR-B212-S**	**GR-B213-S**	**GR-B214-S**	**GR-XX-S-DUP**	**GR-B215-S**	**GR-B216-S**	**GR-B217-S**	
Sample Depth (ft. bgs)	**8-12'**	**8-12'**	**12-15'**	**4-8'**	**12-16'**	**4-8'**	**8-12'**	**0-4'**	**8-12'**	**12-15'**	**4-8'**	**4-8'**	**8-12'**	**0-4'**	**0-4'**	**0-4'**	**4-8'**	**0-4'**	**0-4'**	
Acetone	**11** J				**11** J	**27** J	**18** J		**15** J		**20** J	**9.5** J	**1.4** J		**130**	***230***				200
2-Butanone															**18** J	**33** J				300
Carbon Disulfide	**1.3** J						**1.3** J		**3.6** J					**1.9** J	**4** J	**5.1** J			**1.8** J	2,700
1,2-Dichlorobenzene											**27**									7,900
Ethyl Benzene	**1.4** J																			5,500
Methylene Chloride	**3.0** JB	**3.9** JB	**3.4** JB	**3.5** JB	**2.3** JB	**3.0** JB	**4.2** JB	**3.2** JB	**3.1** JB	**3.7** JB	**4.0** JB	**2.5** JB	**4.4** JB	**10** JB	**3.6** JB	**3.3** JB	**2.8** JB	**5.6** JB	**7.3** J	100
Tetrachloroethene	**1.5** J					**1.3** J									**1.9** J				**2.0** J	1,400
Toluene														**1.3** J	**1.3** J			**4.3** J	**1.2** J	1,500
m/p-Xylenes	**2.1** J																		**1.3** J	1,200 **
Total TICs				**6.6**		**3,080**					**799**	**78.6**	**29.5**	**1,621**	**2,290**	**1,990**			**1,930**	10,000*

Notes:
1. NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046). Revised July 2001.
2. All values expressed in micrograms per kilogram (ug/Kg), which is equivalent to parts per billion (ppb).
3. **Bold** values are concentrations that have been reported above the detection limits.
4. **Bold**, Underlined, and *Italicized* values are reported concentrations that exceed the NYSDEC recommended soil cleanup objective.
5. * = As per TAGM 4046, both individual VOCs and the sum of VOCs may not exceed 10,000 ug/Kg.
6. ** = total xylenes.
7. Blank space = not detected.
8. "J" = indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
9. "B" = compound is identified in the associated blank.
10. GR-XX-S-DUP is a duplicate of GR-B214-S.

TABLE 13
HISTORICAL SUMMARY OF DETECTED SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL: 2000-2002 and 2005
Remedial Investigation
399 Gregory Street
Rochester, NY

	2000-2002 NYSDEC SITE INVESTIGATION (ug/Kg)						NYSDEC Recommended Soil Cleanup Ojectives (ug/Kg)
Sample ID	**MW-109**	**MW-110**	**MW-110**	**MW-111**	**MW-115**	**MW-116**	
Sample Depth	**6-8'**	**6-8'**	**8-10'**	**8-10'**	**6-8'**	**8-11'**	
Benzo(a)anthracene						**119** J	224 or MDL
bis(2-Ethylhexyl)phthalate	**150** B	**480** B	**450** B	**340** B	**520** B	**457**	50,000 *
Chrysene						**134** J	400
Fluoranthene						**201**	50,000 *
Naphthalene						<u>***17,372***</u>	13,000
Phenanthrene						**366**	50,000 *
Pyrene						**237**	50,000 *
Total TICs							50,000*

Notes:
1. NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046). Revised July 2001.
2. All values expressed in micrograms per kilogram (ug/Kg), which is equivalent to parts per billion (ppb).
3. **Bold** values are concentrations that have been reported above the detection limits.
4. **Bold**, <u>Underlined,</u> and *Italicized* values are reported concentrations that exceed the NYSDEC recommended soil cleanup objective.
5. * = As per TAGM 4046, individual SVOCs may not exceed 50,000 ug/Kg and total SVOCs may not exceed 500,000 ug/Kg.
6. Blank space = not detected.
7. "J" = indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
8. "B" = compound is identified in the associated blank.

TABLE 13

HISTORICAL SUMMARY OF DETECTED SEMI-VOLATILE ORGANIC COMPOUNDS IN SOIL: 2000-2002 and 2005

Remedial Investigation

399 Gregory Street

Rochester, NY

	2005 Remedial Investigation (ug/Kg)							NYSDEC
	AOC 2							Recommended Soil
Sample ID	**GR-B212-S**	**GR-B213-S**	**GR-B214-S**	**GR-XX-S-DUP**	**GR-B215-S**	**GR-B216-S**	**GR-B217-S**	**Cleanup Ojectives**
Sample Depth	**0-4'**	**0-4'**	**0-4'**	**0-4'**	**0-4'**	**0-4'**	**0-4'**	**(ug/Kg)**
Acetophenone		**81** J	**120** J	**92** J		**65** J	**63** J	50,000 *
Anthracene		**48** J						50,000 *
Benzo(a)anthracene		**160** J	**83** J	**65** J		**100** J	**130** J	224 or MDL
Benzo(a)pyrene		***<u>170</u>*** J	***<u>96</u>*** J	***<u>64</u>*** J		***<u>110</u>*** J	***<u>110</u>*** J	*<u>61 or MDL</u>*
Benzo(b)fluoranthene		**270** J	**170** J	**110** J		**140** J	**170** J	1,100
Benzo(k)fluoranthene		**110** J	**52** J	**47** J		**81** J	**86** J	1,100
1,1-Biphenyl			**48** J	**46** J			**44** J	50,000 *
bis(2-Ethylhexyl)phthalate		**45** J	**62** J	**65** J		**47** J		50,000 *
Butylbenzylphthalate						**110** J		50,000 *
Chrysene		**150** J	**86** J	**69** J		**96** J	**130** J	400
Fluoranthene		**370** J	**220** J	**170** J		**190** J	**290** J	50,000 *
2-Methylnaphthalene		**50** J	**92** J	**91** J			**79** J	36,400
Phenanthrene		**210** J	**250** J	**220** J		**88** J	**350** J	50,000 *
Pyrene		**270** J	**160** J	**120** J		**160** J	**180** J	50,000 *
Total TICs	**2,500**	**12,590**	**18,880**	**19,240**	**2,692**	**1,014**	**22,470**	50,000 *

Notes:
1. NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046). Revised July 2001.
2. All values expressed in micrograms per kilogram (ug/Kg), which is equivalent to parts per billion (ppb).
3. **Bold** values are concentrations that have been reported above the detection limits.
4. **Bold**, <u>Underlined,</u> and *Italicized* values are reported concentrations that exceed the NYSDEC recommended soil cleanup objective.
5. * = As per TAGM 4046, individual SVOCs may not exceed 50,000 ug/Kg and total SVOCs may not exceed 500,000 ug/Kg.
6. Blank space = not detected.
7. "J" = indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
8. GR-XX-S-DUP is a duplicate of GR-B214-S.

TABLE 14
HISTORICAL SUMMARY OF DETECTED TAL METALS IN SOIL: 2000-2002 and 2005
Remedial Investigation
399 Gregory Street
Rochester, NY

	2000-2002 NYSDEC SITE INVESTIGATION (mg/Kg)																			Eastern USA Background Range (mg/Kg)	NYSDEC Recommended Soil Cleanup Objectives (mg/Kg)
Sample ID	**MW-105**	**MW-105D**	**MW-106**	**MW-107**	**MW-108**	**MW-108D**	**MW-109**	**MW-110**	**MW-110**	**MW-111**	**MW-112**	**MW-112**	**MW-113**	**MW-114**	**MW-115**	**MW-115D**	**MW116**	**MW116D**	**MW-116**		
Soil Sample Depth	6-8'	6-8'	6-8'	12-14'	6-8'	6-8'	6-8'	6-8'	8-10'	8-10'	6-8'	12-14'	6-8'	8-11'	6-8'	6-8'	8-11'	8-11'D	12-14'		
Aluminum	***3,860***	***3,890***	***5,670***	2,050	***5,950*** J	***5,870***	1,710	2,180	2,240	2,320	***3,350***	3,150	2,110 J	2,310	3,250	***3,630***	***6,640***	***6,230***	2,300	3,300	SB
Antimony	45.8 J	45.5 J		3.55 BJ	3.44 BJ	3.45	0.349 BJ			0.364 BJ	0.415 BJ		0.556 BJ		0.392 J					NA	SB
Arsenic	***110***	***112***	2.3	1.2	***12.4***	***12.5***	3.4	6.63	3.13	1.6	1.87	3.4	1.77	1.92	2.86	2.75	1.97	1.86	1.52	3-12	7.5 or SB
Barium	166	169	44.8	16.8	33.1	32.1	26.3	116	22.6	13.1 B	24.5	25.6	12 B	17.3	25.1	28	60.9	56.8	16.1	15-600	300 or SB
Beryllium	***3.2***	***3.26***	0.26 B	0.127 B	0.566	0.543	0.676	0.154 B	0.195 B	0.108 B	0.179 B	0.173 B		0.125 B	0.167 B	0.185 B	0.337 B	0.295 B	0.119 B	0-1.75	0.16 (Heast) or SB
Cadmium	***4.29***	***4.19***	0.385 B	0.954	0.511 B	0.351		***1.42***	***1.4***	0.778	0.157 B	***1.15***		0.302 B	***1.2***	***1.25***	0.642	0.52	0.258 B	0.1-1	1 or SB
Calcium	***92,500***	***94,500***	26,500 EJ	***86,600***	***40,300***	***41,300***	28600 EJ	***59,400*** EJ	27,600 EJ	25,100 EJ	24,300	***51,400***	20500	***53,000*** EJ	***35,100*** EJ	***37,200*** EJ	***47,400*** EJ	***44,300*** EJ	***65,100*** EJ	130-35,000	SB
Chromium	16.9	17	8.3	4.51	14.8	14.5	5.24	4.18	4.84	4.46	5.06	4.99	4.02	3.87	5.81	6.4	11	10.2	4.53	1.5-40	10 or SB
Cobalt	42.9 J	41.7 J	6.1 J	2.19 BJ	8.74 J	8.79	1.95 BJ	3.09 BJ	3.13 BJ	2.59 BJ	3.8 BJ	3.27 BJ	2.2 BJ	2.35 BJ	3.55 BJ	3.99 BJ	5.67 J	5.19 J	2.17 BJ	2.5-60	30 or SB
Copper	31.4 J	32.3 J	16	11.7 J	11.9	11.9	16.7	13	13.8	10.5	16.9 J	15 J	9.79	9.52	15.4	16.4	15.9	15	10.7	1-50	25 or SB
Iron	8,320	8,170	11,300	4,980	12,100 EJ	12,300 EJ	4,640 EJ	9,460 EJ	8,010 EJ	5,310 EJ	7,060	6,320	5360 EJ	6,600	7,580 EJ	8,000 EJ	13,400	12,400	7,340	2,000-550,000	2,000 or SB
Lead	46.6 J	46.3 J	6.38 J	4.91 J	14.6 J	14.2	3.24 J	5.91 J	10.6 J	3.67 J	7.98 J	7.77 J	6.58 J	5.87 J	6.42 J	7.12 J	7.45 J	7 J	4.99 J	200-500 urban *	SB *
Magnesium	***20,900***	***20,800***	***8,380***	***27,800***	***18,900*** EJ	***19,000*** EJ	***5,490*** EJ	***13,300*** EJ	***28,600*** EJ	***6,890*** EJ	***8,600***	***15,400***	***5,200*** EJ	***20,100***	***8,760*** EJ	***9,580*** EJ	***11,150***	***10,700***	***17,200***	100-5,000	SB
Manganese	511	516	313	295	296 EJ	296 EJ	246	487	298	204	239	282	178 EJ	232	256	293	283	268	243	100-5,000	SB
Mercury			0.044 J						***6.37*** J					0.062 J			0.058 J	0.05 J	0.041 J	0.001-0.2	0.1
Nickel	***44*** J	***43.3*** J	13.1 J	4.94 J	13.3 J	12.5	4.58 J	5.62 J		5.47 J	8.63 J	6.76 J	4.31 J	5.29 J	7.88 J	8.62 J	12.9 J	11.8 J	4.47 J	0.5-25	13 or SB
Potassium	2530 EJ	2510 EJ	1260	610 EJ	1160	1130	426	847	1500	485	589 EJ	806 EJ	401 B	797	612	675	1660	1540	738	8,000-8,500	SB
Selenium	***91.6*** EJ	***94.5*** EJ			***9*** J	***9.24***														0.1-3.9	2 or SB
Silver	2.94 J	3 J																		NA	SB
Sodium	1290 J	1,340 J	118 B	187 BJ	358 B	351	122 B	163 B	186 B	121 B	150 BJ	162 BJ	248 B	141 B	129 B	142 B	163 B	155 B	151 B	6,000-8,000	SB
Thallium	119	117		6.62	12	10.9	5.83	12.5	11.1	5.84	8.74	7.98		1.09	10.2	10.3	2.42	1.81	1.5	NA	SB
Vanadium	39.2	39.2	11.3	5.03 B	13.5	13.4	3.87 B	4.99 B	4.65 B	5.31	6.68	6.73	6.13	5.47	6.26	6.7	14.5	13.5	6.5	1-300	150 or SB
Zinc	***50.5***	49.1	27.1	14.9	37.4 EJ	37.7 EJ	13.7 EJ	13.2 EJ	16.7 EJ	12.5 EJ	21.4	***155***	14.6 EJ	11.9	20.7 EJ	22.8 EJ	24.1	23.3	12.8	9-50	20 or SB

Notes:
1. NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046) Revised July 2001.
2. mg/Kg = all values expressed in milligrams per kilogram (mg/Kg), which are equivalent to parts per million (ppm).
3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced,** Underlined, and *Italicized* values are reported concentrations that exceed both the NYSDEC recommended soil cleanup objective and Eastern USA background ranges.
5. * = Rural lead averages 4 - 61 mg/Kg; urban lead averages 200 - 500 mg/Kg.
6. SB = Site Background.
7. Blank space = not detected.
8. "J" = indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
9. "E" = reported value is estimated due to interference.
10. "B" = analyte is present in associated blank.

TABLE 14
HISTORICAL SUMMARY OF DETECTED TAL METALS IN SOIL: 2000-2002 and 2005
Remedial Investigation
399 Gregory Street
Rochester, NY

	2005 REMEDIAL INVESTIGATION (mg/Kg)								
	AOC 2							Eastern USA	NYSDEC Recommended
Sample ID	**GR-B212-S**	**GR-B213-S**	**GR-B214-S**	**GR-XX-S-DUP**	**GR-B215-S**	**GR-B216-S**	**GR-B217-S**	**Background Range**	**Soil Cleanup Objectives**
Soil Sample Depth	**8-12'**	**0-4'**	**0-4'**	**0-4'**	**4-8'**	**0-4'**	**0-4'**	**(mg/Kg)**	**(mg/Kg)**
Aluminum	**1,920**	**7,390**	**5,930**	**5,260**	**3,310**	**7,630**	**4,940**	3,300	SB
Antimony	**14.0** NJ	**13.9** NJ	**1.2** NJ	**14.0** NJ	**14.5** NJ	**14.4** NJ	**13.6** NJ	NA	SB
Arsenic	**0.51** NEJ	**5.8** NEJ	**10.6** NEJ	**10.1** NEJ	**1.7** NEJ	**11.0** NEJ	**8.3** NE	3-12	7.5 or SB
Barium	**14.8** NJ	**130** NJ	**157** NJ	**135** NJ	**26.5** NJ	**165** NJ	**125** NJ	15-600	300 or SB
Beryllium	**0.09** NJ	**0.39** NJ	**0.60** NJ	**0.38** NJ	**0.17** NJ	**0.55** NJ	**0.31** NJ	0-1.75	0.16 (Heast) or SB
Cadmium	***1.2*** NJ	***7.3*** NJ	**0.26** NJ	**0.47** NJ	***1.2*** *NJ*	**1.0** NJ	**0.25** NJ	0.1-1	1 or SB
Calcium	**28,800**	**13,800**	**17,600**	**25,100**	**29,300**	**8,990**	**19,800**	130-35,000	SB
Chromium	**2.8** NJ	**9.9** NJ	**10.6** NJ	**8.3** NJ	**5.0** NJ	**11.0** NJ	**7.7** NJ	1.5-40	10 or SB
Cobalt	**1.9** NJ	**5.1** NJ	**6.8** NJ	**5.4** NJ	**4.1** NJ	**5.9** NJ	**5.1** NJ	2.5-60	30 or SB
Copper	**7.8**	**37.8**	***87.5***	***231***	**10.5**	***905***	***99.9***	1-50	25 or SB
Iron	**4,440**	**11,500**	**17,200**	**10,900**	**8,300**	**13,700**	**10,800**	2,000-550,000	2,000 or SB
Lead	**3.1**	**238**	**295**	**306**	**5.4**	**402**	***588***	200-500 urban *	SB *
Magnesium	***6,430***	**4,990**	***6,070***	***12,900***	***9,390***	**2,840**	***6,660***	100-5,000	SB
Manganese	**170**	**197**	**347**	**307**	**234**	**269**	**254**	100-5,000	SB
Mercury	**0.118** NJ	***0.316*** NJ	***0.363*** NJ	***0.365*** NJ	**0.123** NJ	***0.787*** NJ	**0.185** NJ	0.001-0.2	0.1
Nickel	**3.4** NJ	**9.6** NJ	**10.9** NJ	**10.2** NJ	**8.2** NJ	**13.0** NJ	**8.8** NJ	0.5-25	13 or SB
Potassium	**497** EJ	**709** EJ	**762** EJ	**771** EJ	**624** EJ	**722** EJ	**757** EJ	8,000-8,500	SB
Selenium	***8.2*** NJ	**1.2** NJ	**1.4** NJ	**0.98** NJ	***8.4*** *NJ*	**1.4** NJ	**1.1** NJ	0.1-3.9	2 or SB
Silver	**2.3** NJ	**2.3** NJ	**2.3** NJ	**2.3** NJ	**2.4** NJ	**2.4** NJ	**2.3** NJ	NA	SB
Sodium	**1,160**	**265**	**309**	**335**	**1,210**	**132**	**686**	6,000-8,000	SB
Thallium	**5.8** NJ	**5.8** NJ	**5.8** NJ	**5.8** NJ	**6.0** NJ	**6.0** NJ	**5.7** NJ	NA	SB
Vanadium	**4.6** NJ	**17.6** NJ	**29.2** NJ	**16.7** NJ	**7.3** NJ	**24.6** NJ	**13.3** NJ	1-300	150 or SB
Zinc	**17.7 NJ**	***121*** NJ	***183*** NJ	***187*** NJ	**30.0** NJ	***395*** NJ	***220*** NJ	9-50	20 or SB

Notes:
1. NYSDEC. January 24, 1994. Determination of Soil Cleanup Objectives and Cleanup Levels, Division of Hazardous Waste Remediation, Technical and Administrative Guidance Memorandum, HWR 94-4046 (TAGM 4046) Revised July 2001.
2. mg/Kg = all values expressed in milligrams per kilogram (mg/Kg), which are equivalent to parts per million (ppm).
3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced,** Underlined**,** and *Italicized* values are reported concentrations that exceed both the NYSDEC recommended soil cleanup objective and Eastern USA background ranges.
5. * = Rural lead averages 4 - 61 mg/Kg; urban lead averages 200 - 500 mg/Kg.
6. SB = Site Background.
7. Blank space = not detected.
8. "J" = indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
9. "N" = sample spike recovery is not within control limits.
10. "E" = reported value is estimated because of interference.
11. GR-XX-S-DUP is a duplicate of GR-B214-S.

TABLE 15
SUMMARY OF TCL VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC1								
Sample ID		**GR-MW101-GW**	**GR-MW101-LNAPL**	**GR-MW105-GW**	**GR-MW108-GW**	**GR-MW110-GW**	**GR-MW113-GW**	**GR-MW114-GW**	**GR-MW116-GW**	**NYSDEC Groundwater Standards and Guidance Values (1)**
Lab Sample Number		**T4138-03**	**T4138-02**	**T4138-04**	**T4091-03**	**T4138-05**	**T4138-14**	**T4138-10**	**T4091-04**	
Sampling Date		**08/08/05**	**08/08/05**	**08/08/05**	**08/05/05**	**08/08/05**	**08/09/05**	**08/09/05**	**08/05/05**	
Matrix		**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Dichlorodifluoromethane	75-71-8	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Chloromethane	74-87-3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS
Vinyl Chloride	75-01-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2
Bromomethane	74-83-9	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Chloroethane	75-00-3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Trichlorofluoromethane	75-69-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
1,1,2-Trichlorotrifluoroethane	76-13-1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
1,1-Dichloroethene	75-35-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Acetone	67-64-1	50 U	50 U	50 U	10 U	50 U	50 U	50 U	50 U	50 (G)
Carbon Disulfide	75-15-0	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**0.91** J	60 (G)
Methyl tert-butyl Ether	1634-04-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 (G)
Methyl Acetate	79-20-9	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS
Methylene Chloride	75-09-2	10 U	***8.0*** J	10 U	10 U	10 U	10 U	10 U	10 U	5
trans-1,2-Dichloroethene	156-60-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
1,1-Dichloroethane	75-34-3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Cyclohexane	110-82-7	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS
2-Butanone	78-93-3	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 (G)
Carbon Tetrachloride	56-23-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
cis-1,2-Dichloroethene	156-59-2	**1.8** J	**2.0** J	10 U	10 U	10 U	10 U	10 U	**1.0** J	5
Chloroform	67-66-3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	7
1,1,1-Trichloroethane	71-55-6	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Methylcyclohexane	108-87-2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	**2.8** J	NS
Benzene	71-43-2	***3.7*** J	***3.5*** J	10 U	10 U	10 U	10 U	10 U	***2.1*** J	1
1,2-Dichloroethane	107-06-2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1
Trichloroethene	79-01-6	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
1,2-Dichloropropane	78-87-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1
Bromodichloromethane	75-27-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 (G)
4-Methyl-2-Pentanone	108-10-1	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	NS
Toluene	108-88-3	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
t-1,3-Dichloropropene	10061-02-6	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.4 (-cis and -trans)
cis-1,3-Dichloropropene	10061-01-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.4 (-cis and -trans)
1,1,2-Trichloroethane	79-00-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1
2-Hexanone	591-78-6	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 (G)
Dibromochloromethane	124-48-1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 (G)
1,2-Dibromoethane	106-93-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS
Tetrachloroethene	127-18-4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5

TABLE 15
SUMMARY OF TCL VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC1								
Sample ID		**GR-MW101-GW**	**GR-MW101-LNAPL**	**GR-MW105-GW**	**GR-MW108-GW**	**GR-MW110-GW**	**GR-MW113-GW**	**GR-MW114-GW**	**GR-MW116-GW**	**NYSDEC Groundwater Standards and Guidance Values [1]**
Lab Sample Number		**T4138-03**	**T4138-02**	**T4138-04**	**T4091-03**	**T4138-05**	**T4138-14**	**T4138-10**	**T4091-04**	
Sampling Date		**08/08/05**	**08/08/05**	**08/08/05**	**08/05/05**	**08/08/05**	**08/09/05**	**08/09/05**	**08/05/05**	
Matrix		**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Chlorobenzene	108-90-7	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Ethyl Benzene	100-41-4	***6.2*** J	**1.0** J	10 U	10 U	10 U	10 U	10 U	**1.9** J	5
m/p-Xylenes	136777-61-2	***60***	***16***	10 U	10 U	10 U	10 U	10 U	***190***	5
o-Xylene	95-47-6	***57***	**1.7** J	10 U	10 U	10 U	10 U	10 U	**2.4** J	5
Styrene	100-42-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Bromoform	75-25-2	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 (G)
Isopropylbenzene	98-82-8	**3.5** J	10 U	10 U	10 U	10 U	10 U	10 U	***22***	5
1,1,2,2-Tetrachloroethane	79-34-5	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
1,3-Dichlorobenzene	541-73-1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	3
1,4-Dichlorobenzene	106-46-7	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	3
1,2-Dichlorobenzene	95-50-1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	3
1,2-Dibromo-3-Chloropropane	96-12-8	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.04
1,2,4-Trichlorobenzene	120-82-1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	5
Total TICs		**12.2**	0	0	0	0	0	0	**989**	NS

Notes:
1. NYSDEC. October 22, 1993. Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Reissued June 1998. April 2000 Addendum.
2. ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb).
3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced,** Underlined, and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
5. (G) = guidance value.
6. "NS" = No Standard has been established by NYSDEC.
7. GR-XX-Dup is a duplicate of GR-MW217-GW.
8. "U" = Compound was analyzed but was not detected.
9. "J" = Indicates an estimated value.

TABLE 15
SUMMARY OF TCL VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC1								
Sample ID		**GR-MW208-GW**	**GR-MW208-GW**	**GR-MW209-GW**	**GR-MW209-GW**	**GR-MW210-GW**	**GR-MW210-GW**	**GR-MW211-GW**	**GR-MW211-GW**	**NYSDEC Groundwater Standards and Guidance Values [1]**
Lab Sample Number		**T4138-11**	**T5588-01**	**T4138-12**	**T5588-02**	**T4138-13**	**T5588-03**	**T4138-15**	**T5588-04**	
Sampling Date		**08/09/05**	**11/04/05**	**08/09/05**	**11/04/05**	**08/09/05**	**11/04/05**	**08/09/05**	**11/04/05**	
Matrix		**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Dichlorodifluoromethane	75-71-8	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	5
Chloromethane	74-87-3	10 U	0.08 U	10 U	0.08 U	10 U	0.08 U	10 U	0.08 U	NS
Vinyl Chloride	75-01-4	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	2
Bromomethane	74-83-9	10 U	0.18 U	10 U	0.18 U	10 U	0.18 U	10 U	0.18 U	5
Chloroethane	75-00-3	10 U	0.46 U	10 U	0.46 U	10 U	0.46 U	10 U	0.46 U	5
Trichlorofluoromethane	75-69-4	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	5
1,1,2-Trichlorotrifluoroethane	76-13-1	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	5
1,1-Dichloroethene	75-35-4	10 U	0.19 U	10 U	0.19 U	10 U	0.19 U	10 U	0.19 U	5
Acetone	67-64-1	50 U	1.6 U	50 U	1.6 U	50 U	1.6 U	50 U	1.6 U	50 (G)
Carbon Disulfide	75-15-0	10 U	0.11 U	10 U	0.11 U	10 U	0.11 U	10 U	0.11 U	60 (G)
Methyl tert-butyl Ether	1634-04-4	10 U	0.22 U	10 U	0.22 U	10 U	0.22 U	10 U	0.22 U	10 (G)
Methyl Acetate	79-20-9	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	NS
Methylene Chloride	75-09-2	10 U	0.42 U	10 U	0.42 U	10 U	0.42 U	10 U	0.42 U	5
trans-1,2-Dichloroethene	156-60-5	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	5
1,1-Dichloroethane	75-34-3	10 U	0.17 U	10 U	0.17 U	10 U	0.17 U	10 U	0.17 U	5
Cyclohexane	110-82-7	10 U	0.15 U	10 U	0.15 U	10 U	0.15 U	10 U	0.15 U	NS
2-Butanone	78-93-3	50 U	0.23 U	50 U	0.23 U	50 U	0.23 U	50 U	0.23 U	50 (G)
Carbon Tetrachloride	56-23-5	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	5
cis-1,2-Dichloroethene	156-59-2	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	5
Chloroform	67-66-3	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	7
1,1,1-Trichloroethane	71-55-6	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	10 U	0.16 U	5
Methylcyclohexane	108-87-2	10 U	0.14 U	10 U	0.14 U	10 U	0.14 U	10 U	0.14 U	NS
Benzene	71-43-2	10 U	0.15 UJ	10 UJ	0.15 U	10 UJ	0.15 U	10 UJ	0.15 U	1
1,2-Dichloroethane	107-06-2	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	1
Trichloroethene	79-01-6	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	5
1,2-Dichloropropane	78-87-5	10 U	0.15 U	10 U	0.15 U	10 U	0.15 U	10 U	0.15 U	1
Bromodichloromethane	75-27-4	10 U	0.14 U	10 U	0.14 U	10 U	0.14 U	10 U	0.14 U	50 (G)
4-Methyl-2-Pentanone	108-10-1	50 U	0.46 U	50 U	0.46 U	50 U	0.46 U	50 U	0.46 U	NS
Toluene	108-88-3	10 U	0.11 UJ	10 UJ	0.11 U	10 UJ	0.11 U	10 UJ	0.11 U	5
t-1,3-Dichloropropene	10061-02-6	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	0.4 (-cis and -trans)
cis-1,3-Dichloropropene	10061-01-5	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	0.4 (-cis and -trans)
1,1,2-Trichloroethane	79-00-5	10 U	0.11 U	10 U	0.11 U	10 U	0.11 U	10 U	0.11 U	1
2-Hexanone	591-78-6	50 U	0.57 U	50 U	0.57 U	50 U	0.57 U	50 U	0.57 U	50 (G)
Dibromochloromethane	124-48-1	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	10 U	0.13 U	50 (G)
1,2-Dibromoethane	106-93-4	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	NS
Tetrachloroethene	127-18-4	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	10 U	0.12 U	5

TABLE 15
SUMMARY OF TCL VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC1								
Sample ID		**GR-MW208-GW**	**GR-MW208-GW**	**GR-MW209-GW**	**GR-MW209-GW**	**GR-MW210-GW**	**GR-MW210-GW**	**GR-MW211-GW**	**GR-MW211-GW**	**NYSDEC Groundwater Standards and Guidance Values (1)**
Lab Sample Number		**T4138-11**	**T5588-01**	**T4138-12**	**T5588-02**	**T4138-13**	**T5588-03**	**T4138-15**	**T5588-04**	
Sampling Date		**08/09/05**	**11/04/05**	**08/09/05**	**11/04/05**	**08/09/05**	**11/04/05**	**08/09/05**	**11/04/05**	
Matrix		**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Chlorobenzene	108-90-7	10 U	0.11 UJ	10 UJ	0.11 U	10 UJ	0.11 U	10 UJ	0.11 U	5
Ethyl Benzene	100-41-4	10 U	0.11 UJ	10 UJ	0.11 U	10 UJ	0.11 U	10 UJ	0.11 U	5
m/p-Xylenes	136777-61-2	10 U	0.24 UJ	10 UJ	0.24 U	10 UJ	0.24 U	10 UJ	0.24 U	5
o-Xylene	95-47-6	10 U	0.13 UJ	10 UJ	0.13 U	10 UJ	0.13 U	10 UJ	0.13 U	5
Styrene	100-42-5	10 U	0.11 UJ	10 UJ	0.11 U	10 UJ	0.11 U	10 UJ	0.11 U	5
Bromoform	75-25-2	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	50 (G)
Isopropylbenzene	98-82-8	10 U	0.12 UJ	10 UJ	0.12 U	10 UJ	0.12 U	10 UJ	0.12 U	5
1,1,2,2-Tetrachloroethane	79-34-5	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	10 U	0.09 U	5
1,3-Dichlorobenzene	541-73-1	10 U	0.10 UJ	10 UJ	0.10 U	10 UJ	0.10 U	10 UJ	0.10 U	3
1,4-Dichlorobenzene	106-46-7	10 U	0.12 UJ	10 UJ	0.12 U	10 UJ	0.12 U	10 UJ	0.12 U	3
1,2-Dichlorobenzene	95-50-1	10 U	0.08 UJ	10 UJ	0.08 U	10 UJ	0.08 U	10 UJ	0.08 U	3
1,2-Dibromo-3-Chloropropane	96-12-8	10 U	0.20 U	10 U	0.20 U	10 U	0.20 U	10 U	0.20 U	0.04
1,2,4-Trichlorobenzene	120-82-1	10 U	0.08 UJ	10 UJ	0.08 U	10 UJ	0.08 U	10 UJ	0.08 U	5
Total TICs		0	0	0	0	0	0	0	0	NS

Notes:
1. NYSDEC. October 22, 1993. Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Reissued June 1998. April 2000 Addendum.
2. ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb).
3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced,** Underlined**,** and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
5. (G) = guidance value.
6. "NS" = No Standard has been established by NYSDEC.
7. GR-XX-Dup is a duplicate of GR-MW217-GW.
8. "U" = Compound was analyzed but was not detected.
9. "J" = Indicates an estimated value.

TABLE 15
SUMMARY OF TCL VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 2								
Sample ID		**GR-MW104-GW**	**GR-MW106-GW**	**GR-MW111-GW**	**GR-MW216-GW**	**GR-MW216-GW**	**GR-MW217-GW**	**GR-MW217-GW**	**GR-XX-DUP**	**NYSDEC Groundwater Standards and Guidance Values [1]**
Lab Sample Number		**T4138-16**	**T4138-08**	**T4138-19**	**T4138-06**	**T5588-05**	**T4138-07**	**T5588-07**	**T4138-09**	
Sampling Date		**08/09/05**	**08/09/05**	**08/09/05**	**08/09/05**	**11/04/05**	**08/09/05**	**11/04/05**	**08/09/05**	
Matrix		**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Dichlorodifluoromethane	75-71-8	10 U	10 U	10 U	10 U	0.12 U	10 U	0.12 U	10 U	5
Chloromethane	74-87-3	10 U	10 U	10 U	10 U	0.08 U	10 U	0.08 U	10 U	NS
Vinyl Chloride	75-01-4	10 U	10 U	10 U	10 U	0.09 U	10 U	0.09 U	10 U	2
Bromomethane	74-83-9	10 U	10 U	10 U	10 U	0.18 U	10 U	0.18 U	10 U	5
Chloroethane	75-00-3	10 U	10 U	10 U	10 U	0.46 U	10 U	0.46 U	10 U	5
Trichlorofluoromethane	75-69-4	10 U	10 U	10 U	10 U	0.10 U	10 U	0.10 U	10 U	5
1,1,2-Trichlorotrifluoroethane	76-13-1	10 U	10 U	10 U	10 U	0.13 U	10 U	0.13 U	10 U	5
1,1-Dichloroethene	75-35-4	10 U	10 U	10 U	10 U	0.19 U	10 U	0.19 U	10 U	5
Acetone	67-64-1	50 U	50 U	50 U	50 U	1.6 U	50 U	1.6 U	10 U	50 (G)
Carbon Disulfide	75-15-0	10 U	10 U	10 U	10 U	0.11 U	10 U	0.11 U	10 U	60 (G)
Methyl tert-butyl Ether	1634-04-4	10 U	10 U	10 U	10 U	0.22 U	10 U	**1.5**	10 U	10 (G)
Methyl Acetate	79-20-9	10 U	10 U	10 U	10 U	0.16 U	10 U	0.16 U	10 U	NS
Methylene Chloride	75-09-2	10 U	10 U	10 U	10 U	0.42 U	10 U	0.42 U	10 U	5
trans-1,2-Dichloroethene	156-60-5	10 U	10 U	10 U	10 U	0.10 U	10 U	0.10 U	10 U	5
1,1-Dichloroethane	75-34-3	10 U	10 U	10 U	10 U	0.17 U	10 U	0.17 U	10 U	5
Cyclohexane	110-82-7	10 U	10 U	10 U	10 U	0.15 U	10 U	0.15 U	10 U	NS
2-Butanone	78-93-3	50 U	50 U	50 U	50 U	0.23 U	50 U	0.23 U	50 U	50 (G)
Carbon Tetrachloride	56-23-5	10 U	10 U	10 U	10 U	0.16 U	10 U	0.16 U	10 U	5
cis-1,2-Dichloroethene	156-59-2	10 U	10 U	10 U	10 U	0.09 U	10 U	0.09 U	10 U	5
Chloroform	67-66-3	10 U	10 U	10 U	10 U	0.16 U	10 U	0.16 U	10 U	7
1,1,1-Trichloroethane	71-55-6	10 U	10 U	10 U	10 U	0.16 U	10 U	0.16 U	10 U	5
Methylcyclohexane	108-87-2	10 U	10 U	10 U	10 U	0.14 U	10 U	0.14 U	10 U	NS
Benzene	71-43-2	10 U	10 U	10 U	10 UJ	0.15 U	10 U	0.15 U	10 U	1
1,2-Dichloroethane	107-06-2	10 U	10 U	10 U	10 U	0.13 U	10 U	0.13 U	10 U	1
Trichloroethene	79-01-6	10 U	10 U	10 U	10 U	0.12 U	10 U	0.12 U	10 U	5
1,2-Dichloropropane	78-87-5	10 U	10 U	10 U	10 U	0.15 U	10 U	0.15 U	10 U	1
Bromodichloromethane	75-27-4	10 U	10 U	10 U	10 U	0.14 U	10 U	0.14 U	10 U	50 (G)
4-Methyl-2-Pentanone	108-10-1	50 U	50 U	50 U	50 U	0.46 U	50 U	0.46 U	50 U	NS
Toluene	108-88-3	10 U	10 U	10 U	10 UJ	0.11 U	10 U	0.11 U	10 U	5
t-1,3-Dichloropropene	10061-02-6	10 U	10 U	10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.4 (-cis and -trans)
cis-1,3-Dichloropropene	10061-01-5	10 U	10 U	10 U	10 U	0.12 U	10 U	0.12 U	10 U	0.4 (-cis and -trans)
1,1,2-Trichloroethane	79-00-5	10 U	10 U	10 U	10 U	0.11 U	10 U	0.11 U	10 U	1
2-Hexanone	591-78-6	50 U	50 U	50 U	50 U	0.57 U	50 U	0.57 U	50 U	50 (G)
Dibromochloromethane	124-48-1	10 U	10 U	10 U	10 U	0.13 U	10 U	0.13 U	10 U	50 (G)
1,2-Dibromoethane	106-93-4	10 U	10 U	10 U	10 U	0.12 U	10 U	0.12 U	10 U	NS
Tetrachloroethene	127-18-4	10 U	10 U	10 U	10 U	0.12 U	10 U	0.12 U	10 U	5

TABLE 15
SUMMARY OF TCL VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 2								
Sample ID		**GR-MW104-GW**	**GR-MW106-GW**	**GR-MW111-GW**	**GR-MW216-GW**	**GR-MW216-GW**	**GR-MW217-GW**	**GR-MW217-GW**	**GR-XX-DUP**	**NYSDEC Groundwater Standards and Guidance Values (1)**
Lab Sample Number		**T4138-16**	**T4138-08**	**T4138-19**	**T4138-06**	**T5588-05**	**T4138-07**	**T5588-07**	**T4138-09**	
Sampling Date		**08/09/05**	**08/09/05**	**08/09/05**	**08/09/05**	**11/04/05**	**08/09/05**	**11/04/05**	**08/09/05**	
Matrix		**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Chlorobenzene	108-90-7	10 U	10 U	10 U	10 UJ	0.11 U	10 U	0.11 U	10 U	5
Ethyl Benzene	100-41-4	10 U	10 U	10 U	10 UJ	0.11 U	10 U	0.11 U	10 U	5
m/p-Xylenes	136777-61-2	10 U	10 U	10 U	10 UJ	0.24 U	10 U	0.24 U	10 U	5
o-Xylene	95-47-6	10 U	10 U	10 U	10 UJ	0.13 U	10 U	0.13 U	10 U	5
Styrene	100-42-5	10 U	10 U	10 U	10 UJ	0.11 U	10 U	0.11 U	10 U	5
Bromoform	75-25-2	10 U	10 U	10 U	10 U	0.09 U	10 U	0.09 U	10 U	50 (G)
Isopropylbenzene	98-82-8	10 U	10 U	10 U	10 UJ	0.12 U	10 U	0.12 U	10 U	5
1,1,2,2-Tetrachloroethane	79-34-5	10 U	10 U	10 U	10 U	0.09 U	10 U	0.09 U	10 U	5
1,3-Dichlorobenzene	541-73-1	10 U	10 U	10 U	10 UJ	0.10 U	10 U	0.10 U	10 U	3
1,4-Dichlorobenzene	106-46-7	10 U	10 U	10 U	10 UJ	0.12 U	10 U	0.12 U	10 U	3
1,2-Dichlorobenzene	95-50-1	10 U	10 U	10 U	10 UJ	0.08 U	10 U	0.08 U	10 U	3
1,2-Dibromo-3-Chloropropane	96-12-8	10 U	10 U	10 U	10 U	0.20 U	10 U	0.20 U	10 U	0.04
1,2,4-Trichlorobenzene	120-82-1	10 U	10 U	10 U	10 UJ	0.08 U	10 U	0.08 U	10 U	5
Total TICs		0	0	0	0	0	0	0	0	NS

Notes:
1. NYSDEC. October 22, 1993. Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Reissued June 1998. April 2000 Addendum.
2. ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb).
3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced,** Underlined**,** and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
5. (G) = guidance value.
6. "NS" = No Standard has been established by NYSDEC.
7. GR-XX-Dup is a duplicate of GR-MW217-GW.
8. "U" = Compound was analyzed but was not detected.
9. "J" = Indicates an estimated value.

TABLE 16
SUMMARY OF TCL SEMI-VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 2						
Sample ID		**GR-MW104-GW**	**GR-MW106-GW**	**GR-MW111-GW**	**GR-MW216-GW**	**GR-MW217-GW**	**GR-XX-DUP**	**NYSDEC Groundwater Standards and Guidance Values (1)**
Lab Sample Number		**T4138-16**	**T4138-08**	**T4138-19**	**T4138-06**	**T4138-07**	**T4138-09**	
Sampling Date		**08/09/05**	**08/09/05**	**08/09/05**	**08/09/05**	**08/09/05**	**08/09/05**	
Matrix		**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Benzaldehyde	100-52-7	10 U	10 U	10 U	10 U	10 U	10 U	NS
Phenol	108-95-2	10 U	10 U	10 U	10 U	10 U	10 U	1
bis(2-Chloroethyl)ether	111-44-4	10 U	10 U	10 U	10 U	10 U	10 U	1
2-Chlorophenol	95-57-8	10 U	10 U	10 U	10 U	10 U	10 U	1
2-Methylphenol	95-48-7	10 U	10 U	10 U	10 U	10 U	10 U	5
2,2-oxybis(1-Chloropropane)	108-60-1	10 U	10 U	10 U	10 U	10 U	10 U	NS
Acetophenone	98-86-2	10 U	10 U	10 U	10 U	10 U	10 U	NS
3+4-Methylphenols	106-44-5	10 U	10 U	10 U	10 U	10 U	10 U	NS
N-Nitroso-di-n-propylamine	621-64-7	10 U	10 U	10 U	10 U	10 U	10 U	NS
Hexachloroethane	67-72-1	10 U	10 U	10 U	10 U	10 U	10 U	5
Nitrobenzene	98-95-3	10 U	10 U	10 U	10 U	10 U	10 U	0.4
Isophorone	78-59-1	10 U	10 U	10 U	10 U	10 U	10 U	50
2-Nitrophenol	88-75-5	10 U	10 U	10 U	10 U	10 U	10 U	5
2,4-Dimethylphenol	105-67-9	10 U	10 U	10 U	10 U	10 U	10 U	50
bis(2-Chloroethoxy)methane	111-91-1	10 U	10 U	10 U	10 U	10 U	10 U	5
2,4-Dichlorophenol	120-83-2	10 U	10 U	10 U	10 U	10 U	10 U	50
Naphthalene	91-20-3	10 U	10 U	10 U	10 U	10 U	10 U	10
4-Chloroaniline	106-47-8	10 U	10 U	10 U	10 U	10 U	10 U	5
Hexachlorobutadiene	87-68-3	10 U	10 U	10 U	10 U	10 U	10 U	0.5
Caprolactam	105-60-2	**2.7** J	**380** D	**31**	**320** D	**260** D	**320** D	NS
4-Chloro-3-methylphenol	59-50-7	10 U	10 U	10 U	10 U	10 U	10 U	5
2-Methylnaphthalene	91-57-6	10 U	10 U	10 U	10 U	10 U	10 U	4.7
Hexachlorocyclopentadiene	77-47-4	10 U	10 U	10 U	10 U	10 U	10 U	5
2,4,6-Trichlorophenol	88-06-2	10 U	10 U	10 U	10 U	10 U	10 U	NS
2,4,5-Trichlorophenol	95-95-4	10 U	10 U	10 U	10 U	10 U	10 U	NS
1,1-Biphenyl	92-52-4	10 U	10 U	10 U	10 U	10 U	10 U	5
2-Chloronaphthalene	91-58-7	10 U	10 U	10 U	10 U	10 U	10 U	10
2-Nitroaniline	88-74-4	10 U	10 U	10 U	10 U	10 U	10 U	5
Dimethylphthalate	131-11-3	10 U	10 U	10 U	10 U	10 U	10 U	50
Acenaphthylene	208-96-8	10 U	10 U	10 U	10 U	10 U	10 U	NS
2,6-Dinitrotoluene	606-20-2	10 U	10 U	10 U	10 U	10 U	10 U	5
3-Nitroaniline	99-09-2	10 U	10 U	10 U	10 U	10 U	10 U	5
Acenaphthene	83-32-9	10 U	10 U	10 U	10 U	10 U	10 U	20
2,4-Dinitrophenol	51-28-5	21 U	21 U	20 U	20 U	20 U	21 U	5
4-Nitrophenol	100-02-7	21 U	21 U	20 U	20 U	20 U	21 U	5
Dibenzofuran	132-64-9	10 U	10 U	10 U	10 U	10 U	10 U	NS
2,4-Dinitrotoluene	121-14-2	10 U	10 U	10 U	10 U	10 U	10 U	5
Diethylphthalate	84-66-2	10 U	10 U	10 U	10 U	10 U	10 U	50
4-Chlorophenyl-phenylether	7005-72-3	10 U	10 U	10 U	10 U	10 U	10 U	NS
Fluorene	86-73-7	10 U	10 U	10 U	10 U	10 U	10 U	50
4-Nitroaniline	100-01-6	10 U	10 U	10 U	10 U	10 U	10 U	5

TABLE 16
SUMMARY OF TCL SEMI-VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 2						
Sample ID		**GR-MW104-GW**	**GR-MW106-GW**	**GR-MW111-GW**	**GR-MW216-GW**	**GR-MW217-GW**	**GR-XX-DUP**	**NYSDEC Groundwater Standards and Guidance Values (1)**
Lab Sample Number		**T4138-16**	**T4138-08**	**T4138-19**	**T4138-06**	**T4138-07**	**T4138-09**	
Sampling Date		**08/09/05**	**08/09/05**	**08/09/05**	**08/09/05**	**08/09/05**	**08/09/05**	
Matrix		**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
4,6-Dinitro-2-methylphenol	534-52-1	21 U	21 U	20 U	20 U	20 U	21 U	NS
N-Nitrosodiphenylamine	86-30-6	10 U	10 U	10 U	10 U	10 U	10 U	50
4-Bromophenyl-phenylether	101-55-3	10 U	10 U	10 U	10 U	10 U	10 U	NS
Hexachlorobenzene	118-74-1	10 U	10 U	10 U	10 U	10 U	10 U	0.04
Atrazine	1912-24-9	10 U	10 U	10 U	10 U	10 U	10 U	3
Pentachlorophenol	87-86-5	21 U	21 U	20 U	20 U	20 U	21 U	1
Phenanthrene	85-01-8	10 U	10 U	10 U	10 U	10 U	10 U	50
Anthracene	120-12-7	10 U	10 U	10 U	10 U	10 U	10 U	50
Carbazole	86-74-8	10 U	10 U	10 U	10 U	10 U	10 U	NS
Di-n-butylphthalate	84-74-2	**1.2** J	10 U	**2.8** J	10 U	10 U	10 U	NS
Fluoranthene	206-44-0	10 U	10 U	10 U	10 U	10 U	10 U	50
Pyrene	129-00-0	10 U	10 U	10 U	10 U	10 U	10 U	50
Butylbenzylphthalate	85-68-7	10 U	**2.0** J	10 U	10 U	10 U	10 U	50
3,3-Dichlorobenzidine	91-94-1	21 U	21 U	20 U	20 U	20 U	21 U	5
Benzo(a)anthracene	56-55-3	10 U	10 U	10 U	10 U	10 U	10 U	0.002
Chrysene	218-01-9	10 U	10 U	10 U	10 U	10 U	10 U	0.002
bis(2-Ethylhexyl)phthalate	117-81-7	10 U	10 U	10 U	10 U	10 U	10 U	5
Di-n-octyl phthalate	117-84-0	10 U	10 U	10 U	10 U	10 U	10 U	50
Benzo(b)fluoranthene	205-99-2	10 U	10 U	10 U	10 U	10 U	10 U	0.002
Benzo(k)fluoranthene	207-08-9	10 U	10 U	10 U	10 U	10 U	10 U	0.002
Benzo(a)pyrene	50-32-8	10 U	10 U	10 U	10 U	10 U	10 U	0.002
Indeno(1,2,3-cd)pyrene	193-39-5	10 U	10 U	10 U	10 U	10 U	10 U	0.002
Dibenz(a,h)anthracene	53-70-3	10 U	10 U	10 U	10 U	10 U	10 U	NS
Benzo(g,h,i)perylene	191-24-2	10 U	10 U	10 U	10 U	10 U	10 U	NS
Total TICs		**20**	**220.5**	**37.3**	**170**	**0**	**156**	NS

Notes:
1. NYSDEC. October 22, 1993. Ambient Water Quality Standards and Guidance Values, Division of Water, Technical and Operational Guidance Series (TOGS 1.1.1); Reissued June 1998. April 2000 Addendum.
2. ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb).
3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced,** Underlined**,** and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
5. (G) = guidance value.
6. "NS" = No Standard has been established by NYSDEC.
7. GR-XX-DUP is a duplicate sample of GR-MW217-GW.
8. "U" = Compound was analyzed but was not detected.
9. "J" = Indicates an estimated value.
10. "D" = All compounds identified in an analysis at a secondary dilution factor.

TABLE 17
SUMMARY OF TAL METALS
IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 2									
Sample ID		**GR-MW104-GW**	**GR-MW106-GW**	**GR-MW111-GW**	**GR-MW216-GW**	**GR-MW216-GW**	**GR-DUP-GW**	**GR-MW217-GW**	**GR-XX-DUP**	**GR-MW217-GW**	**NYSDEC Groundwater Standards and Guidance Values (1)**
Lab Sample Number		**T4138-16**	**T4138-08**	**T4138-19**	**T4138-06**	**T5388-05**	**T5588-06**	**T4138-07**	**T4138-09**	**T5588-07**	
Sampling Date		**08/09/05**	**08/09/05**	**08/09/05**	**08/09/05**	**11/4/2005**	**11/04/05**	**08/09/05**	**08/09/05**	**11/04/05**	
Matrix		**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	**WATER**	
Dilution Factor		**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	
Units	**CAS #**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Aluminum	7429-90-5	**12,100** *	**15,000** *	**21,900** *	**28,700** *	**74.1** J	**71.7** J	**12,300**	**11,500** *	**72.4** J	NS
Antimony	7440-36-0	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U	60.0 U	3
Arsenic	7440-38-2	**8.1** J	***25.6***	**19.1**	**11.1**	10 U	10.0 U	**9.5** J	**13.3**	**4.6** J	25
Barium	7440-39-3	**399** NJ	**404** NJ	**412** NJ	**543** NJ	**108** J	**111** J	**720** NJ	**714** NJ	**278**	1,000
Beryllium	7440-41-7	**0.56** J	**0.88** J	**1.1** J	**1.4** J	5.0 U	5.0 U	**0.69** J	**0.69** J	5.0 U	3 (G)
Cadmium	7440-43-9	**4.0** J	**3.2** J	**2.7** J	**1.5** J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5
Calcium	7440-70-2	**229,000** *	**182,000** *	**484,000** *D	**514,000** *D	**149,000** J	**153,000** J	**287,000**	**275,000** *	**193000** J	NS
Chromium	7440-47-3	**17.0**	**34.5**	**33.0**	**50.0**	10.0 U	10.0 U	**24.7**	**22.5**	**1.6** J	50
Cobalt	7440-48-4	**38.2** J	**26.3** J	**28.1** J	**23.7** J	50.0 U	50.0 U	**15.5** J	**14.3** J	50.0 U	NS
Copper	7440-50-8	**61.3**	**88.6**	**76.3**	**80.0**	25.0 U	25.0 U	**55.2**	**52.4**	**2.7** J	200
Iron	7439-89-6	***20,300*** *	***35,900*** *	***42,600*** *	***46,600*** *	100 U	100 U	***25,900*** *	***24,600*** *	**30.8** J	300
Lead	7439-92-1	***50.7*** *NJ	***66.6*** *NJ	***49.0*** *NJ	***70.9*** *NJ	10.0 UN	10.0 U	***31.9*** *NJ	***31.7*** *NJ	10.0 UN	25
Magnesium	7439-95-4	***67,300*** *	***51,000*** *	***114,000*** *	***122,000*** *	**22,100** *	**22400**	***73,600*** *	***72,500*** *	***40100***	35,000 (G)
Manganese	7439-96-5	***7,230*** *	***1,200*** *	***6,280*** *	***2,660*** *	**63.4** J	**66.8** J	***1,750*** *	***1,650*** *	***2100*** J	300
Mercury	7439-97-6	.200 U	.200 U	.200 U	.200 U	.200 U	**0.054** *J	.200 U	.200 U	**0.078** J	1
Nickel	7440-02-0	**77.9**	**53.9**	**75.0**	**56.5**	40.0 U	**3.0** J	29.8 J	29.5 J	**6.5** J	100
Potassium	7440-09-7	**8,930** EJ	**18,400** EJ	**15,400** EJ	**14,900** EJ	**6,180** J	**6,400** J	**14,700** EJ	**14,500** EJ	**13500** J	NS
Selenium	7782-49-2	35.0 U	35.0 U	35.0 U	35.0 U	35.0 U	35.0 U	***31.9*** J	***29.8*** J	35.0 U	10
Silver	7440-22-4	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	50
Sodium	7440-23-5	***27,900*** *J	**7,540** *J	**8,820** *J	**7,120** J	**2,580** J	**2320** J	***85,800*** *J	***86,700*** *J	***29,300***	20,000
Thallium	7440-28-0	11.2 R	11.2 R	11.2 R	11.2 R	25.0 U	25.0 U	25.0 R	25.0 R	25.0 U	0.5 (G)
Vanadium	7440-62-2	**19.5** J	**27.6** J	**40.0** J	**47.5** J	50.0 U	50.0 U	**22.5** J	**21.7** J	50.0 U	NS
Zinc	7440-66-6	**385** *	**316** *	**371** *	**731** *	**30.0** J	**27.3** J	**151** *	**147** *	**26.4** J	2,000 (G)

Notes:
1. NYSDEC. October 22, 1993. Ambient Water Quality Standards Guidance Series (TOGS 1.1.1). Reissued June 1998. April 2000 Addendum.
2. ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb).
3. **Bolded** values are concentrations that have been reported above the detection limits.
4. **Bolded**, Underlined, and *Italicized* values are reported concentrations above NYSDEC groundwater standards or guidance values.
5. (G) = guidance value.
6. "NS" = No Standard or guidance value as been established by NYSDEC.
7. GR-XX-DUP is a duplicate sample of GR-MW217-GW.
8. GR-DUP-GW is a duplicate of sample GR-MW216-GW (11/4/05).
9. Turbidity for each 8/9/05 groundwater sample exceeded 200 NTUs and were not filtered at the request of the NYSDEC representative. Turbidity for samples collected on 11/4/05 were below 50 NTUs.
10. "U" = The analyte was analyzed for, but not detected.
11. "J" = The reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
12. "N" = Spiked sample recovery not within control limits.
13. "E" = The reported value is estimated because of the presence of interference.
14. "R" = The sample results are rejected.
15. "*" = Duplicate analysis not within control limits.
16. "D" = The reported value is from a secondary analyses with a dilution factor. The original analysis exceeded the calibration range.

TABLE 18
SUMMARY OF TCL PCBs
IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

		AOC 2				
Sample ID		GR-MW104-GW	GR-MW111-GW	GR-MW216-GW	GR-MW217-GW	NYSDEC Groundwater Standards and Guidance Values (1)
Lab Sample Number		T4138-16	T4138-19	T4138-06	T4138-07	
Sampling Date		08/09/05	08/09/05	08/09/05	08/09/05	
Matrix		WATER	WATER	WATER	WATER	
Dilution Factor		1.0	1.0	1.0	1.0	
Units	**CAS #**	ug/L	ug/L	ug/L	ug/L	ug/L
Aroclor-1016	12674-11-2	1.0 U	1.0 U	1.0 U	1.0 U	0.09
Aroclor-1221	11104-28-2	2.1 U	2.0 U	2.0 U	2.1 U	0.09
Aroclor-1232	11141-16-5	1.0 U	1.0 U	1.0 U	1.0 U	0.09
Aroclor-1242	53469-21-9	1.0 U	1.0 U	1.0 U	1.0 U	0.09
Aroclor-1248	12672-29-6	1.0 U	1.0 U	1.0 U	1.0 U	0.09
Aroclor-1254	11097-69-1	1.0 U	1.0 U	1.0 U	1.0 U	0.09
Aroclor-1260	11096-82-5	1.0 U	1.0 U	1.0 U	1.0 U	0.09

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2. ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb)
3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced**, Underlined, and Italicized values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
5. "U" = Analyte was analyzed by not detected.

TABLE 19
HISTORICAL SUMMARY OF DETECTED TCL VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER: 2000-2002 and 2005
Remedial Investigation
399 Gregory Street
Rochester, NY

	2000-2002 NYSDEC SITE INVESTIGATION (ug/L)																NYSDEC Groundwater Standards and Guidance Values [1]
	AOC 1														AOC 2		
Sample ID	**MW-101**	**MW-101**	**MW-101**	**MW-108**	**MW-108**	**MW-109**	**MW-109**	**MW-110**	**MW-116**	**MW-116**	**MW-116**	**MW-116**	**MW-BR1**	**MW-BR1**	**MW-106**	**MW-111**	
Units	**11/6/2000**	**3/27/2001**	**9/12/2001**	**3/27/2001**	**1/29/2002**	**3/8/2001**	**9/12/2001**	**3/8/2001**	**3/29/2001**	**9/11/2001**	**9/12/2001**	**1/30/2002**	**3/27/2001**	**9/12/2001**	**1/29/2002**	**3/8/2001**	**ug/L**
Benzene		***7.2***	***15***				***10.8***			***545.9***	***42.8***			***8.7***			1
sec-Butylbenzene									***66***	***114.8***	***39.8***						5
tert-Butylbenzene										***26.3***							5
Carbon Disulfide																	60 (G)
Chloroform									***7.8***								7
cis-1,2-Dichloroethene																	5
Ethyl Benzene	***400***								***1751***	***3,910*** E	***1,201***	***3,700***	**2.3**		**2.5**		5
Isopropylbenzene									***95.3***	***84.5***	***25.2***	***180***					5
4-Isopropyltoluene									***52.7***	***108.9***	***51.9***						5
Methyl tert-butyl Ether				***19.1***	***16***					***46***							10 (G)
Methylcyclohexane												**280**					NS
Methylene Chloride						***24*** B		***10*** B								***16*** B	5
Naphthalene		***15.3***							***204.5***	***178.1***			**7.6**		**5.3**		10
n-Propylbenzene									***92.4***	***60.1***							5
Toluene	***1,400***	***471.3***	***7.7***						***237.7***	**95.3**			***5.7***				5
1,2,4-Trimethylbenzene		***21.3***							***424.3***	***2,393*** E	***903.2***		***14.5***				5
1,3,5-Trimethylbenzene		***24.5***							***159.6***	***833.6***	***393.4***		***5.1***				5
o-Xylene																	5
m/p-Xylenes																	5
Xylenes (total)	***2,420***	***1,183***	***13.8***						***2,974***	***128,487*** E	***70,767***	***14,770***	***29.2***		***14.5***		5
Total TICs												**12,580**					NS

Notes:
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3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced,** Underlined, and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
5. (G) = guidance value.
6. "NS" = No Standard has been established by NYSDEC.
7. Blank space = not detected.
8. "E" = Exceeds calibration limits.
9. "B" = Present in associated blank.

TABLE 19
HISTORICAL SUMMARY OF DETECTED TCL VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER: 2000-2002 and 2005
Remedial Investigation
399 Gregory Street
Rochester, NY

	2005 REMEDIAL INVESTIGATION (ug/L)				NYSDEC Groundwater Standards and Guidance Values (1) ug/L
	AOC 1				
Sample ID / **Date**	**GR-MW101-GW** 8/8/2005	**GR-MW101-LNAPL** 8/8/2005	**GR-MW116-GW** 8/5/2005	**GR-MW217-GW** 11/4/2005	
Benzene	***<u>3.7</u>*** J	***<u>3.5</u>*** J	***<u>2.1</u>*** J		1
sec-Butylbenzene					5
tert-Butylbenzene					5
Carbon Disulfide			0.91 J		60 (G)
Chloroform					7
cis-1,2-Dichloroethene	**1.8** J	**2.0** J	**1.0** J		5
Ethyl Benzene	***<u>6.2</u>*** J	**1.0** J	**1.9** J		5
Isopropylbenzene	**3.5** J		***<u>22</u>***		5
4-Isopropyltoluene					5
Methyl tert-butyl Ether				1.5	10 (G)
Methylcyclohexane			2.8 J		NS
Methylene Chloride		***<u>8.0</u>*** J			5
Naphthalene					10
n-Propylbenzene					5
Toluene					5
1,2,4-Trimethylbenzene					5
1,3,5-Trimethylbenzene					5
o-Xylene	***<u>57</u>***	**1.7** J	**2.4** J		5
m/p-Xylenes	***<u>60</u>***	***<u>16</u>***	***<u>190</u>***		5
Xylene (total)					
Total TICs	**12.2**	0	**989**	0	NS

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3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced,** Underlined**,** and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
5. (G) = guidance value.
6. "NS" = No Standard has been established by NYSDEC.
7. GR-XX-Dup is a duplicate of GR-MW217-GW.
8. Blank space = not detected.
9. "J" = Estimated concentration.
10. The other wells which were sampled but were not reported to contain VOCs above detection limits are not reported on this table.

TABLE 20
HISTORICAL SUMMARY OF DETECTED SEMI-VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER: 2000-2002 and 2005
Remedial Investigation
399 Gregory Street
Rochester, NY

	2000-2002 NYSDEC INVESTIGATIONS (ug/L)	2005 REMEDIAL INVESTIGATION (ug/L)						NYSDEC Groundwater Standards and Guidance Values(1) (ug/L)
	AOC 1	AOC 2						
Sample ID	**MW-101**	**GR-MW104-GW**	**GR-MW106-GW**	**GR-MW111-GW**	**GR-MW216-GW**	**GR-MW217-GW**	**GR-XX-DUP**	
Benzyl Alcohol	**38**							NS
bis(2-Ethylhexyl)phthalate	***<u>28</u>***	**2.7** JB	**5.6** JB	**2.4** JB			**1.1** JB	5
Butylbenzylphthalate	**2.6**		**2.0** J					50
Caprolactam		**2.7** J	**380** D	**31**	**320** D	**260** D	**320** D	NS
Dibenzofuran	**1.5**							NS
Di-n-butylphthalate		**1.2** J		**2.8** J				NS
Fluorene	**2.2**							50
2-Methylnaphthalene	***<u>18</u>***							4.7
2-Methylphenol	**4.4**							5
3+4-Methylphenols	**7.3**							NS
Naphthalene	***<u>12</u>***							10
Phenanthrene	**2.7**							50
Total TICs		**20**	**220.5**	**37.3**	**170**	**0**	**156**	NS

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3. **Bold-faced** values are concentrations that have been reported above the detection limits.
4. **Bold-faced,** <u>Underlined</u>, and *Italicized* values are reported concentrations that exceed the Class GA groundwater standards or guidance values.
5. (G) = guidance value.
6. "NS" = No Standard has been established by NYSDEC.
7. GR-XX-DUP is a duplicate sample of GR-MW217-GW.
8. Blank space = not detected.
9. "J" = Estimated concentration.
10. "B" = Analyte also present in the associated blank.
11. "D" = Analytes that were reported at a secondary dilution factor.

TABLE 21
HISTORICAL SUMMARY OF DETECTED TAL METALS IN GROUNDWATER:
2000-2002 and 2005
IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

	2000-2002 NYSDEC SITE INVESTIGATION (ug/L)										
	AOC 1						AOC 2				
Sample ID	**MW-101**	**MW-105**	**MW-108**	**MW-108**	**MW--109**	**MW-110**	**MW-103**	**MW-104**	**MW-107**	**MW-111**	**NYSDEC Groundwater Standards and Guidance**
Sampling Date	**03/28/01**	**03/28/01**	**03/28/01**	**09/12/01**	**03/28/01**	**03/28/01**	**03/28/01**	**03/26/01**	**03/26/01**	**03/28/01**	**Values [1]**
Aluminum	**123**	**199**	**841**	**338**	**1,350**	**789**	**95**	**279**	**203**	**1,710**	NS
Arsenic				**5**							25
Barium	**191**	**94**	**87**	**75**	**137**	**90**	**103**	**105**	**76**	**92**	1,000
Beryllium											3 (G)
Cadmium				**1**				**1**			5
Calcium	**150,000**	**84,800**	**127,000**	**146,000**	**171,000**	**117,000**	**104,000**	**98,800**	**81,900**	**139,000**	NS
Chromium				**3**	**8**					**3**	50
Cobalt											NS
Copper	**81**	**80**	**88**	**54**	**91**	**74**	**38**	**7**	**5**	**71**	200
Iron	***13,800***	**250**	***1,540***	***2,640***	***2,370***	***1,430***	***347***	**299**	***530***	***2,920***	300
Lead				**8**	**8**						25
Magnesium	***41,700***	**16,100**	***45,100***	***55,100***	***40,800***	**24,100**	**23,000**	**18,400**	**33,600**	**23,300**	35,000 (G)
Manganese	***664***	**14**	**124**	**135**	**130**	**47**	**8**	**21**	**24**	**86**	300
Nickel	**3**		**3**	**32**	**7**					**3**	100
Potassium	**7,340**	**2,860**	**19,700**	**19,100**	**2,170**	**2,720**	**4,260**	**2,780**	**5,690**	**2,900**	NS
Selenium											10
Sodium	**10,500**	**3,190**	***62,300***	***50,400***	**13,000**	***3,880***	***40,700***	**10,200**	**11,200**	**11,900**	20,000
Vanadium					**4**					**4**	NS
Zinc	**25**	**13**	**20**	**21**	**20**	**18**	**15**	**35**	**19**	**17**	2,000 (G)

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3. **Bolded** values are concentrations that have been reported above the detection limits..
4. **Bolded**, Underlined, and *Italicized* values are reported concentrations above NYSDEC groundwater standards or guidance values.
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6. "NS" = No Standard or guidance value as been established by NYSDEC.
7. Blank space = not detected.

TABLE 21
HISTORICAL SUMMARY OF DETECTED TAL METALS IN GROUNDWATER:
2000-2002 and 2005
IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

	2000-2002 NYSDEC SITE INVESTIGATION (ug/L)										
	AOC 1							AOC 2			
Sample ID / **Sampling Date**	**MW-112** 03/26/01	**MW-113** 03/28/01	**MW-113 Dup** 03/28/01	**MW-113** 09/12/01	**MW-BR1** 03/27/01	**MW-BR3** 03/26/01	**Weider Hall 395 Gregory Street** 03/15/01	**MW-115** 03/28/01	**MW-BR2** 03/28/01	**MW-BR2 Dup** 03/28/01	**NYSDEC Groundwater Standards and Guidance Values** (1)
Aluminum	**1,370**	**120**	**2,800**	**179**	**169**	**98**	**73**	**3,030**	**451**	**325**	NS
Arsenic											25
Barium	**53**	**188**	**260**	**189**	**123**	**71**	**128**	**79**	**81**	**82**	1,000
Beryllium											3 (G)
Cadmium	**2**			**2**		***16***					5
Calcium	**106,000**	**238,000**	**239,000**	**150,000**	**93,600**	**97,800**	**143,000**	**126,000**	**119,000**	**128,000**	NS
Chromium								**5**			50
Cobalt										**75**	NS
Copper	**6**	**98**	**104**	**61**	**19**	**16**	**63**	**95**	**178**		200
Iron	***1,540***	***360***	***545***		***3,640***	***4,740***	**47**	***5,050***	***3,360***	***2610***	300
Lead				**12**				**7**	**18**		25
Magnesium	***54,600***	***64,700***	***65,600***	***47,200***	**24,800**	**30,900**	**34,600**	**20,600**	***36,500***	***38400***	35,000 (G)
Manganese	**130**	**34**	**66**	**259**	***394***	**248**		**113**	**86**	**86**	300
Nickel	**4**			**35**				**4**	**4**		100
Potassium	**5,240**	**19,900**	**20,300**	**25,300**	**10,400**	**10,700**	**9,210**	**6,450**	**18,200**	**19500**	NS
Selenium							***18***				10
Sodium	***53,800***	***365,000***	***368,000***	***77,300***	**8,560**	***39,200***	***42,600***	**8,460**	***41,400***	***45300***	20,000
Vanadium				**48**				**8**			NS
Zinc	**51**	**14**	**17**	**54**	**33**	**41**	**55**	**22**	**24**	**21**	2,000 (G)

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3. **Bolded** values are concentrations that have been reported above the detection limits..
4. **Bolded**, Underlined, and *Italicized* values are reported concentrations above NYSDEC groundwater standards or guidance values.
5. (G) = guidance value.
6. "NS" = No Standard or guidance value as been established by NYSDEC.
7. GR-XX-DUP is a duplicate sample of GR-MW217-GW.
8. Blank space = not detected.

TABLE 21
HISTORICAL SUMMARY OF DETECTED TAL METALS IN GROUNDWATER:
2000-2002 and 2005
IN GROUNDWATER
Remedial Investigation
399 Gregory Street
Rochester, NY

	2005 REMEDIAL INVESTIGATION (ug/L) AOC 2									
Sample ID	**GR-MW104-GW**	**GR-MW106-GW**	**GR-MW111-GW**	**GR-MW216-GW**	**GR-MW216-GW**	**GR-DUP-GW**	**GR-MW217-GW**	**GR-XX-DUP**	**GR-MW217-GW**	**NYSDEC Groundwater Standards and**
Sampling Date	**08/09/05**	**08/09/05**	**08/09/05**	**08/09/05**	**11/4/2005**	**11/4/2005**	**08/09/05**	**08/09/05**	**11/4/2005**	**Guidance Values (1)**
Aluminum	**12,100**	**15,000**	**21,900**	**28,700**	**74.1** J	**71.7** J	**12,300**	**11500***	**72.4** J	NS
Arsenic	**8.1** J	***25.6***	**19.1**	**11.1**	10.0 U	10.0 U	**9.5** J	**13.3**	**4.6** J	25
Barium	**399**	**404**	**412**	**543**	**108** J	**111** J	**720**	**714** NJ	**278**	1,000
Beryllium	**0.56** J	**0.88** J	**1.1** J	**1.4** J	5.0 U	5.0 U	**0.69** J	**0.69** J	5.0 U	3 (G)
Cadmium	**4.0** J	**3.2** J	**2.7** J	**1.5** J	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5
Calcium	**229,000**	**182,000**	**484,000**	**514,000**	**149,000** J	**153,000** J	**287,000**	**275000***	**193,000** J	NS
Chromium	**17.0**	**34.5**	**33.0**	**50.0**	10.0 U	10.0 U	**24.7**	**22.5**	**1.6** J	50
Cobalt	**38.2** J	**26.3** J	**28.1** J	**23.7** J	50.0 U	50.0 U	**15.5** J	**14.3** J	50.0 U	NS
Copper	**61.3**	**88.6**	**76.3**	**80.0**	25.0 U	25.0 U	**55.2**	**52.4**	**2.7** J	200
Iron	***20,300***	***35,900***	***42,600***	***46,600***	100 U	100 U	***25,900***	***24600****	**30.8** J	300
Lead	***50.7***	***66.6***	***49.0***	***70.9***	10.0 UN	10.0 U	***31.9*** *NJ*	***31.7**** NJ	10.0 UN	25
Magnesium	***67,300***	***51,000***	***114,000***	***122,000***	**22,100** *	**22,400**	***73,600***	***72500****	***40,100***	35,000 (G)
Manganese	***7,230***	***1,200***	***6,280***	***2,660***	**63.4** J	**66.8** J	***1,750***	***1,650*** *	***2,100*** J	300
Mercury	0.200 U	0.200 U	0.200 U	0.200 U	.200 *U	**0.054** *J	.200 *U	.200 U	**0.078** J	1
Nickel	**77.9**	**53.9**	**75.0**	**56.5**	40.0 U	**3.0** J	**29.8** J	**29.5** J	**6.5** J	100
Potassium	**8,930**	**18,400**	**15,400**	**14,900**	**6,180** J	**6,400** J	**14,700** EJ	**14,500** EJ	**13,500** J	NS
Selenium	35.0 U	35.0 U	35.0 U	35.0 U	35.0 UN	35.0 UN	***31.9*** J	***29.8*** J	35.0 U	10
Sodium	***27,900***	**7,540**	**8,820**	**7,120**	**2,580** J	**2,320** J	***85,800***	***86,700*** *J	***29,300***	20,000
Vanadium	**19.5** J	**27.6** J	**40.0** J	**47.5** J	50.0 U	50.0 U	**22.5** J	**21.7** J	50.0 U	NS
Zinc	**385**	**316**	**371**	**731**	**30.0** J	**27.3** J	**151*** J	**147** *	**26.4** J	2,000 (G)

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   April 2000 Addendum.
2. Ug/L = all values are expressed in micrograms per liter, which is equivalent to parts per billion (ppb).
3. **Bolded** values are concentrations that have been reported above the detection limits.
4. **Bolded**, Underlined, and *Italicized* values are reported concentrations above NYSDEC groundwater standards or guidance values.
5. (G) = guidance value.
6. "NS" = No Standard or guidance value as been established by NYSDEC.
7. GR-XX-DUP is a duplicate sample of GR-MW217-GW.
8. GR-DUP-GW is a duplicate of sample GR-MW216-GW (11/4/05).
9. Turbidity for each 8/9/05 groundwater sample exceeded 200 NTUs and were not filtered at the request of the NYSDEC representative. Turbidity for samples collected on 11/4/05 were below 50 NTUs.
10. " U " = The analyte was analyzed for, but not detected.
11. "J" = The reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
12. "N" = Spiked sample recovery not within control limits.
13. "E" = The reported value is estimated because of the presence of interference.
14. "R" = The sample results are rejected.
15. (*) = Duplicate analysis not within control limits.

TABLE 22
SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS in AIR
Remedial Investigation
395 Gregory Street
Rochester, NY

TO-15 VOCs (ug/m³)	Sub-Slab Soil Vapor	Indoor Building Air				Background	
	GR-SG1-A	GR-BA1-A		GR-BA2-A		GR-BK1-A	
	8/30/05	8/30/05	12/20/05	8/30/05	12/20/05	8/30/05	12/20/05
Acetone	18	76	28 MJ	110	50	23	14 MJ
Benzene			0.87				0.98
2-Butanone (MEK)	2.9	8.2	2.5	9.3	3.2	2.6	1.8
Carbon Disulfide	0.85						
Chloroform	21						
Chloromethane		1.0	0.77	1.1		0.96	0.89
Ethylbenzene		0.97		0.90			
2-Hexanone	0.96	0.87					
Methylene chloride		0.93		0.96			
4-Methyl-2-pentanone	1.3	1.1		1.2			
Tetrachloroethene	32						
Toluene	2.9	7.4	2.2	7.7	5.7	1.8	3.5
1,1,1-Trichloroethane	7.6						
Trichloroethene		0.94		1.2			
Trichlorofluoromethane	1.3	1.1	1.2	1.1	1.5	0.94	1.2
Vinyl Acetate	4.3	9.7		11		5.9	
m,p-Xylenes		3.7		2.6			1.5
o-Xylene		1.4		1.0			

Notes:
1. All results expressed in µg/m³ (micrograms per cubic meter).
2. Blank space = not detected above laboratory reporting limit.
3. M = matrix interference; results may be biased high.
4. J = estimated quantity; possible high bias due to interferences.

TABLE 23
SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS in SUB-SLAB SOIL VAPOR

Remedial Investigation
395 Gregory Street
Rochester, New York

	GR-SG1-A	
	8/30/05	
TO-15 VOCs	Result (µg/m³)	MRL (µg/m³)
Acetone	**18**	7.6
2-Butanone (MEK)	**2.9**	0.76
Carbon Disulfide	**0.85**	0.76
Chloroform	**21**	0.76
2-Hexanone	**0.96**	0.76
4-Methyl-2-pentanone	**1.3**	0.76
Tetrachloroethene	**32**	0.76
Toluene	**2.9**	0.76
1,1,1-Trichloroethane	**7.6**	0.76
Trichlorofluoromethane	**1.3**	0.76
Vinyl Acetate	**4.3**	1.5

Notes:
1. All results expressed in µg/m³ (micrograms per cubic meter).
2. MRL = method reporting limit.

TABLE 24
SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS in INDOOR BUILDING AIR

Remedial Investigation

395 Gregory Street

Rochester, New York

	Indoor Building Air								USEPA BASE[3] Data (background levels)	NYSDOH Air Guideline Value[4]	USEPA Target Indoor Air Concentration [5]
	GR-BA1-A				GR-BA2-A						
	8/30/05		12/20/05		8/30/05		12/20/05		Indoor	Indoor	
TO-15 VOCs (ug/m^{3})	Result	MRL	Result	MRL	Result	MRL	Result	MRL	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Acetone	**76**	0.73	**28 MJ**	6.5	**110**	8.0	**50**	1.5	32 - 60	NA	350
Benzene		0.73	**0.87**	0.65		0.80		1.5	2.1 - 5.1	NA	31
2-Butanone (MEK)	**8.2**	0.73	**2.5**	0.65	**9.3**	0.80	**3.2**	1.5	NA	NA	NA
Chloromethane	**1**	0.73	**0.77**	0.65	**1.1**	0.80		1.5	NA	NA	NA
Ethylbenzene	**0.97**	0.73		0.65	**0.90**	0.80		1.5	<1.6 - 3.4	NA	220
2-Hexanone	**0.87**	0.73		0.65		0.80		1.5	NA	NA	NA
Methylene chloride	**0.93**	0.73		0.65	**0.96**	0.80		1.5	<1.7 - 5.0	60	520
4-Methyl-2-pentanone	**1.1**	0.73		0.65	**1.2**	0.80		1.5	NA	NA	NA
Toluene	**7.4**	0.73	**2.2**	0.65	**7.7**	0.80	**5.7**	1.5	10.7 - 26	NA	400
Trichloroethene	**0.94**	0.73		0.65	**1.2**	0.80		1.5	<1.2 - 1.2	5	2.2
Trichlorofluoromethane	**1.1**	0.73	**1.2**	0.65	**1.1**	0.80	**1.5**	1.5	NA	NA	700
Vinyl Acetate	**9.7**	0.73		0.65	**11**	1.6		1.5	NA	NA	200
m,p-Xylenes	**3.7**	1.5		1.3	**2.6**	1.6		1.5	4.1 - 12	NA	7,000
o-Xylene	**1.4**	0.73		0.65	**1.0**	0.80		1.5	<2.4 - 4.4	NA	7,000

Notes:

1. All results expressed in $\mu g/m^3$ (micrograms per cubic meter).
2. MRL = method reporting limit.
3. Building Assessment and Survey Evaluation (BASE '94-'98); Unpublished; Indoor Environments Division, United States Environmental Protection Agency (USEPA).
4. Draft Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Public Comment Draft, February 2005. New York State Department of Health (NYSDOH), Center for Environmental Health, Bureau of Environmental Exposure.
5. Draft Guidance For Evaluating The Vapor Intrusion To Indoor Air Pathway From Groundwater And Soils (Subsurface Vapor Intrusion Guidance). United States Environmental Protection Agency (USEPA), Office of Solid Waste and Emergency Response (OSWER), November 2002.
6. N/A = not available.
7. Blank space = not detected above laboratory reporting limit.
8. M = matrix interference; results may be biased high.

TABLE 25
SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS in OUTDOOR AIR
Remedial Investigation
395 Gregory Street
Rochester, New York

	Outdoor Air GR-BK1-A				EPA BASE(3) Data (background levels)	NYSDOH Air Guideline Value(4)	NYSDEC Air Guideline Value(5)	
	8/30/05		12/20/05		Outdoor	Outdoor	SCG	ACG
TO-15 VOCs (ug/m³)	Result	MRL	Result	MRL	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
Acetone	**23**	7.6	**14 MJ**	6.6	15 - 32	NA	180,000	28,000
Benzene		0.76	**0.98**	0.66	1.2 - 3.7	NA	1,300	13
2-Butanone (MEK)	**2.6**	0.76	**1.8**	0.66	NA	NA	NA	NA
Chloromethane	**0.96**	0.76	**0.89**	0.66	NA	NA	22,000	90
Toluene	**1.8**	0.76	**3.5**	0.66	5.9 - 16	NA	37,000	400
Trichlorofluoromethane	**0.94**	0.76	**1.2**	0.66	NA	NA	560,000	NA
Vinyl Acetate	**5.9**	1.5		0.66	NA	NA	5,300	200
m.p -xylenes		0.76	**1.5**	0.66	<3.6 - 7.3	NA	4,300	100

Notes:
1. All results expressed in µg/m³ (micrograms per cubic meter).
2. MRL = method reporting limit.
3. Building Assessment and Survey Evaluation (BASE '94-'98); Unpublished; United States Environmental Protection Agency (USEPA), Indoor Environments Division.
4. Draft Guidance for Evaluating Soil Vapor Intrusion in the State of New York. Public Comment Draft, February 2005. New York State Department of Health (NYSDOH), Center for Environmental Health, Bureau of Environmental Exposure.
5. DAR-1 AGC/SCG Tables, New York State Department of Environmental Conservation (NYSDEC), Division of Air Resources, Air Toxics Section, December 22, 2003.
6. SCG = short term guidance concentrations.
7. ACG = annual guidance concentrations.
8. Blank space = not detected above laboratory reporting limit.
9. N/A = not available.
10. M = matrix interference; results may be biased high.

TABLE 26
LIST OF DATA QUALIFIERS
Remedial Investigation
399 Gregory Street
Rochester, NY

Organic Data Qualifiers:

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N = The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R = The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Inorganic Data Qualifiers:

U = The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

J = The associated value is an estimated quantity.

R = The data are unusable. (Note: Analyte may or may not be present.)

UJ = The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

TABLE 27
STATISTICAL ANALYSIS FOR TAL METALS IN SOILS
Remedial Investigation
399 Gregory Street
Rochester, NY

	Analytical Results 2000-2002 and 2005 (mg/kg)																																			
Sample ID	**MW-105**	**MW-105D**	**MW-106**	**MW-107**	**MW-108**	**MW-108D**	**MW-109**	**MW-110**	**MW-110**	**MW-111**	**MW-112**	**MW-112**	**MW-113**	**MW-114**	**MW-115**	**MW-115D**	**MW116**	**MW116D**	**MW-116**	**GR-B212-S**	**GR-B213-S**	**GR-B214-S**	**GR-XX-S-DUP**	**GR-B215-S**	**GR-B216-S**	**GR-B217-S**	**Eastern USA Background Range (mg/Kg)**	**MINIMUM (mg/kg)**	**MAXIMUM (mg/kg)**	**MEAN (mg/kg)**	**STANDARD DEVIATION-σ (mg/kg)**	**2σ (mg/kg)**	**MEAN - σ (mg/kg)**	**MEAN + σ (mg/kg)**	**MEAN - 2σ (mg/kg)**	**MEAN + 2σ (mg/kg)**
Aluminum	3860	3890	5670	2050	**5950**	5870	1710	2180	2240	2320	3350	3150	2110	2310	3250	3630	**6640**	**6230**	2300	1920	**7390**	**5930**	5260	3310	**7630**	4940	3,300 - 3,300	1710.00	7630.00	4041.92	1866.83	3733.65	2175.10	5908.75	308.27	7775.58
Antimony	45.80	45.50	0.00	3.55	3.44	3.45	0.35	-	-	0.36	0.42	0.00	0.56	-	0.39	-	-	-	-	14.00	13.90	1.20	14.00	14.50	14.40	13.60	NA - NA	0.00	45.80	9.97	13.96	27.91	-3.99	23.93	-17.94	37.88
Arsenic	**110.00**	**112.00**	2.30	1.20	12.40	12.50	3.40	6.63	3.13	1.60	1.87	3.40	1.77	1.92	2.86	2.75	1.97	1.86	1.52	0.51	5.80	10.60	10.10	1.70	11.00	8.30	3 - 12	0.51	112.00	12.81	29.15	58.31	-16.34	41.97	-45.50	71.12
Barium	166.00	169.00	44.80	16.80	33.10	32.10	26.30	116.00	22.60	13.10	24.50	25.60	12.00	17.30	25.10	28.00	60.90	56.80	16.10	14.80	130.00	157.00	135.00	26.50	165.00	125.00	15 - 600	12.00	169.00	63.82	57.73	115.45	6.10	121.55	-51.63	179.27
Beryllium	**3.20**	**3.26**	-	0.13	0.57	0.54	0.68	0.15	0.20	0.11	0.18	0.17	-	0.13	0.17	0.19	0.34	0.30	0.12	0.09	0.39	0.60	0.38	0.17	0.55	0.31	0 - 1.75	0.09	3.26	0.54	0.85	1.70	-0.31	1.39	-1.16	2.23
Cadmium	**4.29**	**4.19**	-	0.95	0.51	0.35	-	1.42	1.40	0.78	0.16	1.15	-	0.30	1.20	1.25	0.64	0.52	0.26	1.20	**7.30**	0.26	0.47	1.20	1.00	0.25	0 - 1	0.16	7.30	1.35	1.69	3.37	-0.34	3.04	-2.02	4.72
Calcium	**92500**	**94500**	26500	**86600**	40300	41300	28600	59400	27600	25100	24300	51400	20500	53000	35100	37200	47400	44300	**65100**	28800	13800	17600	25100	29300	8990	19800	30 - 35,000	8990.00	94500.00	40157.31	23361.63	46723.26	16795.68	63518.94	-6565.96	86880.57
Chromium	16.90	17.00	8.30	4.51	14.80	14.50	5.24	4.18	4.84	4.46	5.06	4.99	4.02	3.87	5.81	6.40	11.00	10.20	4.53	2.80	9.90	10.60	8.30	5.00	11.00	7.70	2 - 40	2.80	17.00	7.92	4.22	8.44	3.70	12.14	-0.52	16.36
Cobalt	42.90	41.70	6.10	2.19	8.74	8.79	1.95	3.09	3.13	2.59	3.80	3.27	2.20	2.35	3.55	3.99	5.67	5.19	2.17	1.90	5.10	6.80	5.40	4.10	5.90	5.10	3 - 60	1.90	42.90	7.22	10.51	21.02	-3.29	17.73	-13.80	28.23
Copper	31.40	32.30	16.00	11.70	11.90	11.90	16.70	13.00	13.80	10.50	16.90	15.00	9.79	9.52	15.40	16.40	15.90	15.00	10.70	7.80	37.80	87.50	231.00	10.50	**905.00**	99.90	1 - 50	7.80	905.00	64.36	177.67	355.34	-113.31	242.03	-290.99	419.70
Iron	8320	8170	11300	4980	12100	12300	4640	9460	8010	5310	7060	6320	5360	6600	7580	8000	13400	12400	7340	4440	11500	17200	10900	8300	13700	10800	2,000 - 550,000	4440.00	17200.00	9057.31	3269.22	6538.44	5788.09	12326.53	2518.87	15595.75
Lead	46.60	46.30	6.38	4.91	14.60	14.20	3.24	5.91	10.60	3.67	7.98	7.77	6.58	5.87	6.42	7.12	7.45	7.00	4.99	3.10	238.00	295.00	306.00	5.40	402.00	**588.00**	200 - 500	3.10	588.00	79.04	153.32	306.63	-74.27	232.36	-227.59	385.67
Magnesium	**20900**	**20800**	8380	**27800**	18900	19000	5490	13300	**28600**	6890	8600	15400	**5200**	**20100**	8760	9580	11150	10700	17200	6430	4990	6070	12900	9390	2840	6660	100 - 5,000	2840.00	28600.00	12539.62	7128.33	14256.65	5411.29	19667.94	-1717.03	26796.27
Manganese	511	516	313	295	296	296	246	487	298	204	239	282	178	232	256	293	283	268	243	170	197	347	307	234	269	254	100 - 5000	170.00	516.00	289.00	90.04	180.07	198.96	379.04	108.93	469.07
Mercury	-	-	0.04	-	-	-	-	-	**6.37**	-	-	-	-	0.06	-	-	0.06	0.05	0.04	0.12	0.32	0.36	0.37	0.12	0.79	0.19	0 - 0.2	0.04	6.37	0.68	1.72	3.44	-1.04	2.40	-2.76	4.13
Nickel	**44.00**	**43.30**	13.10	4.94	13.30	12.50	4.58	5.62	-	5.47	8.63	6.76	4.31	5.29	7.88	8.62	12.90	11.80	4.47	3.40	9.60	10.90	10.20	8.20	13.00	8.80	1 - 25	3.40	44.00	11.26	10.25	20.50	1.02	21.51	-9.23	31.76
Potassium	2530	2510	1260	610	1160	1130	426	847	1500	485	589	806	401	797	612	675	1660	1540	738	497	709	762	771	624	722	757	8,000 - 8500	401.00	2530.00	966.08	569.37	1138.73	396.71	1535.44	-172.66	2104.81
Selenium	**91.60**	**94.50**	-	-	9.00	9.24	-	-	-	-	-	-	-	-	-	-	-	-	-	8.20	1.20	1.40	0.98	8.40	1.40	1.10	0 - 3.9	0.98	94.50	20.64	35.98	71.96	-15.34	56.62	-51.33	92.60
Silver	2.94	3.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.30	2.30	2.30	2.30	2.40	2.40	2.30	NA - NA	2.30	3.00	2.47	0.29	0.57	2.18	2.76	1.90	3.04
Sodium	1290	1340	118	187	358	351	122	163	186	121	150	162	248	141	129	142	163	155	151	1160	265	309	335	1210	132	686	6,000 - 8,000	118.00	1340.00	375.92	399.62	799.24	-23.69	775.54	-423.31	1175.16
Thallium	119.00	117.00	-	6.62	12.00	10.90	5.83	12.50	11.10	5.84	8.74	7.98	0.00	1.09	10.20	10.30	2.42	1.81	1.50	5.80	5.80	5.80	5.80	6.00	6.00	5.70	NA - NA	0.00	119.00	15.43	31.06	62.12	-15.63	46.49	-46.69	77.55
Vanadium	39.20	39.20	11.30	5.03	13.50	13.40	3.87	4.99	4.65	5.31	6.68	6.73	6.13	5.47	6.26	6.70	14.50	13.50	6.50	4.60	17.60	29.20	16.70	7.30	24.60	13.30	1 - 300	3.87	39.20	12.55	10.12	20.23	2.43	22.66	-7.69	32.78
Zinc	50.50	49.10	27.10	14.90	37.40	37.70	13.70	13.20	16.70	12.50	21.40	155.00	14.60	11.90	20.70	22.80	24.10	23.30	12.80	17.70	121.00	**183.00**	**187.00**	30.00	**395.00**	**220.00**	9 - 50	11.90	395.00	66.66	91.61	183.22	-24.95	158.27	-116.57	249.88

Notes:

10	: greater than 1σ deviation from the mean and greater than eastern USA background range
10	: greater than 2σ deviation from the mean and greater than eastern USA background range

TABLE 28
SUMMARY OF PID HEADSPACE READINGS (ppm)
Remedial Design Investigation
399 Gregory Street
Rochester, NY

Borehole	Depth (ft. bgs)	PID Readings Peak (ppm)	PID Readings Background (ppm)
RAOC - 3			
B-212-07	0-4	0.2	0.1
	4-8	0.2	0.1
B-213-07	0-4	0.4	0.3
	4-8	0.3	0.3
B-214-07	0-4	0.6	0.3
	4-8	0.5	0.4
B-215-07	0-4	0.7	0.4
	4-8	1.0	0.4
B-216-07	0-4	0.5	0.4
	4-8	0.5	0.4
B-217-07	0-4	0.7	0.5
	4-8	0.6	0.5
B-218-07	0-4	0.5	0.4
	4-8	0.6	0.4
B-219-07	0-4	0.5	0.4
	4-8	0.6	0.4

Notes:
1. ft. bgs = feet below ground surface.
2. ppm = parts per million.
3. PID data collected with Mini-Rae 2000 equipped with 10.6 eV lamp.

TABLE 29
SOIL SAMPLE SUMMARY
Remedial Design Investigation
399 Gregory Street
Rochester, NY

Sample ID	Location	Date	Depth (ft. bgs)	Parameters
GS-B212-07 (0-4)	B-212-07	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B212-07 (4-8)	B-212-07	6/7/2007	4-8	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B213-07 (0-4)	B-213-07	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B213-07 (4-8)	B-213-07	6/7/2007	4-8	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B214-07 (0-4)	B-214-07	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-DUP	duplicate of B-214-07 (0-4)	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B214-07 (4-8)	B-214-07	6/7/2007	4-8	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B215-07 (0-4) MS/MSD	B-215-07	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B215-07 (0-4)	B-215-07	6/7/2007	0-4	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B215-07 (4-8)	B-215-07	6/7/2007	4-8	Arsenic, Beryllium, Cadmium, Nickel and Selenium by ILM05.3
GS-B216-07 (0-4)	B-216-07	6/7/2007	0-4	Not analyzed (see notes)
GS-B216-07 (4-8)	B-216-07	6/7/2007	4-8	"
GS-B217-07 (0-4)	B-217-07	6/7/2007	0-4	"
GS-B217-07 (4-8)	B-217-07	6/7/2007	4-8	"
GS-B218-07 (0-4)	B-218-07	6/7/2007	0-4	"
GS-B218-07 (4-8)	B-218-07	6/7/2007	4-8	"
GS-B219-07 (0-4)	B-219-07	6/7/2007	0-4	"
GS-B219-07 (4-8)	B-219-07	6/7/2007	4-8	"

Notes:
1. ft. bgs = feet below ground surface.
2. Samples from B-216-07, B-217-07, B-218-07, and B-219-07 were submitted to the laboratory but placed on hold pending results from B-212-07, B-213-07, B-214-07, and B-215-07. No analysis was performed on these samples.

TABLE 30
SUMMARY OF INORGANICS IN SOIL
Remedial Design Investigation
399 GREGORY STREET
ROCHESTER, NY

Sample Location			B-212-07		B-213-07		B-214-07			B-215-07		MW-105	
Sample Date			7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	7-Jun-07	2000-2002	2000-2002
Sample ID			GS-B212(0-4)	GS-B212(4-8)	GS-B213(0-4)	GS-B213(4-8)	GS-B214(0-4)	GS-B214(4-8)	GS-DUP	GS-B215(0-4)	GS-B215(4-8)	MW-105	MW-105D
Sample Depth			0 - 4 ft	4 - 8 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	6 - 8 ft	6 - 8 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		
Laboratory			CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE	CCGE		
Laboratory Work Order			Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012	Y3012		
Laboratory Sample ID		PART 375 Soil	Y3012-01	Y3012-02	Y3012-03	Y3012-04	Y3012-05	Y3012-06	Y3012-19	Y3012-07	Y3012-10	UNKNOWN	UNKNOWN
Sample Type	Units	Cleanup Objectives							Field Duplicate				Field Duplicate
RCRA Metals													
Aluminum	mg/kg	y^A y^B y^C	-	-	-	-	-	-	-	-	-	3860	3890
Antimony	mg/kg	y^A y^B y^C	-	-	-	-	-	-	-	-	-	45.8 J	45.5 J
Arsenic	mg/kg	16_g^A 16_g^B 16_g^C	3.520	1.830 J	5.450	3.640	3.510	5.050	5.470	3.460	3.240	110^{ABC}	112^{ABC}
Barium	mg/kg	350_g^A 400^B 820^C	-	-	-	-	-	-	-	-	-	166	169
Beryllium	mg/kg	14^A 590^B 47^C	0.295 J	0.228 J	0.316 J	0.223 J	0.226 J	0.193 J	0.260 J	0.222 J	0.320 J	3.2	3.26
Cadmium	mg/kg	2.5_g^A 9.3^B 7.5^C	1.110 U *	1.170 U *	0.252 J*	1.150 U *	0.116 J*	1.100 U *	0.310 J*	0.260 J*	0.701 J*	4.29^A	4.19^A
Calcium	mg/kg	y^A y^B y^C	-	-	-	-	-	-	-	-	-	92500	94500
Chromium	mg/kg	y^A y^B y^C	-	-	-	-	-	-	-	-	-	16.9	17
Cobalt	mg/kg	y^A y^B y^C	-	-	-	-	-	-	-	-	-	42.9 J	41.7 J
Copper	mg/kg	270^A 270^B 1720^C	-	-	-	-	-	-	-	-	-	31.4 J	32.3 J
Iron	mg/kg	y^A y^B y^C	-	-	-	-	-	-	-	-	-	8320	8170
Lead	mg/kg	400^A 1000^B 450^C	-	-	-	-	-	-	-	-	-	46.6 J	46.3 J
Magnesium	mg/kg	y^A y^B y^C	-	-	-	-	-	-	-	-	-	20900	20800
Manganese	mg/kg	2000_g^A 10000_e^B 2000_g^C	-	-	-	-	-	-	-	-	-	511	516
Mercury	mg/kg	0.81_k^A 2.8_k^B 0.73^C	-	-	-	-	-	-	-	-	-	U	U
Nickel	mg/kg	140^A 310^B 130^C	9.000	10.600	10.200	11.100	7.500 J	9.030	8.480 J	7.530 J	6.120 J	44 J	43.3 J
Potassium	mg/kg	y^A y^B y^C	-	-	-	-	-	-	-	-	-	2530 EJ	2510 EJ
Selenium	mg/kg	36^A 1500^B 4_g^C	*7.800 U*	*8.180 U*	*7.490 U*	*8.080 U*	*7.970 U*	*7.720 U*	*7.570 U*	*7.750 U*	*8.780 U*	91.6 EJ^{AC}	94.5 EJ^{AC}
Silver	mg/kg	36^A 1500^B 8.3^C	-	-	-	-	-	-	-	-	-	2.94 J	3 J
Sodium	mg/kg	y^A y^B y^C	-	-	-	-	-	-	-	-	-	1290 J	1340 J
Thallium	mg/kg	y^A y^B y^C	-	-	-	-	-	-	-	-	-	119	117
Vanadium	mg/kg	y^A y^B y^C	-	-	-	-	-	-	-	-	-	39.2	39.2
Zinc	mg/kg	2200^A 10000_e^B 2480^C	-	-	-	-	-	-	-	-	-	50.5	49.1

Notes:

6NYCRR	NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives
A	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential
B	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial
C	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater
6.5^A	Concentration exceeds the indicated criteria
0.50 U	Laboratory estimated quantitation limit exceeded criteria
0.03 U	The analyte was not detected above the laboratory estimated quantation limit
n/v	No criteria/guideline value
-	Parameter not analyzed / not available
y^A	There is no standard currently listed under part 375 for this parameter.
g^A	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
k^A	This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 Technical Support Document Table 5.6-1.
y^B	There is no standard currently listed under part 375 for this parameter.
g^B	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
e	The SCOs for metals were capped at a maximum value of 10,000 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
k^B	This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 Technical Support Document Table 5.6-1.
y^C	There is no standard currently listed under part 375 for this parameter.
g^C	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
J	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Spiked sample recovery not within control limits.
E	The reported value is estimated because of the presence of interference.
B	Analyte is present in associated blank.

Stantec

2/8/2008
Stantec Consulting Services Inc.

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TABLE 31
SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS in PERIMETER SOIL VAPOR
Remedial Design Investigation

395 Gregory Street

Rochester, New York

	Perimeter Soil Vapor Samples, June 2007						Comparison concentrations: Site Background, Outdoor Air			Comparison concentrations: NYSDOH Final SVI Guidance(9)		Comparison concentrations: USEPA Draft SVI Guidance(10)
Site sample names:	**SV2**	**SV3**	**SV4**	**SV5**	**SV6**	**SV7**	**GR-BK1-A**		**Ambient-1**	**Reference background levels for outdoor air (EPA BASE 2001)**	**SVI Decision Matrix Soil Vapor Screening Value**	**Deep Soil Gas Generic Screening Levels(11)**
Sample dates:	6/12/07	6/12/07	6/12/07	6/12/07	6/12/07	6/12/07	8/30/05	12/20/05	6/12/07	Conc. range (and mean)		
TO-15 VOCs	**Concentrations in micrograms per cubic meter (µg/m³)**											
Benzene	**2.29J**	**1.25J**	**1.75NJ**	**8.39J**	**0.976J**	**2.64J**	ND	**0.98**	**0.702J**	<1.2 - 13 (3.2)	NA	31 - 3,100
Ethylbenzene	**3.92NJ**	ND <1.42	**5.85J**	**16.0NJ**	**2.08J**	**4.17NJ**	ND	ND	ND <0.7	<0.8 - 7.8 (1.4)	NA	220 - 22,000
Toluene	**12.2J**	**6.36J**	**9.07J**	**33.9J**	**6.92J**	**22.0J**	**1.8**	**3.5**	**2.35J**	2.1 - 93 (15.4)	NA	40,000
m,p-xylene	**13.3J**	**7.07J**	**14.0J**	**24.8J**	**7.41J**	**14.9J**	ND	**1.5**	**0.884J**	<1.4 - 26.8 (5.6)	NA	70,000
o-xylene	**4.10J**	ND <1.42	**5.25J**	**7.72NJ**	**2.48J**	**4.32J**	ND	ND	ND <0.7	<0.6 - 11.1 (2.0)	NA	70,000
Tetrachloroethene	**6.07J**	**39.6J**	**11.6J**	**9.26J**	**1.99NJ**	ND <1.72	ND	ND	ND <1.1	<0.8 - 27.6 (2.7)	100 (Matrix 2)	81 - 8,100
Trichloroethene	ND <1.14	**4.51NJ**	ND <1.55	ND <2.20	ND <1.69	ND <1.64	ND	ND	ND <0.88	<0.6 - 13.5 (1)	5 (Matrix 1)	2.2 - 220
cis-1,2-Dichloroethene	**62.4E**	**3.27NJ**	ND <0.919	ND <1.60	ND <0.899	ND <1.01	ND	ND	**0.726J**	<0.6 - 1.1 (0.5)	100 (Matrix 2)	3,500
trans-1,2-Dichloroethene	**1.32J**	ND <1.29	ND <0.919	ND <1.60	ND <0.899	ND <1.01	ND	ND	ND <0.64	NA	NA	7,000
1,1,1-Trichloroethane	ND <1.14	ND <1.77	**20.1J**	ND <2.20	ND <1.24	ND <1.38	ND	ND	ND <0.88	<0.4 - 8.7 (1.3)	100 (Matrix 2)	220,000
Chloroform	**1.90J**	ND <1.58	ND <1.21	**11.0J**	ND <1.11	ND <1.24	ND	ND	ND <0.78	<0.2 - 14 (0.5)	NA	11 - 1,100
Chloromethane	ND <0.43	ND <0.67	ND <0.48	ND <0.83	ND <0.47	ND <0.52	**0.96**	**0.89**	**0.924J**	0.9 - 10.6 (2.6)	NA	NA
Trichlorofluoromethane (Freon 11)	**1.27J**	**2.15J**	ND <1.30	ND <2.27	ND <1.27	ND <1.42	**0.94**	**1.2**	**1.16J**	<2.0 - 133 (3.6)	NA	70,000
Acetone	ND <31.1	ND <51.5	ND <48.9	ND <59.5	ND <81.8	ND <55.3	**23**	**14 MJ**	ND <28.7	<1.8 - 104 (26.8)	NA	35,000
2-Butanone (MEK)	**3.5NJ**	ND <6.33	ND <5.57	**9.01NJ**	ND <3.36	**8.54NJ**	**2.6**	**1.8**	**3.15J**	<1.2 - 43.1 (5.2)	NA	100,000
2-Hexanone	ND <4.29	ND <6.71	ND <4.79	ND <8.34	ND <4.66	ND <5.24	ND	ND	ND <3.3	NA	NA	NA
4-Methyl-2-pentanone	ND <4.29	ND <6.71	ND <4.79	ND <8.34	ND <4.66	ND <5.24	ND	ND	ND <3.3	<0.8 - 21 (1.3)	NA	8,000
Carbon Disulfide	ND <9.54	ND <11.7	ND <10.8	ND <27.0	ND <3.09	ND <10.8	ND	ND	ND <0.50	<0.6 - 22 (2.1)	NA	70,000
Vinyl Acetate	NA	NA	NA	NA	NA	NA	**5.9**	ND	NA	NA	NA	20,000

Notes:
1. All results and guidance values expressed in µg/m³ (micrograms per cubic meter).
2. MRL = method reporting limit.
3. ND = Not detected at the method reporting limit shown.
4. J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
5. NJ = The analysis indicates the presence of an analyte that has been "tentatively identified," the value represents its approximate concentration.
6. E = The analyte was positively identified at an estimated concentration that is above the linear range of the instrument calibration.
7. NA = Not analyzed.
8. M = matrix interference; results may be biased high.
9. Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. October 2006. New York State Department of Health (NYSDOH), Center for Environmental Health, Bureau of Environmental Exposure.
10. OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance), U. S. EPA, November 2002 (EPA530-D-02-004).
11. Target deep (> 5 ft. below foundation level) soil gas concentrations for risk levels ranging from $1x10^{-4}$ to $1x10^{-6}$.

TABLE 32
SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS in OUTDOOR AIR

Remedial Design Investigation
395 Gregory Street
Rochester, New York

	Outdoor Air	**Reference background levels for outdoor air**	**NYSDOH Air**	**NYSDEC Air**	
	Ambient-1	**EPA BASE 2001(3)**	**Guideline Value(4)**	**Guideline Value(5)**	
	6/12/07	Conc. range (and mean)	Outdoor	SCG	ACG
TO-15 VOCs (ug/m 3)	Result (μg/m³)	(μg/m³)	(μg/m³)	(μg/m³)	(μg/m³)
Benzene	**0.702J**	<1.2 - 13 (3.2)	NA	1,300	13
2-Butanone (MEK)	**3.15J**	<1.2 - 43.1 (5.2)	NA	NA	NA
Chloromethane	**0.924J**	0.9 - 10.6 (2.6)	NA	22,000	90
cis-1,2-Dichloroethene	**0.726J**	<0.6 - 1.1 (0.5)	100(10)	NA	NA
Toluene	**2.35J**	2.1 - 93 (15.4)	NA	37,000	400
Trichlorofluoromethane	**1.16J**	<2.0 - 133 (3.6)	NA	560,000	NA
m,p -xylenes	**0.884J**	<1.4 - 26.8 (5.6)	NA	4,300	100

Notes:
1. All results expressed in μg/m³ (micrograms per cubic meter).
2. MRL = method reporting limit.
3. Building Assessment and Survey Evaluation (BASE) 2001; United States Environmental Protection Agency (USEPA), Indoor Environments Division.
4. Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York. October 2006. New York State Department of Health (NYSDOH), Center for Environmental Health, Bureau of Environmental Exposure.
5. DAR-1 AGC/SCG Tables, New York State Department of Environmental Conservation (NYSDEC), Division of Air Resources, Air Toxics Section, December 22, 2003.
6. SCG = short term guidance concentrations.
7. ACG = annual guidance concentrations.
8. NA = not available.
9. J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
10. Assumes the same value as the NYSDOH Air Guideline Value for Tetrachloroethene.

TABLE 33
ANALYTICAL RESULTS SUMMARY
INORGANICS
PART 375 SCOs
GREGORY STREET
CITY OF ROCHESTER

Sample Location			B-212			B-213			B-214					B-215			B-216	B-217	MW-105		MW-106	MW-107
Sample Date			3-Aug-05	7-Jun-07	7-Jun-07	3-Aug-05	7-Jun-07	7-Jun-07	3-Aug-05	3-Aug-05	7-Jun-07	7-Jun-07	7-Jun-07	3-Aug-05	7-Jun-07	7-Jun-07	3-Aug-05	3-Aug-05	2000-2002	2000-2002	2000-2002	2000-2002
Sample ID			GR-B212-S	GS-B212(0-4)	GS-B212(4-8)	GR-B213-S	GS-B213(0-4)	GS-B213(4-8)	GR-B214-S	GR-XX-S-DUP	GS-B214(0-4)	GS-B214(4-8)	GS-DUP	GR-B215-S	GS-B215(0-4)	GS-B215(4-8)	GR-B216-S	GR-B217-S	MW-105	MW-105D	MW-106	MW-107
Sample Depth			8 - 12 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	12 - 14 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory				CCGE	CCGE		CCGE	CCGE			CCGE	CCGE	CCGE		CCGE	CCGE						
Laboratory Work Order				Y3012	Y3012		Y3012	Y3012			Y3012	Y3012	Y3012		Y3012	Y3012						
Laboratory Sample ID			T4080-16	Y3012-01	Y3012-02	T4080-14	Y3012-03	Y3012-04	T4080-10	T4080-11	Y3012-05	Y3012-06	Y3012-19	T4080-17	Y3012-07	Y3012-10	T4080-18	T4080-15	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type	Units	6NYCRR								Field Duplicate			Field Duplicate							Field Duplicate		
RCRA Metals																						
Aluminum	mg/kg	$y^A\ y^B\ y^C$	1920	-	-	7390	-	-	5930	5260	-	-	-	3310	-	-	7630	4940	3860	3890	5670	2050
Antimony	mg/kg	$y^A\ y^B\ y^C$	14.0 NJ	-	-	13.9 NJ	-	-	1.2 NJ	14.0 NJ	-	-	-	14.5 NJ	-	-	14.4 NJ	13.6 NJ	45.8 J	45.5 J	U	3.55 BJ
Arsenic	mg/kg	$16_q^A\ 16_q^B\ 16_q^C$	0.51 NEJ	3.520	1.830 J	5.8 NEJ	5.450	3.640	10.6 NEJ	10.1 NEJ	3.510	5.050	5.470	1.7 NEJ	3.460	3.240	11.0 NEJ	8.3 NEJ	110^{ABC}	112^{ABC}	2.3	1.2
Barium	mg/kg	$350_q^A\ 400^B\ 820^C$	14.8 NJ	-	-	130 NJ	-	-	157 NJ	135 NJ	-	-	-	26.5 NJ	-	-	165 NJ	125 NJ	166	169	44.8	16.8
Beryllium	mg/kg	$14^A\ 590^B\ 47^C$	0.09 NJ	0.295 J	0.228 J	0.39 NJ	0.316 J	0.223 J	0.60 NJ	0.38 NJ	0.226 J	0.193 J	0.260 J	0.17 NJ	0.222 J	0.320 J	0.55 NJ	0.31 NJ	3.2	3.26	0.26 B	0.127 B
Cadmium	mg/kg	$2.5_q^A\ 9.3^B\ 7.5^C$	1.2 NJ	1.110 U *	1.170 U *	7.3 NJ^{A}	0.252 J*	1.150 U *	0.26 NJ	0.47 NJ	0.116 J*	1.100 U *	0.310 J*	1.2 NJ	0.260 J*	0.701 J*	1.0 NJ	0.25 NJ	4.29^{A}	4.19^{A}	0.385 B	0.954
Calcium	mg/kg	$y^A\ y^B\ y^C$	28800	-	-	13800	-	-	17600	25100	-	-	-	29300	-	-	8990	19800	92500	94500	26500 EJ	86600
Chromium	mg/kg	$y^A\ y^B\ y^C$	2.8 NJ	-	-	9.9 NJ	-	-	10.6 NJ	8.3 NJ	-	-	-	5.0 NJ	-	-	11.0 NJ	7.7 NJ	16.9	17	8.3	4.51
Cobalt	mg/kg	$y^A\ y^B\ y^C$	1.9 NJ	-	-	5.1 NJ	-	-	6.8 NJ	5.4 NJ	-	-	-	4.1 NJ	-	-	5.9 NJ	5.1 NJ	42.9 J	41.7 J	6.1 J	2.19 BJ
Copper	mg/kg	$270^A\ 270^B\ 1720^C$	7.8	-	-	37.8	-	-	87.5	231	-	-	-	10.5	-	-	905^{AB}	99.9	31.4 J	32.3 J	16	11.7 J
Iron	mg/kg	$y^A\ y^B\ y^C$	4440	-	-	11500	-	-	17200	10900	-	-	-	8300	-	-	13700	10800	8320	8170	11300	4980
Lead	mg/kg	$400^A\ 1000^B\ 450^C$	3.1	-	-	238	-	-	295	306	-	-	-	5.4	-	-	402^{A}	588^{AC}	46.6 J	46.3 J	6.38 J	4.91 J
Magnesium	mg/kg	$y^A\ y^B\ y^C$	6430	-	-	4990	-	-	6070	12900	-	-	-	9390	-	-	2840	6660	20900	20800	8380	27800
Manganese	mg/kg	$2000_q^A\ 10000_e^B\ 2000_q^C$	170	-	-	197	-	-	347	307	-	-	-	234	-	-	269	254	511	516	313	295
Mercury	mg/kg	$0.81_k^A\ 2.8_k^B\ 0.73^C$	0.118 NJ	-	-	0.316 NJ	-	-	0.363 NJ	0.365 NJ	-	-	-	0.123 NJ	-	-	0.787 NJ^{C}	0.185 NJ	U	U	0.044 J	U
Nickel	mg/kg	$140^A\ 310^B\ 130^C$	3.4 NJ	9.000	10.600	9.6 NJ	10.200	11.100	10.9 NJ	10.2 NJ	7.500 J	9.030	8.480 J	8.2 NJ	7.530 J	6.120 J	13.0 NJ	8.8 NJ	44 J	43.3 J	13.1 J	4.94 J
Potassium	mg/kg	$y^A\ y^B\ y^C$	497 EJ	-	-	709 EJ	-	-	762 EJ	771 EJ	-	-	-	624 EJ	-	-	722 EJ	757 EJ	2530 EJ	2510 EJ	1260	610 EJ
Selenium	mg/kg	$36^A\ 1500^B\ 4_q^C$	8.2 NJ^{C}	*7.800 U*	*8.180 U*	1.2 NJ	*7.490 U*	*8.080 U*	1.4 NJ	0.98 NJ	*7.970 U*	*7.720 U*	*7.570 U*	8.4 NJ^{C}	*7.750 U*	*8.780 U*	1.4 NJ	1.1 NJ	91.6 EJ^{AC}	94.5 EJ^{AC}	U	U
Silver	mg/kg	$36^A\ 1500^B\ 8.3^C$	2.3 NJ	-	-	2.3 NJ	-	-	2.3 NJ	2.3 NJ	-	-	-	2.4 NJ	-	-	2.4 NJ	2.3 NJ	2.94 J	3 J	U	U
Sodium	mg/kg	$y^A\ y^B\ y^C$	1160	-	-	265	-	-	309	335	-	-	-	1210	-	-	132	686	1290 J	1340 J	118 B	187 BJ
Thallium	mg/kg	$y^A\ y^B\ y^C$	5.8 NJ	-	-	5.8 NJ	-	-	5.8 NJ	5.8 NJ	-	-	-	6 NJ	-	-	6 NJ	5.7 NJ	119	117	U	6.62
Vanadium	mg/kg	$y^A\ y^B\ y^C$	4.6 NJ	-	-	17.6 NJ	-	-	29.2 NJ	16.7 NJ	-	-	-	7.3 NJ	-	-	24.6 NJ	13.3 NJ	39.2	39.2	11.3	5.03 B
Zinc	mg/kg	$2200^A\ 10000_e^B\ 2480^C$	17.7 NJ	-	-	121 NJ	-	-	183 NJ	187 NJ	-	-	-	30.0 NJ	-	-	395 NJ	220 NJ	50.5	49.1	27.1	14.9

Notes:

6NYCRR	NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives
A	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential
B	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial
C	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater
6.5^{A}	Concentration exceeds the indicated criteria
0.50 U	Laboratory estimated quantitation limit exceeded criteria
0.03 U	The analyte was not detected above the laboratory estimated quantation limit
n/v	No criteria/guideline value
-	Parameter not analyzed / not available
y^A	There is no standard currently listed under part 375 for this parameter.
q^A	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
k^A	This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 Technical Support Document Table 5.6-1.
y^B	There is no standard currently listed under part 375 for this parameter.
q^B	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
e	The SCOs for metals were capped at a maximum value of 10,000 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
k^B	This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 Technical Support Document Table 5.6-1.
y^C	There is no standard currently listed under part 375 for this parameter.
q^C	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
J	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Spiked sample recovery not within control limits.
E	The reported value is estimated because of the presence of interference.
B	Analyte is present in associated blank.

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TABLE 33
ANALYTICAL RESULTS SUMMARY
INORGANICS
PART 375 SCOs
GREGORY STREET
CITY OF ROCHESTER

Sample Location			MW-108		MW-109	MW-110		MW-111	MW-112		MW-113	MW-114	MW-115		MW-116		
Sample Date			2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002
Sample ID			MW-108	MW-108D	MW-109	MW-110	MW-110	MW-111	MW-112	MW-112	MW-113	MW-114	MW-115	MW-115D	MW116	MW-116	MW116D
Sample Depth			6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	12 - 14 ft	6 - 8 ft	8 - 11 ft	6 - 8 ft	6 - 8 ft	8 - 11 ft	12 - 14 ft	8 - 11 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory																	
Laboratory Work Order																	
Laboratory Sample ID			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type	Units	6NYCRR		Field Duplicate										Field Duplicate			Field Duplicate
RCRA Metals																	
Aluminum	mg/kg	y^A y^B y^C	5950 J	5870	1710	2180	2240	2320	3350	3150	2110 J	2310	3250	3630	6640	2300	6230
Antimony	mg/kg	y^A y^B y^C	3.44 BJ	3.45	0.349 BJ	U	U	0.364 BJ	0.415 BJ	U	0.556 BJ	U	0.392 J	U	U	U	U
Arsenic	mg/kg	16_g^A 16_g^B 16_g^C	12.4	12.5	3.4	6.63	3.13	1.6	1.87	3.4	1.77	1.92	2.86	2.75	1.97	1.52	1.86
Barium	mg/kg	350_g^A 400^B 820^C	33.1	32.1	26.3	116	22.6	13.1 B	24.5	25.6	12 B	17.3	25.1	28	60.9	16.1	56.8
Beryllium	mg/kg	14^A 590^B 47^C	0.566	0.543	0.676	0.154 B	0.195 B	0.108 B	0.179 B	0.173 B	U	0.125 B	0.167 B	0.185 B	0.337 B	0.119 B	0.295 B
Cadmium	mg/kg	2.5_g^A 9.3^B 7.5^C	0.511 B	0.351	U	1.42	1.4	0.778	0.157 B	1.15	U	0.302 B	1.2	1.25	0.642	0.258 B	0.52
Calcium	mg/kg	y^A y^B y^C	40300	41300	28600 EJ	59400 EJ	27600 EJ	25100 EJ	24300	51400	20500	53000 EJ	35100 EJ	37200 EJ	47400 EJ	65100 EJ	44300 EJ
Chromium	mg/kg	y^A y^B y^C	14.8	14.5	5.24	4.18	4.84	4.46	5.06	4.99	4.02	3.87	5.81	6.4	11	4.53	10.2
Cobalt	mg/kg	y^A y^B y^C	8.74 J	8.79	1.95 BJ	3.09 BJ	3.13 BJ	2.59 BJ	3.8 BJ	3.27 BJ	2.2 BJ	2.35 BJ	3.55 BJ	3.99 BJ	5.67 J	2.17 BJ	5.19 J
Copper	mg/kg	270^A 270^B 1720^C	11.9	11.9	16.7	13	13.8	10.5	16.9 J	15 J	9.79	9.52	15.4	16.4	15.9	10.7	15
Iron	mg/kg	y^A y^B y^C	12100 EJ	12300 EJ	4640 EJ	9460 EJ	8010 EJ	5310 EJ	7060	6320	5360 EJ	6600	7580 EJ	8000 EJ	13400	7340	12400
Lead	mg/kg	400^A 1000^B 450^C	14.6 J	14.2	3.24 J	5.91 J	10.6 J	3.67 J	7.98 J	7.77 J	6.58 J	5.87 J	6.42 J	7.12 J	7.45 J	4.99 J	7 J
Magnesium	mg/kg	y^A y^B y^C	18900 EJ	19000 EJ	5490 EJ	13300 EJ	28600 EJ	6890 EJ	8600	15400	5200 EJ	20100	8760 EJ	9580 EJ	11150	17200	10700
Manganese	mg/kg	2000_g^A 10000_e^B 2000_g^C	296 EJ	296 EJ	246	487	298	204	239	282	178 EJ	232	256	293	283	243	268
Mercury	mg/kg	0.81_k^A 2.8_k^B 0.73^C	U	U	U	U	**6.37 J^{ABC}**	U	U	U	U	0.062 J	U	U	0.058 J	0.041 J	0.05 J
Nickel	mg/kg	140^A 310^B 130^C	13.3 J	12.5	4.58 J	5.62 J	U	5.47 J	8.63 J	6.76 J	4.31 J	5.29 J	7.88 J	8.62 J	12.9 J	4.47 J	11.8 J
Potassium	mg/kg	y^A y^B y^C	1160	1130	426	847	1500	485	589 EJ	806 EJ	401 B	797	612	675	1660	738	1540
Selenium	mg/kg	36^A 1500^B 4_g^C	**9 J^C**	**9.24^C**	U	U	U	U	U	U	U	U	U	U	U	U	U
Silver	mg/kg	36^A 1500^B 8.3^C	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Sodium	mg/kg	y^A y^B y^C	358 B	351	122 B	163 B	186 B	121 B	150 BJ	162 BJ	248 B	141 B	129 B	142 B	163 B	151 B	155 B
Thallium	mg/kg	y^A y^B y^C	12	10.9	5.83	12.5	11.1	5.84	8.74	7.98	U	1.09	10.2	10.3	2.42	1.5	1.81
Vanadium	mg/kg	y^A y^B y^C	13.5	13.4	3.87 B	4.99 B	4.65 B	5.31	6.68	6.73	6.13	5.47	6.26	6.7	14.5	6.5	13.5
Zinc	mg/kg	2200^A 10000_e^B 2480^C	37.4 EJ	37.7 EJ	13.7 EJ	13.2 EJ	16.7 EJ	12.5 EJ	21.4	155	14.6 EJ	11.9	20.7 EJ	22.8 EJ	24.1	12.8	23.3

Notes:

6NYCRR	NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives
A	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential
B	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial
C	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater
6.5^A	Concentration exceeds the indicated criteria
0.50 U	Laboratory estimated quantitation limit exceeded criteria
0.03 U	The analyte was not detected above the laboratory estimated quantation limit
n/v	No criteria/guideline value
-	Parameter not analyzed / not available
y^A	There is no standard currently listed under part 375 for this parameter.
g^A	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
k^A	This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 Technical Support Document Table 5.6-1.
y^B	There is no standard currently listed under part 375 for this parameter.
g^B	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
e	The SCOs for metals were capped at a maximum value of 10,000 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
k^B	This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See 6 NYCRR Part 375 Technical Support Document Table 5.6-1.
y^C	There is no standard currently listed under part 375 for this parameter.
g^C	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
J	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Spiked sample recovery not within control limits.
E	The reported value is estimated because of the presence of interference.
B	Analyte is present in associated blank.

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TABLE 34
ANALYTICAL RESULTS SUMMARY
PCBs
PART 375 SCOs
GREGORY STREET
CITY OF ROCHESTER

Sample Location			B-212	B-213	B-214		B-215	B-216	B-217
Sample Date			3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05
Sample ID			GR-B212-S	GR-B213-S	GR-B214-S	GR-XX-S-DUP	GR-B215-S	GR-B216-S	GR-B217-S
Sample Depth			8 - 12 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			T4080-16	T4080-14	T4080-10	T4080-11	T4080-17	T4080-18	T4080-15
Sample Type	Units	6NYCRR				Field Duplicate			
Polychlorinated Biphenyls									
Aroclor 1016	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U
Aroclor 1242	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U
Aroclor-1221	µg/kg	n/v	79 U	79 U	79 U	78 U	83 U	81 U	76 U
Aroclor-1232	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U
Aroclor-1248	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U
Aroclor-1254	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U
Aroclor-1260	µg/kg	n/v	39 U	39 U	39 U	38 U	41 U	40 U	37 U

Notes:

6NYCRR	NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives
A	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential
B	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial
C	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater
6.5[A]	Concentration exceeds the indicated criteria
0.50 U	Laboratory estimated quantitation limit exceeded criteria
0.03 U	The analyte was not detected above the laboratory estimated quantation limit
n/v	No criteria/guideline value
-	Parameter not analyzed / not available

There is criteria for Total PCBs, but the lab did not report Total PCB.

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TABLE 35
ANALYTICAL RESULTS SUMMARY
TCL VOCS
PART 375 SCOs
GREGORY STREET
CITY OF ROCHESTER

Sample Location			B-1					B-4	B-200	B-201	B-202	B-203	B-204	B-205	B-206	B-207	B-208	B-209	B-210	B-211	B-212
Sample Date			2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	4-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	4-Aug-05	5-Aug-05	4-Aug-05	5-Aug-05	3-Aug-05
Sample ID			B-1 01	B-1 02	B-1 03	B-1 04	B-1 (dup) 03	B-4 01	GR-B200-S 01	GR-B201-S 01	GR-B202-S 01	GR-B203-S 01	GR-B204-S 01	GR-B205-S 01	GR-B206-S 01	GR-B207-S 01	GR-B208-S 01	GR-B209-S 01	GR-B210-S 01	GR-B211-S 01	GR-B212-S 01
Sample Depth			9 - 10 ft	10 - 11 ft	12 - 14 ft	16 - 17.5 ft	12 - 14 ft	6 - 8 ft	8 - 12 ft	8 - 12 ft	12 - 15 ft	4 - 8 ft	12 - 16 ft	4 - 8 ft	8 - 12 ft	0 - 4 ft	8 - 12 ft	12 - 15 ft	4 - 8 ft	4 - 8 ft	8 - 12 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	T4080-12	T4080-09	T4080-06	T4080-03	T4080-01	T4080-02	T4080-04	T4080-05	T4080-13	T4091-01	T4080-19	T4091-02	T4080-16
Sample Type	Units	6NYCRR					Field Duplicate														
TCL/STARs VOC Compounds																					
1,1,1-Trichloroethane	µg/kg	100000_b^A 500000_c^B 680^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.2 U	12 U
1,1,2,2-Tetrachloroethane	µg/kg	y^A y^B y^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.2 U	12 U
1,1-Dichloroethane	µg/kg	19000^A 240000^B 270^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.1 U	12 U
1,1-Dichloroethene	µg/kg	100000_b^A 500000_c^B 330^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.3 U	12 U
1,2,4-trichlorobenzene	µg/kg	y^A y^B y^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.7 U	12 U
1,2,4-Trimethylbenzene	µg/kg	47000^A 190000^B 3600^C	U	U	U	U	U	U	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/kg	100000_b^A 500000_c^B 1100^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	**27**	1.1 U	12 U
1,2-Dichloroethane	µg/kg	2300^A 30000^B 20_q^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.3 U	12 U
1,2-Dichloropropane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	0.93 U	12 U
1,3-Dichlorobenzene	µg/kg	17000^A 280000^B 2400^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.2 U	12 U
1,4-Dichlorobenzene	µg/kg	9800^A 130000^B 1800^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.0 U	12 U
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	µg/kg	y^A y^B y^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.4 U	12 U
2-Butanone	µg/kg	100000_b^A 500000_c^B 120^C	-	-	-	-	-	-	55 U	57 U	59 U	57 U	58 U	60 U	54 U	55 U	59 U	55 U	53 U	6.4 U	59 U
2-Hexanone	µg/kg	n/v	-	-	-	-	-	-	55 U	57 U	59 U	57 U	58 U	60 U	54 U	55 U	59 U	55 U	53 U	7.1 U	59 U
4-Methyl-2-Pentanone	µg/kg	y^A y^B y^C	-	-	-	-	-	-	55 U	57 U	59 U	57 U	58 U	60 U	54 U	55 U	59 U	55 U	53 U	4.8 U	59 U
Acetone	µg/kg	100000_b^A 500000_c^B 50^C	U	U	U	**18**	U	U	**11 J**	***57 U***	***59 U***	***57 U***	**11 J**	**27 J**	**18 J**	***55 U***	**15 J**	***55 U***	11 U	12 U	**1.4 J**
Benzene	µg/kg	2900^A 44000^B 60^C	U	U	U	U	U	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.2 U	12 U
Bromodichloromethane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	0.97 U	12 U
Bromoform	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.3 U	12 U
Bromomethane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.2 U	12 U
Carbon Disulfide	µg/kg	y^A y^B y^C	-	-	-	-	-	-	**1.3 J**	11 U J	12 U J	11 U J	12 U	12 U	**1.3 J**	11 U J	**3.6 J**	11 U J	11 U J	1.5 U	12 U J
Carbon Tetrachloride	µg/kg	1400^A 22000^B 760^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	2.5 U	12 U
Chlorobenzene	µg/kg	100000_b^A 500000_c^B 1100^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.3 U	12 U
Chloroethane	µg/kg	y^A y^B y^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.5 U	12 U
Chloroform	µg/kg	10000^A 350000^B 370^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.1 U	12 U
Chloromethane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	2.1 U	12 U
cis-1,2-Dichloroethene	µg/kg	59000^A 500000_c^B 250^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.1 U	12 U
cis-1,3-Dichloropropene	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.1 U	12 U
Cyclohexane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.6 U	12 U
Dibromo-3-Chloropropane (DBCP), 1,2-	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.2 U	12 U
Dibromochloromethane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.0 U	12 U
Dibromoethane, 1,2-	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.2 U	12 U
Dichlorodifluoromethane	µg/kg	n/v	-	-	-	-	-	-	11 U J	11 U J	12 U J	11 U J	12 U	12 U	11 U J	11 U J	12 U J	11 U	11 U J	1.0 U	12 U J
Ethylbenzene	µg/kg	30000^A 390000^B 1000^C	**50 J**	U	U	**10 J**	U	U	**1.4 J**	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.3 U	12 U
Isopropylbenzene	µg/kg	y^A y^B y^C	**11 J**	U	U	**2 J**	U	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.3 U	12 U
m/p-Xylenes	µg/kg	b_{s1}^A c_{s1}^B $s1^C$	U	U	U	**12**	U	U	**2.1 J**	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	3.3 U	12 U
Methyl Acetate	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.3 U	12 U
Methylcylohexane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.1 U	12 U
Methylene chloride	µg/kg	51000^A 500000_c^B 50^C	**55 JB**^{C}	**48 JB**	U	U	**47 JB**	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	12 U	12 U
Methyl-Tert-Butyl-Ether(MTBE)	µg/kg	62000^A 500000_c^B 930^C	U	U	U	U	U	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.1 U	12 U
o-Xylene	µg/kg	b_{s1}^A c_{s1}^B	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.3 U	12 U
Styrene	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.7 U	12 U
Tetrachloroethene	µg/kg	5500^A 150000^B 1300^C	-	-	-	-	-	-	**1.5 J**	11 U J	12 U J	11 U J	12 U	**1.3 J**	11 U J	11 U J	12 U J	11 U	11 U J	1.4 U	12 U J
Toluene	µg/kg	100000_b^A 500000_c^B 700^C	U	U	U	U	U	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.3 U	12 U
trans-1,2-Dichloroethene	µg/kg	100000_b^A 500000_c^B 190^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.3 U	12 U
trans-1,3-Dichloropropene	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.2 U	12 U
Trichloroethane, 1,1,2-	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.4 U	12 U
Trichloroethene	µg/kg	10000^A 200000^B 470^C	U	U	U	U	U	U	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.2 U	12 U
Trichlorofluoromethane	µg/kg	n/v	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.5 U	12 U
Vinyl chloride	µg/kg	210^A 13000^B 20^C	-	-	-	-	-	-	11 U	11 U	12 U	11 U	12 U	12 U	11 U	11 U	12 U	11 U	11 U	1.1 U	12 U
TCL/STARs VOC Tentatively Identified Compounds																					
Total TICs	µg/kg	n/v	**7550**	**10640**	**139**	**1064**	**5510**	**6**	**0**	**0**	**0**	**6.6 JN**	**0**	**3080**	**0**	**0**	**0**	**0**	**799**	**78.6**	**29.5**

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TABLE 35
ANALYTICAL RESULTS SUMMARY
TCL VOCS
PART 375 SCOs

GREGORY STREET
CITY OF ROCHESTER

Sample Location			B-213	B-214		B-215	B-216	B-217	MW-105	MW-107		MW-108	MW-109	MW-110	MW-111	MW-112		MW-113	MW-115
Sample Date			3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002
Sample ID			GR-B213-S 01	GR-B214-S 01	GR-XX-S-DUP 01	GR-B215-S 01	GR-B216-S 01	GR-B217-S 01	MW-105 01	MW-107 01	MW-107 02	MW-108 01	MW-109 01	MW-110 02	MW-111 01	MW-112 01	MW-112 02	MW-113 01	MW-115 01
Sample Depth			0 - 4 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	6 - 8 ft	8 - 10 ft	12 - 14 ft	6 - 8 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	12 - 14 ft	6 - 8 ft	6 - 8 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			T4080-14	T4080-10	T4080-11	T4080-17	T4080-18	T4080-15	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type	Units	6NYCRR			Field Duplicate														
TCL/STARs VOC Compounds																			
1,1,1-Trichloroethane	µg/kg	100000_b^A 500000_c^B 680^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	y^A y^B y^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/kg	19000^A 240000^B 270^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/kg	100000_b^A 500000_c^B 330^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
1,2,4-trichlorobenzene	µg/kg	y^A y^B y^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	47000^A 190000^B 3600^C	-	-	-	-	-	-	U	U	U	U	U	U	**4 J**	U	U	U	**4 J**
1,2-Dichlorobenzene	µg/kg	100000_b^A 500000_c^B 1100^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/kg	2300^A 30000^B 20_q^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/kg	17000^A 280000^B 2400^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/kg	9800^A 130000^B 1800^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
113 Freon (1,1,2 Trichloro-1,2,2 Trifluoroethane)	µg/kg	y^A y^B y^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	µg/kg	100000_b^A 500000_c^B 120^C	59 U	**18 J**	**33 J**	62 U	60 U	56 U	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	µg/kg	n/v	59 U	59 U	58 U	62 U	60 U	56 U	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone	µg/kg	y^A y^B y^C	59 U	59 U	58 U	62 U	60 U	56 U	-	-	-	-	-	-	-	-	-	-	-
Acetone	µg/kg	100000_b^A 500000_c^B 50^C	***59 U***	**130^C**	**230^C**	***62 U***	***60 U***	***56 U***	**21 BJ**	**16 BJ**	**13 BJ**	**5**	**9 BJ**	**12 BJ**	**6 BJ**	**25 B**	**15 B**	**6**	**4 JB**
Benzene	µg/kg	2900^A 44000^B 60^C	12 U	12 U	12 U	12 U	12 U	11 U	U	U	U	U	U	U	U	U	U	U	**4 J**
Bromodichloromethane	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Bromoform	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide	µg/kg	y^A y^B y^C	**1.9 J**	**4.0 J**	**5.1 J**	12 U J	12 U J	**1.8 J**	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	µg/kg	1400^A 22000^B 760^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/kg	100000_b^A 500000_c^B 1100^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	µg/kg	y^A y^B y^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Chloroform	µg/kg	10000^A 350000^B 370^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	µg/kg	59000^A 500000_c^B 250^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Dibromo-3-Chloropropane (DBCP), 1,2-	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Dibromoethane, 1,2-	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	µg/kg	n/v	12 U J	12 U J	12 U J	12 U J	12 U J	11 U J	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/kg	30000^A 390000^B 1000^C	12 U	12 U	12 U	12 U	12 U	11 U	U	U	U	U	U	U	U	U	U	U	U
Isopropylbenzene	µg/kg	y^A y^B y^C	12 U	12 U	12 U	12 U	12 U	11 U	U	U	U	U	U	U	U	U	U	U	U
m/p-Xylenes	µg/kg	b_{s1}^A c_{s1}^B $s1^C$	12 U	12 U	12 U	12 U	12 U	**1.3 J**	U	**9 J**	U	U	U	U	**43 J**	U	U	U	**39 J**
Methyl Acetate	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Methylcylohexane	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	µg/kg	51000^A 500000_c^B 50^C	12 U	12 U	12 U	12 U	12 U	11 U	U	U	U	U	U	U	U	U	U	U	U
Methyl-Tert-Butyl-Ether(MTBE)	µg/kg	62000^A 500000_c^B 930^C	12 U	12 U	12 U	12 U	12 U	11 U	U	U	U	U	U	U	U	U	U	U	**8 J**
o-Xylene	µg/kg	b_{s1}^A c_{s1}^B	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/kg	5500^A 150000^B 1300^C	12 U J	**1.9 J**	12 U J	12 U J	12 U	**2.0 J**	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/kg	100000_b^A 500000_c^B 700^C	**1.3 J**	**1.3 J**	12 U	12 U	**4.3 J**	**1.2 J**	U	U	U	U	U	U	**31 J**	U	U	U	**29 J**
trans-1,2-Dichloroethene	µg/kg	100000_b^A 500000_c^B 190^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Trichloroethane, 1,1,2-	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	µg/kg	10000^A 200000^B 470^C	12 U	12 U	12 U	12 U	12 U	11 U	**10 J**	U	U	**6**	U	U	U	U	U	U	U
Trichlorofluoromethane	µg/kg	n/v	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/kg	210^A 13000^B 20^C	12 U	12 U	12 U	12 U	12 U	11 U	-	-	-	-	-	-	-	-	-	-	-
TCL/STARs VOC Tentatively Identified Compounds																			
Total TICs	µg/kg	n/v	**1621**	**2290**	**1990**	**0**	**0**	**1930**	**4**	U	U	U	U	U	**7**	U	**15**	U	U

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\\us1275-f02\shared_projects\190500196\report\RAWP - Feb2008 FINAL\Appendices\Appendix A - SMP\App_A_00196_Tables_SMP_GregorySt_FINAL_Feb08.xls\35-P375_VOC

TABLE 36
ANALYTICAL RESULTS SUMMARY
TCL VOCs - NOTES
PART 375 SCOs
GREGORY STREET
CITY OF ROCHESTER

Notes:

6NYCRR	NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives
A	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential
B	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial
C	NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater
6.5[A]	Concentration exceeds the indicated criteria
0.50 U	Laboratory estimated quantitation limit exceeded criteria
0.03 U	The analyte was not detected above the laboratory estimated quantation limit
n/v	No criteria/guideline value
-	Parameter not analyzed / not available
b	The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
y[A]	There is no standard currently listed under part 375 for this parameter.
b s1	The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3. The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
c	The SCOs for commercial use were capped at a maximum value of 500 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
y[B]	There is no standard currently listed under part 375 for this parameter.
c s1	The SCOs for commercial use were capped at a maximum value of 500 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3. The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
y[C]	There is no standard currently listed under part 375 for this parameter.
g	For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
s1	The criterion is applicable to total xylenes, and the individual isomers should be added for comparison.
J	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Indicates presumptive evidence of a compound. It applies to all TIC results.
B	Compound is identified in the associated blank.

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TABLE 37
ANALYTICAL RESULTS SUMMARY
TCL SVBNs
PART 375 SC0s
GREGORY STREET
CITY OF ROCHESTER

Sample Location			B-212	B-213	B-214		B-215	B-216	B-217	MW-109	MW-110		MW-111	MW-115	MW-116
Sample Date			3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002
Sample ID			GR-B212-S 01	GR-B213-S 01	GR-B214-S 01	GR-XX-S-DUP 01	GR-B215-S 01	GR-B216-S 01	GR-B217-S 01	MW-109 01	MW-110 01	MW-110 02	MW-111 01	MW-115 01	MW-116 01
Sample Depth			8 - 12 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	6 - 8 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	8 - 11 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			T4080-16	T4080-14	T4080-10	T4080-11	T4080-17	T4080-18	T4080-15	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type	Units	6NYCRR				Field Duplicate									
TCL/STARs SVBN Compounds															
2,2-oxybis(1-Chloropropane)	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
2,4,5-Trichlorophenol	µg/kg	y^A y^B y^C	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
2,4-Dichlorophenol	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
2,6 Dinitrotoluene	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
2-Chlorophenol	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
2-methylnaphthalene	µg/kg	y^A y^B y^C	390 U	**50 J**	**92 J**	**91 J**	410 U	400 U	**79 J**	-	-	-	-	-	-
2-Methylphenol	µg/kg	100000_b^A 500000_c^B 330_f^C	***390 U***	***390 U***	***390 U***	***380 U***	***410 U***	***400 U***	***370 U***	-	-	-	-	-	-
4- Chloroaniline	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
4-Chloro-3-methylphenol	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Acenaphthene	µg/kg	100000_b^A 500000_c^B 98000^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Acenaphthylene	µg/kg	100000_b^A 500000_c^B 107000^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Acetophenone	µg/kg	n/v	390 U	**81 J**	**120 J**	**92 J**	410 U	**65 J**	**63 J**	-	-	-	-	-	-
Anthracene	µg/kg	100000_b^A 500000_c^B 1000000_d^C	390 U	**48 J**	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Atrazine	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Benzaldehyde	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Benzo (a) anthracene	µg/kg	1000_q^A 5600^B 1000_q^C	390 U	**160 J**	**83 J**	**65 J**	410 U	**100 J**	**130 J**	U	U	U	U	U	**119 J**
Benzo (a) pyrene	µg/kg	1000_q^A 1000_q^B 22000^C	390 U	**170 J**	**96 J**	**64 J**	410 U	**110 J**	**110 J**	-	-	-	-	-	-
Benzo (b) fluoranthene	µg/kg	1000_q^A 5600^B 1700^C	390 U	**270 J**	**170 J**	**110 J**	410 U	**140 J**	**170 J**	-	-	-	-	-	-
Benzo (g,h,i) perylene	µg/kg	100000_b^A 500000_c^B 1000000_d^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Benzo (k) fluoranthene	µg/kg	1000^A 56000^B 1700^C	390 U	**110 J**	**52 J**	**47 J**	410 U	**81 J**	**86 J**	-	-	-	-	-	-
Biphenyl	µg/kg	n/v	390 U	390 U	**48 J**	**46 J**	410 U	400 U	**44 J**	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Bis(2-Chloroethyl)ether	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
bis(2-ethylhexyl)phthalate	µg/kg	y^A y^B y^C	390 U	**45 J**	**62 J**	**65 J**	410 U	**47 J**	370 U	**150 B**	**480 B**	**450 B**	**340 B**	**520 B**	**457**
Bromophenyl Phenyl Ether, 4-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Butylbenzylphthlate	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	**110 J**	370 U	-	-	-	-	-	-
Caprolactam	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Carbazole	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Chloronaphthalene, 2-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Chlorophenyl Phenyl Ether, 4-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Chrysene	µg/kg	1000_q^A 56000^B 1000_q^C	390 U	**150 J**	**86 J**	**69 J**	410 U	**96 J**	**130 J**	U	U	U	U	U	**134 J**
Dibenzo(a,h)anthracene	µg/kg	330_f^A 560^B 1000000_d^C	***390 U***	***390 U***	***390 U***	***380 U***	***410 U***	***400 U***	***370 U***	-	-	-	-	-	-
Dibenzofuran	µg/kg	14000^A 350000^B 210000^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Dichlorobenzidine, 3,3'-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Diethylphthlate	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Dimethylphenol, 2,4-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Dimethylphthlate	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Di-n-butyl phthalate	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Dinitro-o-cresol, 4,6-	µg/kg	n/v	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
Dinitrophenol, 2,4-	µg/kg	y^A y^B y^C	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
Dinitrotoluene, 2,4-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Di-n-octyl phthlate	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Fluoranthene	µg/kg	100000_b^A 500000_c^B 1000000_d^C	390 U	**370 J**	**220 J**	**170 J**	410 U	**190 J**	**290 J**	U	U	U	U	U	**201**
Fluorene	µg/kg	100000_b^A 500000_c^B 386000^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Hexachlorobenzene	µg/kg	330_f^A 6000^B 3200^C	***390 U***	***390 U***	***390 U***	***380 U***	***410 U***	***400 U***	***370 U***	-	-	-	-	-	-
Hexachlorobutadiene	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Hexachlorocyclopentadiene	µg/kg	n/v	390 U J	390 U J	390 U J	380 U J	410 U J	400 U J	370 U J	-	-	-	-	-	-
Hexachloroethane	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/kg	500_q^A 5600^B 8200^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Isophorone	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
m & p-Cresol	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Naphthalene	µg/kg	100000_b^A 500000_c^B 12000^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	U	U	U	U	U	**17372^C**
Nitroaniline, 2-	µg/kg	y^A y^B y^C	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
Nitroaniline, 3-	µg/kg	y^A y^B y^C	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
Nitroaniline, 4-	µg/kg	n/v	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
Nitrobenzene	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Nitrophenol, 2-	µg/kg	y^A y^B y^C	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-

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TABLE 37
ANALYTICAL RESULTS SUMMARY
TCL SVBNs
PART 375 SC0s
GREGORY STREET
CITY OF ROCHESTER

Sample Location			B-212	B-213	B-214		B-215	B-216	B-217	MW-109	MW-110		MW-111	MW-115	MW-116
Sample Date			3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	3-Aug-05	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002	2000-2002
Sample ID			GR-B212-S 01	GR-B213-S 01	GR-B214-S 01	GR-XX-S-DUP 01	GR-B215-S 01	GR-B216-S 01	GR-B217-S 01	MW-109 01	MW-110 01	MW-110 02	MW-111 01	MW-115 01	MW-116 01
Sample Depth			8 - 12 ft	0 - 4 ft	0 - 4 ft	0 - 4 ft	4 - 8 ft	0 - 4 ft	0 - 4 ft	6 - 8 ft	6 - 8 ft	8 - 10 ft	8 - 10 ft	6 - 8 ft	8 - 11 ft
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC
Laboratory			UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Laboratory Work Order			20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ	20070628EZ
Laboratory Sample ID			T4080-16	T4080-14	T4080-10	T4080-11	T4080-17	T4080-18	T4080-15	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN	UNKNOWN
Sample Type	Units	6NYCRR				Field Duplicate									
Nitrophenol, 4-	µg/kg	y^A y^B y^C	980 U	970 U	970 U	960 U	1000 U	1000 U	940 U	-	-	-	-	-	-
N-Nitrosodi-n-Propylamine	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
n-Nitrosodiphenylamine	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
Pentachlorophenol	µg/kg	2400^A 6700^B 800_f^C	***980 U***	***970 U***	***970 U***	***960 U***	***1000 U***	***1000 U***	***940 U***	-	-	-	-	-	-
Phenanthrene	µg/kg	100000_b^A 500000_c^B 1000000_d^C	390 U	**210 J**	**250 J**	**220 J**	410 U	**88 J**	**350 J**	U	U	U	U	U	**366**
Phenol	µg/kg	100000_b^A 500000_c^B 330_f^C	***390 U***	***390 U***	***390 U***	***380 U***	***410 U***	***400 U***	***370 U***	-	-	-	-	-	-
Pyrene	µg/kg	100000_b^A 500000_c^B 1000000_d^C	390 U	**270 J**	**160 J**	**120 J**	410 U	**160 J**	**180 J**	U	U	U	U	U	**237**
Trichlorophenol, 2,4,6-	µg/kg	n/v	390 U	390 U	390 U	380 U	410 U	400 U	370 U	-	-	-	-	-	-
TCL/STARs SVBN Tentatively Identified Compounds															
Total TICs	µg/kg	n/v	**2500**	**12590**	**18880**	**19240**	**2692**	**1014**	**22470**	-	-	-	-	-	-

Notes:

6NYCRR NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives
A NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Residential
B NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Human Health - Commercial
C NYSDEC 6 NYCRR Part 375 - Restricted Use Soil Cleanup Objectives - Protection of Groundwater
6.5^A Concentration exceeds the indicated criteria
0.50 U Laboratory estimated quantitation limit exceeded criteria
0.03 U The analyte was not detected above the laboratory estimated quantation limit
n/v No criteria/guideline value
\- Parameter not analyzed / not available
y^A There is no standard currently listed under part 375 for this parameter.
b The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
g^A For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
f^A For constituents where the calculated SCO was lower than the Contract Required Quantitation Limit (CRQL), the CRQL is used as the SCO value.
y^B There is no standard currently listed under part 375 for this parameter.
c The SCOs for commercial use were capped at a maximum value of 500 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
g^B For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the DEC/DOH rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.
y^C There is no standard currently listed under part 375 for this parameter.
f^C For constituents where the calculated SCO was lower than the Contract Required Quantitation Limit (CRQL), the CRQL is used as the SCO value.
d The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 mg/kg. See 6 NYCRR Part 375 Technical Support Document section 9.3.
g^C For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the SCO value for this use of the site.

J Indicates an estimated value.
B Indicates the analyte was found in the blank as well as the sample.

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Appendix A
Test Pit and Soil Boring Logs

Stantec	2250 Brighton Henrietta Town Line F Rochester, NY 14623 (585) 475-1440	**Test Boring No.: B-200**

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/4/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/4/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

	SAMPLE				**Soil Information**	
0	**PID**	**Rec.**	**No.**	**Depth**	**Remarks**	
					Concrete	0.9
	0.8/0.0	2.0	1	1-4'	Brown fine to medium SAND, some Silt, trace fine Gravel, moist (fill)	
	0.0/0.0	2.5	2	4-8'		
5						7.7
					Concrete (fill)	8.3
	0.0/0.0	2.9	3	8-12'	Brown/gray fine to medium SAND, little to trace Silt, wet (Native)	9.5
10					Red brown/gray fine SAND, some Silt, trace fine Gravel and Clay, wet (TILL)	
	0.0/0.0	3.0	4	12-15'		
15						15.0
					End of Boring Boring collapsed at 11'	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

Stantec
2250 Brighton Henrietta Town Line F
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-201

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/3/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/3/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

Depth (ft)	SAMPLE PID	SAMPLE Rec.	SAMPLE No.	SAMPLE Depth	Soil Information Remarks	
0	0.6/0.0	1.1	1	0-4'	Concrete	0.5
					Red Brown/Brown fine SAND, some Silt, trace fine Gravel, moist	1.0
					Black fine to medium SAND and Gravel, trace cinder, dry (misc. fill)	1.2
					Brown SILT, some fine Sand, trace Clay, moist (FILL)	4.3
5	0.5/0.0	2.0	2	4-8'	Light brown SILT, some to little Sand, little Clay, rust mottling (Native)	5.5
					Light brown fine SAND, some Silt, moist	5.8
					Light brown fine to medium SAND, little fine to course Gravel, multi-colored "staining"	8.0
	0.4/0.0	3.8	3	8-12'	s.a.a., Light brown only	8.4
10					Red Brown/Brown fine SAND, some Silt, trace fine Gravel, moist to wet (TILL) @9.5' 0.2' sand seam	12.0
15					End of Boring Boring collapsed 9.3'	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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2250 Brighton Henrietta Town Line F
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-202

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/3/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/3/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
	1.2/0.6	2.5	1	0-4'	Concrete	0.6
					Brown, fine to medium SAND, some Silt, trace fine Gravel, trace cinders, dry to m	
	0.7/0.0	3.0	2	4-8'	s.a.a., Light brown (misc. fill)	
5						
						6.4
					Brown, fine to medium SAND, some to little Silt and fine to course Gravel, yellow and red brown coloration, dry to moist (Native)	7.8
					Gray, fine SAND, some Silt, moist	8.0
	0.4/0.0	3.4	3	8-12'	Red brown, fine to medium SAND, some Silt, fine Gravel, wet, trace Clay	
					@8.6' 0.3' sand seam	
10						
	0.2/0.0	3.0	4	12-15'		
					@13.5' very loose	
15						15.0
					End of Boring	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

2250 Brighton Henrietta Town Line F
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-203

Project:	399 Gregory St.	Drill Contractor:	TREC
Project #:	190500196	Driller:	P. Willey
Client:	City of Rochester	Elevation:	
Location:	See Figure	Weather:	Clear 85 deg.

Start Date:	8/3/2005
Completion Date:	8/3/2005
Drilling Method:	Geoprobe
Supervisor:	D. Gnage/P. Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0	1.3/0.0	2.9	1	0-4'	Topsoil, trace Cinder	0.7
					Brick	1.0
					Gray, black SILT, some fine Sand, little fine Gravel and cinder, moist	1.5
					s.a.a., rust colored (misc. fill)	1.7
					Light brown, fine to medium SAND, some to little Silt, trace fine Gravel, dry (FILL)	3.7
5	0.8/0.0	1.8	2	4-8'	Dark brown SILT, some to little fine Sand, moist, trace organics (Native)	6.2
					Light brown fine to medium SAND, some Silt, little fine to course Gravel, moist, multi-colored, yellow, red-brown, gray-blue, orange (staining sands)	
10	0.6/0.0	2.0	3	8-12'		10.0
					Red brown fine to medium SAND, some Silt, little fine Gravel, moist to wet (Native)	
	0.6	2.7	4	12-15'	wet @ 13.5' and loose	
15						15.0
					End of Boring	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

2250 Brighton Henrietta Town Line F
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-204

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/3/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/3/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0	0.8/0.0	2.7	1	0-4'	Asphalt	0.2
					Brown, red/brown, fine to course SAND and Gravel, trace Silt, dry	2.1
					Brown, SILT, some fine Sand, moist to dry	3.1
					Black slag (misc. fill)	3.3
					Brown SILT, some fine Sand, trace Clay, moist (fill)	4.0
5	0.8/0.0	2.6	2	4-8	Brown fine to medium SAND, little Gravel and Silt, moist (Native)	5.5
					Brown SILT, some fine Sand, moist	6.5
					Brown to gray CLAY, some Silt, moist, fine to medium Sand pockets/lenses	
10	0.6/0.0	2.8	3	8-12'	s.a.a., dry	10.3
					Red brown, fine to medium SAND, some Silt, little to trace fine Gravel, moist to wet (TILL)	
15	0.6/0.0	3.2	4	12-16'	@13.0' wet	16.0
20					End of Boring Boring collapsed @ 12'	

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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2250 Brighton Henrietta Town Line F
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-205

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/3/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/3/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
	1.0/0.0	2.5	1	0-4'	Asphalt	0.3
					Sub-base	0.5
					Brown fine SAND, little to some Silt, trace fine Gravel, dry	
					@3.3' dark brown	
	89.1/0.0	2.8	2	4-8'	s.a.a., increase in fine GRAVEL, moist to dry	
5						
					(FILL)	7.4
					Black fine to medium SAND, trace Silt, dry to moist, slight odor (Native)	7.6
					Gray/brown SILT, some fine Sand, little clay, moist	
	13.1/0.0	2.5	3	8-12'		
						9.7
10					Brown/gray fine to course SAND, little fine Gravel, moist, odor	10.0
					Red/brown fine SAND, some Silt, trace fine Gravel, moist	
					@11.8' moist to wet	
	0.7/0.0	2.5	4	12-14'		
					@13.0 wet	
15						15.0
					End of Boring Boring collapsed @ 11.8'	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

2250 Brighton Henrietta Town Line F
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-206

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/3/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/3/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0	1.5/0.0	2.4	1	0-4'	Topsoil	0.3
					Light brown fine to medium SAND, some Silt, trace fine Gravel, dry	0.9
					s.a.a., Dark brown, trace cinder (Misc. Fill)	4.0
5	1.2/0.0	2.5	2	4-8'	s.a.a., Light brown, no cinder, dry (fill)	6.3
					Brick	6.5
					Light brown/gray SILT, some fine SAND, little fine Gravel, moist (Native) @7.8' 0.2' sand lense	
10	1.1/0.0	2.2	3	8-12'		9.8
					Red brown, fine to medium SAND, some Silt, little fine Gravel, moist to wet	12.0
15					End of Boring Boring collapsed @ 8.5'	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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2250 Brighton Henrietta Town Line F
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-207

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/3/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/3/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
	1.5/0.0	2.8	1	0-4'	Stone/crusher run	0.5
					Brown, fine to medium SAND, some Silt, trace to little fine Gravel, dry to moist, trace Cinder	1.2
					Black Slag and Cinder (misc. fill)	1.5
					Brown fine to medium SAND, some Silt, little fine Gravel, yellow, orange staining, moist	3.7
					Brown SILT, trace fine Sand, moist	4.0
5	0.8/0.0	1.2	2	4-6'	Brown fine SAND, some Silt, moist (Native)	5.8
					Brown/gray fine to course SAND, moist to dry	6.0
					Refusal/End of Boring	
10						
15						
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

Stantec
2250 Brighton Henrietta Town Line F
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(585) 475-1440

Test Boring No.: B-208

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/4/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/4/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

	SAMPLE				Soil Information	
0	**PID**	**Rec.**	**No.**	**Depth**	**Remarks**	
					Concrete	0.75
	0.5/0.0	2.5	1	0-4'	Brown, fine to medium SAND, little to some Silt, trace gravel, dry to moist	1.0
					Cinder and ash (misc. fill)	1.3
					Brown fine to medium SAND, some Silt, trace Gravel, dry to moist (Native)	
	0.4/0.0	2.9	2	4-8'	s.a.a., less SILT	
5						
						7.0
					Brown fine SAND, some Silt, wet	7.8
					Brown fine to medium SAND, dry	
	0.3/0.0	3.5	3	8-12'		
						9.0
					Gray/red brown fine SAND, some Silt, trace fine Gravel, wet	
10						
					Gray/red brown fine SAND, some Silt, trace fine Gravel, wet	
	0.4/0.0	2.0	4	12-15'		
15						15.0
					End of Boring	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

2250 Brighton Henrietta Town Line F
Rochester, NY 14623
(585) 475-1440

Test Boring No.: B-209

Project:	399 Gregory St.	Drill Contractor:	TREC
Project #:	190500196	Driller:	P. Willey
Client:	City of Rochester	Elevation:	
Location:	See Figure	Weather:	Clear 80 deg.
Start Date:	8/5/2005		
Completion Date:	8/5/2005		
Drilling Method:	Geoprobe		
Supervisor:	D. Gnage/P. Smith		

	SAMPLE				Soil Information Remarks	
0	PID	Rec.	No.	Depth		
	0.4/0.0	2.6	1	0-4'	Crusher run	0.4
					Brown to light brown, fine to coarse SAND, some fine to course Gravel, little Silt, dry to moist	4.1
	0.0/0.0	2.6	2	4-8	Brown fine SAND, some Silt, little fine to course Gravel, yellow and red "staining" (Native)	6.9
5						
					Gray/brown fine to course SAND and Gravel, dry	7.6
					Light brown, SAND, moist	7.8
					Brown, silty CLAY, moist	8.0
	0.0/0.0	2.7	3	8-12'	Brown, fine to medium SAND, little Silt, moist	9.3
10					Red brown/gray, fine SAND, some Silt, little to trace fine Gravel, moist to wet (TILL)	
	0.0/0.0	2.7	4	12-15	s.a.a., wet, loose	
15						15.0
					End of Boring	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-210

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/4/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/4/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 90 deg.	Supervisor:	D. Gnage/P. Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0	10.0/0.0	3.6	1	0-4'	Topsoil	0.7
					Black, fine SAND and Gravel, conglomorate, slight odor, dry (old asphalt?)	1.4
					Dark brown, fine to medium SAND, some Silt, little fine Gravel, trace Brick and Cinder, dry (misc. fill)	2.7
					Brown to light brown, fine SAND, some Silt, moist (Native)	4.5
5	9.4/0.0	2.7	2	4-8'	Brown/gray fine SAND, some Silt, moist to wet	6.0
					Gray brown, fine to medium SAND, some Silt, little fine to course Gravel, dry to moist @6.5' gray black staining	
	1.1/0.0	2.0	3	8-12'		9.0
10					Red brown/Gray, fine SAND, some Silt, trace fine Gravel, moist to wet (TILL)	
	0.4/0.0	2.7	4	12-15'	Wet @13.5' loose	
15						15.0
					End of Boring	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Rochester, NY 14623
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Test Boring No.: B-211

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/5/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/5/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 86 deg.	Supervisor:	D. Gnage/P. Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
	0.4/0.0	3.5	1	0-4'	Crusher run	0.3
					Brown, fine SAND, some Silt, little fine Gravel, trace Cinder, dry (Misc. Fill)	2.7
					s.a.a., no cinder (fill)	4.4
5	34.1/0.0	3.5	2	4-8'	Light brown SILT, some fine Sand, dry to moist, orange mottling (Native)	6.0
					Brown fine SAND, moist	7.1
					Brown, SILT, some fine Sand, moist	7.4
					Orange brown, fine to medium SAND, little Silt	7.7
10	0.0/0.0	2.3	3	8-11.9'	Red brown/gray, fine SAND, some Silt, little fine Gravel, moist (TILL) @8.2' wet	11.9
15					End of Boring/Refusal	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Rochester, NY 14623
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Test Boring No.: B-212

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/4/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/4/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 90 deg.	Supervisor:	D. Gnage/P. Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0					Concrete	1.0
	0.9/0.0	2.1	1	1-4'	Sub-base	1.4
					Black, fine to medium SAND, some Cinders, dry (misc. fill)	1.8
					Brown fine SAND, some Silt, trace fine Gravel, dry to moist (Native)	
	1.4/0.0	3.0	2	4-8'		
5						5.5
					Red brown/gray, Silty CLAY, moist	6.7
					Brown, fine SAND, little Silt, moist to wet	7.5
					Red brown/gray Silty CLAY, moist	
	1.3/0.0	3.5	3	8-12'		9.5
10					Brown to red/brown, little SILT, trace Gravel, wet	11.0
					Red brown/gray, fine SAND, some Silt, little fine Gravel, rust (TILL)	12.0
					End of Boring	
15						
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-213

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/4/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/4/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0					Concrete	0.5
	6.5/0.0	2.6	1	0.5-4'	Sub-base	0.8
					Brown to light brown, fine SAND, some Silt, trace to little cinder, dry (Misc. Fill)	3.6
	0.5/0.0	2.6	2	4-8'	Light brown, SILT, some fine Sand, moist (Native)	5.4
5					Brown, fine to course SAND, some fine Gravel, trace Silt, dry	6.3
					Brown SILT, some fine Sand, moist	7.1
	0.2/0.0	3.3	3	8-12'	Brown to orange, fine to medium SAND, trace to little Silt, dry to moist @8.7' wet	10.0
10	0.4/0.0	2.3	4	12-15'	Red brown/gray, fine SAND, course Silt, little fine Gravel, wet (TILL)	15.0
15					End of Boring	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-214

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/3/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/3/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
	27.1/0.0	3.3	1	0-4'	Concrete	0.3
					Sub-base	0.6
					Brown, SILT, some fine Sand, trace Gravel, dry to moist (fill)	1.5
					Black, fine to medium SAND, some fine Gravel, little Silt, dry, odor (fill)	2.2
					Brown/dark brown SILT, some fine Sand, moist (Native)	4.0
	0.7/0.0	2.7	2	4-8'	Brown to gray, fine to medium SAND, little Silt, dry to moist	
5						
	0.5/0.0	3.0	3	8-12'		
					@10.1 increase in GRAVEL, moist to wet	
10						10.4
					Red brown/brown, Silty CLAY, moist to wet	11.2
					Red brown/brown, fine SAND, some Silt, little to trace fine Gravel, moist to wet (TILL)	
	0.7/0.0	2.5	4	12-15'	s.a.a., wet, softer	
15						15.0
					End of Boring	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-215

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/4/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/4/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
	1.0/0.1	2.7	1	0-4'	Brown, fine to course SAND and Gravel, little Silt, moist	0.8
					Brown to black, fine SAND, some Silt, little fine Gravel and Cinder, dry to moist (Misc. Fill)	1.5
					Dark brown, fine SAND, some Silt, trace organics, moist (Native)	3.8
					s.a.a., Light brown, no organics	
	1.3/0.8	2.9	2	4-8'		
5						5.0
					Brown, fine to course SAND, little Silt and Gravel, dry	6.2
					Brown, fine SAND, some Silt, wet	6.6
					Red brown, SILT, Clay, moist	7.2
					Brown, fine SAND, little Silt, wet	8.0
	0.5/0.3	2.1	3	8-10'	Red brown/gray	9.0
					Red brown/gray, fine SAND, some Silt, trace fine Gravel, moist to wet (TILL)	
10						10.25
					End of Boring/Refusal	
15						
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-216

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/4/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/4/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
	0.7/0.0	2.7	1	0-4'	Brown, fine to course SAND, some Silt, little fine Gravel, dry	0.4
					Black, fine SAND, little cinders, dry, yellow staining, red concrete (Misc. Fill)	1.0
					Dark brown, fine SAND, some Silt, moist (Native)	3.6
					Light brown, silty CLAY, moist	4.0
	1.8/0.0	2.1	2	4-8'	Light brown/gray, fine SAND, little Silt, wet	
5						
					Red brown/gray, silty CLAY, moist	7.2
					Brown, fine to medium SAND, wet	7.6
					Red brown/gray, silty CLAY	
	0.3/0.0	3.3	3	8-12'		8.7
					Red brown/gray, fine SAND, some Silt, wet	
10						9.7
					Red brown/gray, fine SAND, some Silt, little fine Gravel, wet (TILL)	
	0.3/0.0	0.5	4	12-15'		
15						15.0
					End of Boring	
20						

Notes:

1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-217

Project:	399 Gregory St.	Drill Contractor:	TREC	Start Date:	8/4/2005
Project #:	190500196	Driller:	P. Willey	Completion Date:	8/4/2005
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 85 deg.	Supervisor:	D. Gnage/P. Smith

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
					Concrete	0.4
	22.5/0.0	2.5	1	0.4-4'	Sub-base	0.8
					Brown, fine SAND, some Silt, dry to moist	1.1
					Black, fine SAND, some Cinder, dry (Misc. Fill)	1.6
					Brown to dark brown, fine SAND, some Silt, dry to moist (Native)	
	1.0/0.4	3.0	2	4-8'		
5						3.0
					Red brown/gray, silty CLAY, moist, rust mottling (Sands), moist	
						6.6
					Brown, fine to medium SAND, little to trace Silt, moist to wet	
	0.5/0.0	2.8	3	8-12'		
					@9.0' wet	
10						
						11.5
					Red/brown/gray, fine SAND, some Silt, little to trace fine Gravel, wet	
	0.0/0.0	1.7	4	12-15'		
15						15.0
					End of Boring	
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-212-07

Project:	399 Gregory St.	Drill Contractor:	Nothnagle	Start Date:	6/7/2007
Project #:	190500196	Driller:	Jeff Schwitzer	Completion Date:	6/7/2007
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 90 deg.	Supervisor:	P. Smith/D. Bauch

Depth (ft)	SAMPLE PID	Rec.	No.	Depth	Soil Information Remarks	
0	.2/.1	42"	1	0-4.0'	Gray coarse to fine GRAVEL with SAND and SILT, moist	0
					Brown - gray brown sand and some SILT, trace GRAVEL, white paint specks, coal, moist	1.2
					Dark brown SILT, some SAND, moist (NATIVE)	2.8
					Light brown SAND, some SILT, moist	3.2
	.2/.1	40"	2	4.0-8.0'	Brown SAND, some SILT, trace CLAY, moist	4.0
5					Gray brown coarse to fine GRAVEL and SAND, some SILT, trace sandstone, moist	5.7
					Gray brown SILT, wet	6.7
					End of boring	8.0
10						
15						
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-213-07

Project:	399 Gregory St.	Drill Contractor:	Nothnagle	Start Date:	6/7/2007
Project #:	190500196	Driller:	Jeff Schwitzer	Completion Date:	6/7/2007
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 90 deg.	Supervisor:	P. Smith/D. Bauch

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
	.4/.3	33"	1	0-4.0'	Topsoil, moist	0
					Misc. FILL - graycoarse to fine SAND, some SILT, trace GRAVEL, coal, paint, dry	1.6
					Dark brown-black wood, some coarse to fine SAND and SILT, moist	3.3
	.3/.3	36"	2	4.0-8.0'		4.0
					Brown fine SAND, some SILT, wet	4.9
5						
					Coase to fine GRAVEL and SAND, trace SILT, moist (NATIVE)	5.5
					Light gray broken stone, dry	6.2
					Coarse to fine GRAVEL and SAND, some SILT, moist	6.4
					Gray brown SILT, trace fine SAND, wet	7.2
					End of boring	8.0
10						
15						
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-214-07

Project:	399 Gregory St.	Drill Contractor:	Nothnagle	Start Date:	6/7/2007
Project #:	190500196	Driller:	Jeff Schwitzer	Completion Date:	6/7/2007
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 90 deg.	Supervisor:	P. Smith/D. Bauch

	SAMPLE				Soil Information Remarks	
0	PID	Rec.	No.	Depth		
	.6/.3	37"	1	0-4.0'	Topsoil and grass, moist	0
					Gray brown fine SAND, some coarse to fine GRAVEL and SILT, trace brick and ash, dry	1.5
					Dark brown fine SAND and SILT, some GRAVEL, trace coal, wood, paint, moist	3.3
	.5/.4	39"	2	4.0-8.0'		4.0
5					Dark brown fine SAND and SILT, some GRAVEL, moist	4.9
					Light gray broken stone, dry	5.1
					Coarse to fine GRAVEL and SAND, some SILT, moist	5.3
					Brown SILT, some CLAY, wet	7.4
					End of boring	8.0
10						
15						
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-215-07

Project:	399 Gregory St.	Drill Contractor:	Nothnagle	Start Date:	6/7/2007
Project #:	190500196	Driller:	Jeff Schwitzer	Completion Date:	6/7/2007
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 90 deg.	Supervisor:	P. Smith/D. Bauch

	SAMPLE				Soil Information	
0	**PID**	**Rec.**	**No.**	**Depth**	**Remarks**	
	.7/.4	27"	1	0-4.0'	Gray coarse to fine GRAVEL and SAND, some SILT, trace coal, dry	0
					Gray brown coarse to fine GRAVEL and SAND, trace ash, brick, moist	2.0
					Gray broken stone (concrete), dry	3.3
	1.0/.6/.4	38"	2	4.0-8.0'		4.0
5					Gray coarse to fine GRAVEL and SAND, some SILT	4.8
					Brown SILT, some fine SAND, wet	5.2
					Gray CLAY, some SILT, wet	5.6
					Coarse to fine GRAVEL and SAND, some SILT, moist	6.0
					Gray broken stone, dry	7.5
					Brown SILT, some SAND, wet	7.8
					End of boring	8.0
10						
15						
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-216-07

Project:	399 Gregory St.	Drill Contractor:	Nothnagle	Start Date:	6/7/2007
Project #:	190500196	Driller:	Jeff Schwitzer	Completion Date:	6/7/2007
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 90 deg.	Supervisor:	P. Smith/D. Bauch

	SAMPLE				Soil Information Remarks	
0	PID	Rec.	No.	Depth		
	.5/.4	38"	1	0-4.0'	Topsoild and grass, moist	0
					Brown fine SAND and SILT, trace GRAVEL, trace ash and paint, dry	.9
					Red orange (irony) fine SAND and SILT, trace paint	2.5
					Brown SILT and CLAY, some fine SAND, moist (NATIVE)	2.9
	.5/.4	42"	2	4.0-8.0'		4.0
					Brown SILT and CLAY, some fine SAND, moist	4.5
5					Brown coarse to fine SAND and GRAVEL, some SILT, moist	5.2
					Brown CLAY and SILT, some SAND, moist	6.4
					End of boring	8.0
10						
15						
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-217-07

Project:	399 Gregory St.	Drill Contractor:	Nothnagle	Start Date:	6/7/2007
Project #:	190500196	Driller:	Jeff Schwitzer	Completion Date:	6/7/2007
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 90 deg.	Supervisor:	P. Smith/D. Bauch

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
	.7/.5	37"	1	0-4.0'	Topsoil and grass, moist	0
						1.3
					Light brown SAND and SILT, trace coal, dry	2.0
					Ash and coal, dry	2.2
					Pink coarse to fine GRAVEL and SAND (sandstone), dry	2.6
					Brown fine SAND and SILT, some GRAVEL, trace concrete, moist	3.1
					Gray GRAVEL and SAND, dry	3.7
	.6/.5	42"	2	4.0-8.0'	Brown coarse to fine GRAVEL and SAND, some SILT, trace ash and wood, mois	4.0
					Brown coarse to fine GRAVEL and SAND, some SILT, trace wood, moist	4.5
5					Light tan GRAVEL and SAND, dry (NATIVE)	4.9
					Brown orange fine SAND and SILT (irony), pyrite, moist	5.0
					Gray brown coarse to fine SAND and GRAVEL, some SILT, moist	5.5
					Gray brown SILT and fine SAND, wet	6.9
					End of boring	8.0
10						
15						
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-218-07

Project:	399 Gregory St.	Drill Contractor:	Nothnagle	Start Date:	6/7/2007
Project #:	190500196	Driller:	Jeff Schwitzer	Completion Date:	6/7/2007
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 90 deg.	Supervisor:	P. Smith/D. Bauch

	SAMPLE				Soil Information Remarks	
0	PID	Rec.	No.	Depth		
	.5/.4	38"	1	0-4.0'	Topsoil, dark brown SILT and CLAY, moist	0
					Brown fine SAND and SILT, trace GRAVEL, ash, moist	1.3
					Brown fine SAND, CLAY, and SILT, trace orange (irony) SAND and SILT, trace coal, moist	2.0
	.6/.4	39"	2	4.0-8.0'		4.0
					Brown fine SAND and SILT, trace ash, moist	4.6
5					Gray brown coarse SAND, some GRAVEL, moist	4.8
					Pink SAND and GRAVEL (sandstone), moist	5.5
					Brown coarse to fine SAND and SILT, some GRAVEL, trace pink sand	5.8
					Brown SILT and CLAY, trace fine SAND, wet	7.4
					End of boring	8.0
10						
15						
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

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Test Boring No.: B-219-07

Project:	399 Gregory St.	Drill Contractor:	Nothnagle	Start Date:	6/7/2007
Project #:	190500196	Driller:	Jeff Schwitzer	Completion Date:	6/7/2007
Client:	City of Rochester	Elevation:		Drilling Method:	Geoprobe
Location:	See Figure	Weather:	Clear 90 deg.	Supervisor:	P. Smith/D. Bauch

	SAMPLE				Soil Information	
0	PID	Rec.	No.	Depth	Remarks	
	.5/.4	44"	1	0-4.0'	Topsoil and grass, moist	0
					Brown fine SAND and SILT, some GRAVEL, trace brick, moist	.7
					Brown fine SAND and SILT, trace ash and coal, trace brick and paint, moist	1.6
					Brown SILT and fine SAND, moist (NATIVE)	3..2
	.6/.4	38"	2	4.0-8.0'		4.0
5					Brown SILT and fine SAND, moist	4.7
					Brown coarse to fine SAND and SILT, moist-wet	5.0
					Gray brown CLAY, some SILT, wet	6.0
					Brown coarse to fine SAND and GRAVEL, some SILT, some pink sandstone gra	6.4
					Brown fine coarse to fine SAND, moist	7.3
					Brown CLAY and SILT, trace fine SAND, wet	7.6
					End of boring	8.0
10						
15						
20						

Notes:
1. PID Model Mini-Rae 2000 with 10.6eV lamp.

Appendix B
Sewer Use Permit Information

Initial Sewer Use Permit Instructions

Please provide all requested information accurately. The Sewer Use Permit is a legal document. Any name or address change will require a new Initial Sewer Use Permit. An officer of the company must sign the permit or designate someone else the responsibility by attachment letter with the permit package. The permit application refers to sections of the Sewer Use Law, which is available in the “Related Documents” section of this Web page.

Pure Waters, under Section 57 of the Worker's Compensation Law and Section 220 - Subdivision 8 of the Disability Benefits Law, is required to have on file proof that your company has workers compensation and disability benefits for your employees. A form from your insurance carrier stating such coverage will thus be required before your permit can be processed.

Initial permit fee of $40.00 should be made payable to Director of Finance, County of Monroe. All copies of the application, the form from your insurance carrier, and the check should be mailed to:

Division of Pure Waters
Industrial Waste Control Section
444 E. Henrietta Road, Bldg. 15
Rochester, New York 14620

If you have any questions regarding the permit, please call the Industrial Waste Control Section at 760-7600 option 4.

APPLICATION FOR PERMIT TO DISCHARGE
INTO PURE WATERS SEWER SYSTEM OR TRIBUTARY

1. Name of Applicant: ______________________________
   Company or Individual

2. Address of Applicant: ______________________________
   ____
   ____

3. Location of Property: ______________________________

4. Ownership of Property: Name/Address if different than above ______________________________

5. Number of sewer connections requiring license/permit ______________________________

6. Type of activity producing wastes requiring license or permit pursuant to Sewer Use Law of Monroe County ______________________________

7. Department of Health or of New York State Permit # (if any) ______________________________

8. Number of Attachments: ______________________________

   Exhibit "A" __________

   Exhibit "B" __________

   Exhibit "C" __________

   Exhibit "D" __________

Note: 1. Fill in all spaces. Mark, “NA” in appropriate space, if not applicable.

2. Refer to page 1c of this document for descriptions of Exhibits A, B and D. Refer to page 1b for Exhibit C.

444 E. Henrietta Rd., Bldg. 15 • Rochester, New York 14620-4630
(585) 760-7600 Option 4 • *fax:* (585) 324-1213 • *www.monroecounty.gov*

SUMMARY OF INDUSTRIAL WASTE CHARACTERISTICS
Exhibit C

Firm: ____

Address: ____

Industrial Waste Characteristics and Quantity

Characteristics	(Unit)	Avg.	Minimum	Maximum
Volume (Gal. or CF/month)				
Temperature (F or C)				
pH				
Biochemical Oxygen Demand (mg/L or lbs/mil. gal.)				
Chlorine Demand (mg/L or lbs/mil. gal.)				
Suspended Solids (mg/L or lbs/mil. gal.)				
Phosphate or Phosphorus (mg/L or lbs/mil. gal.)				

SUBSTANCES UNDER ARTICLES IV, V, VI, VII OF SEWER USE LAW

(List item and concentration (or volume) under appropriate heading. If none, so state.)

1. Unpolluted waters (Sect. 4.1) ______________________________

2. Prohibited Materials (Sect. 4.2) ______________________________

3. Certain materials and/or characteristics (Sect. 4.3) ______________________________

4. Toxic Substances (Sect. 5.1, 5.2) ______________________________

5. Pathogenic Bacteria (Sect. 5.1) ______________________________

6. Radioactive Wastes (Sect. 6.2) ______________________________

7. Scavenger Wastes (Sect. 7.1, 7.2) ______________________________

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ATTACHMENTS TO ACCOMPANY APPLICATION

1. A plot or tape location map of the property showing accurately the size and location of all sewer and drainage connections to the sewerage system, all pretreatment devices and all manholes or other accessible sampling points. Each sewer or drain connection shown on drawing shall be designated by an identification number. The plot or tape location map shall be attached as Exhibit "A".

2. A complete schedule of all process waters and industrial wastes produced or expected to be produced at said property, including a description of the character of each waste, the daily volume and whether the flow is continuous or intermittent. The schedule shall be attached as Exhibit "B".

3. A summary of the total wastewater characteristics to be received from the applicant shall be submitted in proper for as Exhibit "C".

4. Additional information requested by the Director of Pure Waters shall be prepared as Exhibit "D" and be attached to the application as required.

____

Company Representative Signature

____

Print Name

____

Title

Phone Number ______________________________

Person to be contacted for inspection and/or emergency purposes including phone number

____

Print Name

Phone number _________________________

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(585) 760-7600 Option 4 • *fax:* (585) 324-1213 • *www.monroecounty.gov*

INITIAL SEWER USE PERMIT

County of Monroe Pure Waters District No. _________

Permit No:_________

Expires: _________

Fee: $40.00

Firm Name ____

Address ____

____

Type of Business or Service ____

I. The above-named applicant is permitted to discharge wastes into the Pure Waters Sewer system or Tributary thereto as applied for by an application dated_______________ and verified by the applicant except the Director of Pure Waters requires the following terms and conditions to govern the permitted discharge:
A.____
B.____
C.____

II. The applicant further agrees to:

1. Accept and abide by all provisions of the Sewer Use Law of Monroe County and of all pertinent rules or regulations now in force or shall be adopted in the future.

2. Notify the Director of Pure Waters in writing of any revision to the plant sewer system or any change in industrial wastes discharge to the public sewers listed in Exhibit "B". The latter encompasses either (1) an increase or decrease in average daily volume or strength of wastes listed in Exhibit "B" or (2) new wastes that were not listed in Exhibit "B".

3. Furnish the Director of Pure Waters upon request any additional information related to the installation or use of sewer or drain for which this permit is sought.

4. Operate and maintain any waste pretreatment facilities, as may be required as a condition of the acceptance into the public sewer of the industrial wastes involved, in an efficient manner at all times, and at no expense to the County.

5. Cooperate with the Director of Pure Waters or his representatives in their inspecting, sampling, and study of wastes, or the facilities provided for pretreatment.

6. Notify the Director of Pure Waters immediately of any accident, negligence, breakdown of pretreatment equipment, or other occurrence that occasions discharge to the public sewers of any wastes or process waters not covered by this permit.

Applicant's Signature ____ Date ________________

Applicant's Title ____

Emergency Contact __________________________________ Phone ________________________

Permit Approved by____ Date ________________
Director of Pure Waters

Appendix B
Community Air Monitoring Plan

APPENDIX B

COMMUNITY AIR MONITORING PLAN
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK

Prepared for:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
6274 EAST AVON-LIMA ROAD
AVON, NEW YORK 14414

Prepared on Behalf of:
CITY OF ROCHESTER
30 CHURCH STREET, SUITE 300B
ROCHESTER, NEW YORK 14614

Prepared by:
STANTEC CONSULTING SERVICES INC.
2250 BRIGHTON HENRIETTA TOWN LINE ROAD
ROCHESTER, NEW YORK 14623

Stantec

FEBRUARY 2008

APPENDIX B
COMMUNITY AIR MONITORING PLAN
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK

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1.0 Introduction

This Community Air Monitoring Plan (CAMP) has been prepared by Stantec on behalf of City of Rochester. This CAMP addresses potential volatile organic compound (VOC) air quality issues which may arise during planned Remedial Action Work Plan activities at 399 Gregory Street, Rochester, New York (Site) (Figure 1).

The activities planned during the portion of the project covered by this CAMP include Remedial Actions consisting of groundwater monitoring, well decommissioning/ installations, excavation and disposal of impacted soils, application of an in-situ bio-augmentation additive to the open RAOC1 excavation and soil and groundwater sampling and analysis.

Based on previous studies completed at the Site and the Site's history, the primary chemicals of concern at the subject site are various volatile organic compounds (VOCs), SVOCs and metals. Volatilization of the organic compounds through disturbance of soils and/or groundwater could result in releases to ambient air, creating possible nuisance or health threats to the neighborhood. Disturbance of soils may also generate dust containing SVOCs and metals.

This CAMP details real-time monitoring activities to be carried out during the Remedial Action activities, to minimize the potential for neighborhood exposure to airborne hazards resulting from fugitive emissions during the field work.

Pursuant to New York State Department of Environmental Conservation (NYSDEC) Division of Hazardous Waste Remediation Technical and Administrative Guidance Memorandum - Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites, (HWR-89-4031), this CAMP addresses the methods that will be implemented to monitor particulate (dust) levels at the perimeter of, and within the work area.

Air monitoring and response actions for VOCs are also included in this CAMP. VOC monitoring of the work areas will also be conducted as part of the Health and Safety Plan (HASP) that will be implemented during Remedial Action activities carried out by the Engineer.

2.0 Methodology

The Remedial Action activities at the site will consist primarily of soil excavation. The following programs will be implemented to monitor and, if necessary, control the potential migration of fugitive VOCs and particulates on the property.

2.1 PERIMETER MONITORING

For each day of intrusive field work, a wind sock or flag will be used to monitor wind direction in the area of the work zone. Based upon the daily wind direction, two temporary particulate monitoring points will be identified, one upwind and one downwind of the work area, at the perimeter of the site or field work location.

Real-time particulate monitoring will be carried out using an MIE PDM-3 MiniRam aerosol monitor, or its equivalent, capable of providing the measurement of airborne particulate matter. VOC monitoring will be done with MiniRAE Photoionization Detector (PID), or its equivalent, fitted with a 10.6 eV lamp. Rainy, snowy or damp conditions may eliminate the need for particulate monitoring, as well as reduce the usefulness of the PID.

Prior to the commencement of field work each day, background measurements of particulate and VOC concentrations will be logged at the up- and downwind locations with the construction equipment gas/diesel engines operating on site.

Thereafter, readings will be recorded at approximate 30-minute intervals. These readings will be used to observe the difference between upwind and downwind particulate and VOC levels. If at any time, the difference between the upwind and downwind particulate levels exceed 100 µg/m^3 or total VOC levels downwind exceed upwind levels (adjusted for engine exhaust) by 5 ppm, then work will be temporarily halted. The Contractor will then be required to implement dust suppression techniques or any other means necessary to control dusts and VOCs, similar to those discussed in Section 2.3.

2.2 WORK AREA MONITORING

In addition to perimeter monitoring, monitoring for VOCs, explosive gases and particulates will be carried out continuously within the work area to monitor personal exposures and to compare work area readings with downwind and upwind readings. The first readings of the day will be obtained prior to the commencement of work to obtain daily background readings. Readings will be logged along with the perimeter measurements. Specific monitoring procedures to be used in the work zone can be found in the Health and Safety Plan (HASP) prepared for the activities at this site.

2.3 FUGITIVE DUST CONTROL

If the monitoring described in Sections 2.1 or 2.2 results in fugitive particulate levels exceeding 100 µg/m^3 above background, then the Contractor will implement fugitive dust control measures which may include one or more of the following:

- using water spray or other dust suppression methods;
- establishing wind shielding;
- slowing down the field work speed; and/or
- stopping the field work activities.

If fugitive particulate levels cannot be maintained below 100 μg/m^3 above background using the above-listed dust suppression measures, all work activities must be halted.

2.4 MINOR VAPOR EMISSION RESPONSE PLAN

If the ambient air concentration of total organic vapors exceeds 5 ppm above background at the perimeter of the work area, activities will be halted and monitoring continued. If the total organic vapor level decreases below 5 ppm above background, work activities can resume, with emphasis given to observing spikes in levels. When work shutdown occurs, downwind air monitoring as directed by the Safety Officer will be implemented to evaluate if the vapor emission levels exceed those specified in Section 2.5, Major Vapor Emission Response Plan.

2.5 MAJOR VAPOR EMISSION RESPONSE PLAN

2.5.1 Site Boundaries Adjacent to Streets

If total organic vapor levels greater than 5 ppm over background are identified 100 feet downwind from the work area or half the distance to the nearest residential or commercial structure along the Site boundaries adjacent to Cayuga and Gregory Streets, whichever is less, all work activities must be halted.

If, following the cessation of the work activities, or as the result of an emergency, total organic vapor levels greater than 5 ppm above background persist 100 feet downwind from the work area or half the distance to the nearest residential or commercial structure along the Site boundaries adjacent to Cayuga and Gregory Streets, then the air quality must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 foot zone).

If efforts to abate the emission source area are unsuccessful and if the organic vapor levels continue to persist at or near 5 ppm above background for more than 30 minutes in the 20 foot zone, then the Major Vapor Emission Response Plan shall automatically be placed into effect.

The Major Vapor Emission Response Plan shall also be immediately placed into effect if organic vapor levels are greater than 10 ppm above background at the 20 foot zone.

2.5.2 Site Boundaries Adjacent to Buildings or Residential Properties

If total organic vapor levels greater than 5 ppm over background are identified at the Site boundaries adjacent to buildings or residential properties, all work activities must be halted.

If, following the cessation of the work activities, or as the result of an emergency, total organic vapor levels greater than 5 ppm above background persist at the Site boundaries adjacent to buildings or residential properties, then the air quality must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 foot zone).

If efforts to abate the emission source area are unsuccessful and if the organic vapor levels continue to persist at or near 5 ppm above background for more than 30 minutes in the 20 foot zone, then the Major Vapor Emission Response Plan shall automatically be placed into effect.

The Major Vapor Emission Response Plan shall also be immediately placed into effect if organic vapor levels are greater than 10 ppm above background at the 20 foot zone.

2.5.3 Major Vapor Emission Response Plan Activation

Upon activation of the Major Vapor Emission Response Plan, the following activities will be undertaken:

1. All Emergency Response Contacts as listed in the Health and Safety Plan will be contacted.

2. The local police authorities will immediately be contacted by the Safety Officer and advised of the situation. Evacuation or neighborhood notification plans can be discussed at that time.

3. Air monitoring will be conducted at 30-minute intervals within the 20-Foot Zones. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Safety Officer.

3.0 Record Keeping and Quality Control

For the duration of the field activities, a monitoring log book will be kept to record calibration, operational notes and monitoring readings. The results of the Community Air Monitoring Program will be incorporated by Stantec into the required reports.

Instrumentation will be calibrated and/or operationally checked, either daily or at intervals recommended by the manufacturer. Only approved calibration gases will be used. All operators will have been trained in the proper use, maintenance, limitation, and interpretation of results of the monitoring equipment.

Figures

This map may contain data from a variety of sources. This map is not intended to replace a survey by a Licensed Surveyor.
Stantec does not certify the accuracy of the data. This map is for reference only and should not be used for construction.

Geographic Information Systems

Cartographic Design By: Marc Bouchard

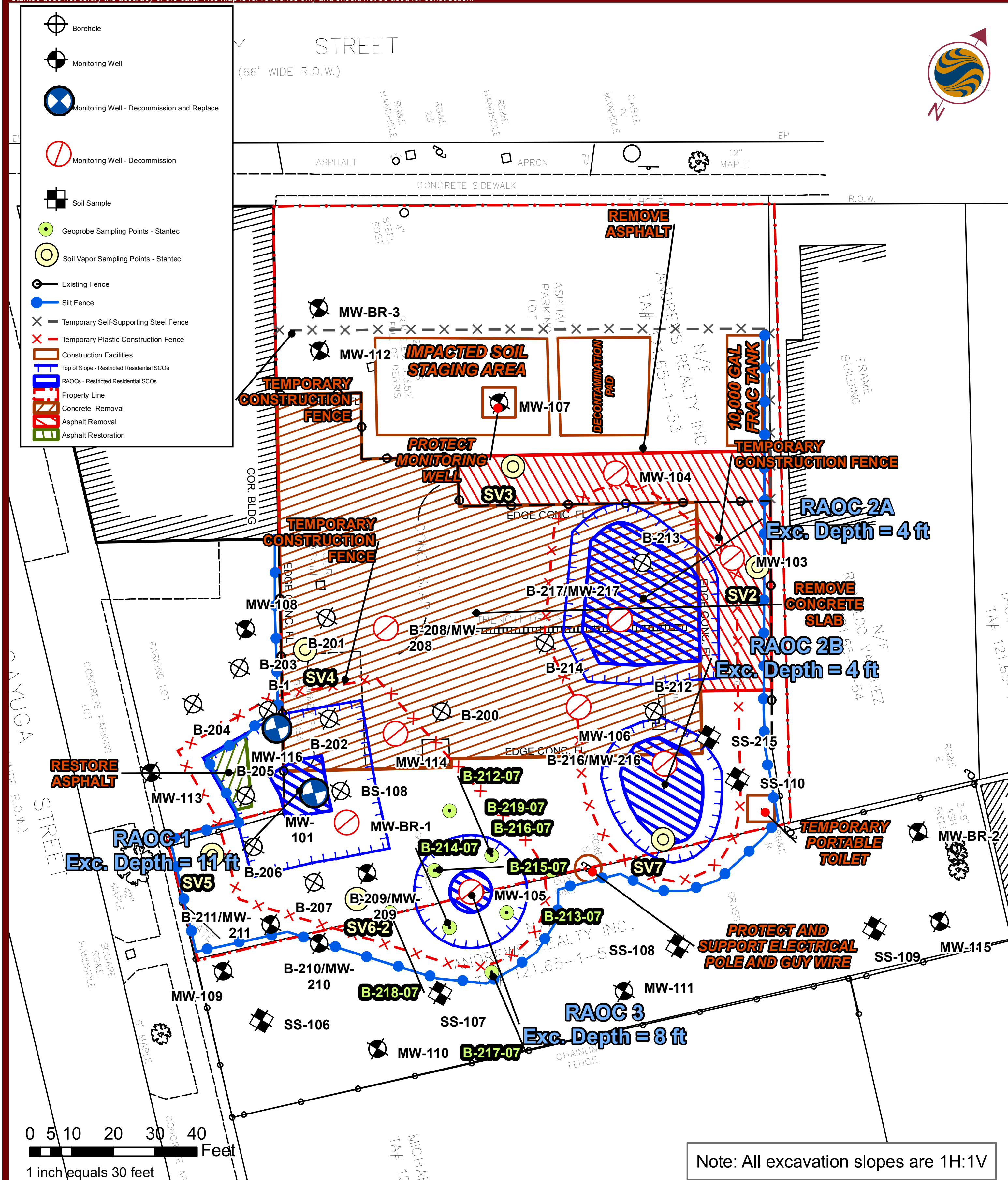
Thursday, January 24, 2008 6:37:03 AM
\\us1275-f02\shared_projects\190500196\drawing\RAWP_January2008\Figure1_RAWP_Site_Location_Jan08.mxd

Stantec Consulting
2250 Brighton Henrietta Townline Road
Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
www.stantec.com

Stantec

Figure 1 - Site Location
Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

This map may contain data from a variety of sources. This map is not intended to replace a survey by a Licensed Surveyor. Stantec does not certify the accuracy of the data. This map is for reference only and should not be used for construction.



Geographic Information Systems

Cartographic Design By: Marc Bouchard

Friday, February 8, 2008 9:30:19 AM

\\us1275-f02\shared_projects\190500196\drawing\RAWP_January2008\Figure2_RAWP_CAMP_Constr_Facilities_Jan08.mxd

Stantec Consulting
2250 Brighton Henrietta Townline Road
Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
www.stantec.com

Figure 2 - Construction Facilities

Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

Appendix C
Quality Assurance Project Plan

APPENDIX C

QUALITY ASSURANCE PROJECT PLAN
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK

Prepared for:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
6274 EAST AVON-LIMA ROAD
AVON, NEW YORK 14414

Prepared on Behalf of:
CITY OF ROCHESTER
30 CHURCH STREET, SUITE 300B
ROCHESTER, NEW YORK 14614

Prepared by:
STANTEC CONSULTING SERVICES INC.
2250 BRIGHTON HENRIETTA TOWN LINE ROAD
ROCHESTER, NEW YORK 14623

Stantec

FEBRUARY 2008

Stantec

APPENDIX C
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REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK

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Appendices

1.0 Introduction

On behalf of the City of Rochester, Stantec has prepared this Quality Assurance Project Plan (QAPP) for use during the Remedial Action Work Plan (RAWP) activities for the property located at 399 Gregory Street, Rochester, New York (Site) (Figure 1).

This QAPP presents the policies, organization, objectives, functional activities, and specific quality assurance and quality control activities to ensure the validity of data generated in the completion of the investigation. The purpose of the QAPP is to ensure that technical data generated are accurate and representative.

Quality Assurance (QA) is a management system for ensuring that information, data, and decisions resulting from investigation and environmental monitoring programs are technically sound, and properly documented. Quality Control (QC) is the functional mechanism through which quality assurance achieves its goals. Quality control programs, for example, define the frequency and methods of checks, audits, and reviews necessary to identify problems and dictate corrective actions to resolve these problems, thus ensuring high quality data. As such, a quality assurance and quality control program pertains to data collection, evaluation, and review activities, which are part of the investigation.

QA/QC procedures will be in accordance with applicable professional technical standards, government regulations and guidelines, and specific project goals and requirements. This QAPP has been prepared in accordance with New York State Department of Environmental Conservation (NYSDEC) and United States Environmental Protection Agency (EPA) Region II guidance documents.

The QAPP incorporates the following activities:

- Sample collection, control, chain-of-custody, and analysis;
- Document control;
- Laboratory instrumentation, analysis, and control; and
- Review of project reports.

Analytical samples will be collected in the field using standard operating procedures and sent to a NYSDEC-certified Analytical Services Protocol (ASP) laboratory for analysis. Duplicates, replicates, and spiked samples will be used to identify the quality of the analytical data. Field audits may be conducted to verify that proper sampling techniques and chain-of-custody procedures are followed. Field data compilation, tabulation, and analysis will be checked for accuracy. Calculations and other post-field tasks will be reviewed by senior project personnel. Equipment used to take field measurements will be maintained and calibrated in accordance with established procedures. Records of calibration and maintenance will be kept by assigned personnel. Field testing and data acquisition will be performed following strict guidelines as described herein.

Document control procedures will be used to coordinate the distribution, coding, storage, retrieval, and review of all data collected during all sampling tasks.

2.0 Project Description

This QAPP pertains to the completion of field activities and subsequent laboratory and data analysis associated with the Remedial Action activities at 399 Gregory Street (Figure 2). Previous investigations completed at the Site identified volatile organic compounds (VOCs) impacts to soil and groundwater. The Remedial Action activities are intended to remove the contamination from the Site.

2.1 SITE DESCRIPTION

The former Davidson Collision Site (Site No. 828091) is located at 399 Gregory Street and operated as an auto body shop from the early 1960s until it went out of business in March 1993. The City of Rochester (City) acquired the 399 Gregory Street parcel (County of Monroe Tax ID No. 121-650-0001.053.000) in November 2004 through delinquent tax foreclosure proceedings. The adjacent undeveloped grass-covered 10 Cayuga Street parcel was also part of Davidson Collision, however, it was purchased by a third party, Mr. John Trickey. Therefore, 10 Cayuga Street is not part of the site subject to the BCA.

Previous investigations at the site between 1991 and 1994 identified the disposal of a consequential amount of hazardous waste (primarily paint waste including paint thinner) through a pipe leading from a paint booth inside the shop to a storage container outside the building. This method of discharging paints and paint thinner, contaminated soil near the southwestern corner of the auto body shop. In January 1993, some contaminated soil from the waste disposal area was excavated, however, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and 1993 activities were performed without NYSDEC approval or oversight. In 1994 the NYSDEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the site. As such, the NYSDEC conducted an investigation in

2000-2002 to obtain additional information regarding the nature and extent of contamination at the site and to determine if the site represents a significant threat to human health or the environment.

2.2 INTRODUCTION OF 6 NYCRR PART 375 SCOS

NYSDEC 6 NYCRR Part 375 Regulations and Soil Cleanup Objectives came into effect in December 2006. It was agreed with the NYSDEC that TAGM 4046 RSCOs would be utilized for all reporting requirements for the Former Davidson Collision Site up to and including the revised Remedial Investigation and Alternatives Analysis Report first issued in September 2006 and revised in January 2008. Subsequent reports, including the Remedial Design Investigation Report issued in December 2008, would employ the new Part 375 SCOs instead of TAGM. For this Site, the City of Rochester selected the restricted use soil cleanup objective for the protection of public health in a restricted-residential setting as the recommended soil cleanup objective (Restricted Residential SCO)

3.0 Summary of Prior Investigations

Environmental studies that have been completed at the 399 Gregory Street Site and the adjacent 10 Cayuga Street parcel and for which reports were either reviewed by or prepared by Stantec include:

- a September 1991 Phase II Investigation[1];
- an August 1995 Preliminary Site Assessment Report[2];
- a March 2003 Site Investigation Report[3];
- a September 2006 Remedial Investigation and Alternatives Analysis Report (revised in January 2008)[4]; and
- a December 2007 Remedial Design Investigation Report[5].

Previous investigations at the Site between 1991 and 1994 identified the disposal of paint waste including paint thinner through a pipe leading from a paint booth inside the shop to a storage container outside the building. In January 1993, some contaminated soil from the waste disposal area was excavated. However, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and

1993 activities were performed without NYSDEC approval or oversight. In 1994, the NYSDEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the Site.

As such, the NYSDEC conducted an investigation in 2000-2002 to obtain additional information regarding the nature and extent of contamination at the Site and to determine if the Site represents a significant threat to human health or the environment. The NYSDEC concluded there was a small, highly impacted Volatile Organic Compound (VOC) source area, but nearby residents were not impacted. The City subsequently obtained an EPA Brownfield grant and applied to the NYSDEC to address the Site through the State's Brownfield Cleanup Program (BCP).

Given the results from the investigations performed prior to Stantec's involvement, Stantec's 2005 Remedial Investigation (RI) (revised in January 2008) focused on two areas of concern (AOCs) previously identified by the NYSDEC, based on TAGM 4046 Recommended SCOs. These two AOCs include the former waste paint disposal area (AOC1) and the former vehicle maintenance/trench drain area (AOC2). A third AOC was identified by the NYSDEC in their 2000-2002 investigation and was further delineated by a Remedial Design Investigation (RDI) performed by Stantec in 2007. In subsequent discussions, AOCs will be referred to as Remedial Areas of Concern (RAOC). The numbering scheme of AOCs and RAOCs has been maintained, such that AOC1 coincides with RAOC1, and so on.

The following summary of analytical results for soils utilizes Restricted Residential SCOs instead of the TAGM 4046 Recommended SCOs used in previous studies.

3.1 SOILS ANALYTICAL RESULTS

A summary of analytical results in excess of Restricted Residential SCOs is presented in Table 4. Also refer to Appendix A (Soil Management Plan) for complete analytical results for Stantec's RI and RDI.

3.1.1 RAOC1

Results from previous site investigations indicate no impacts from VOCs to soils at concentrations above Restricted Residential SCOs outside the previously investigated waste disposal and paint booth area (RAOC 1). Within RAOC1, comparison to Restricted Residential SCOs indicates exceedances for ethylbenzene, toluene and xylenes between 6 and 8 ft. bgs.

3.1.2 RAOC2

Within RAOC2, soil samples collected in B-213, B-216/MW-216 and B-217/MW-217 exceed Restricted Residential SCOs for metals. Cadmium exceeds its SCO in B-213 from ground surface to a depth of 4 feet, lead exceeds its SCO in B-217/MW-217 from 0 to 4 ft. bgs, while copper and lead exceed their respective SCOs in B-216/MW-216 from 0 to 4 ft. bgs. RAOC2 consists of two sub-areas: RAOC2A to the north, encompassing B-213 and B-217/MW-217, and RAOC2B to the south, which includes B-216/MW-216.

3.1.3 RAOC3

A third potential Remedial Area of Concern (RAOC3) was identified at the MW-105 location where metals impacts in excess of Restricted Residential SCOs (arsenic, cadmium and selenium) were reported in a 6-8 ft. bgs soil sample. This boring/monitoring well is located on the City property slightly east of RAOC1 along the common property line with 10 Cayuga Street. The RDI found no metals impacts in boreholes installed radially at regular intervals around MW-105 (refer to Figure 4 for borehole locations and Appendix A for RDI analytical results).

3.2 GROUNDWATER ANALYTICAL RESULTS

Metals in site-wide groundwater have exhibited elevated concentrations for iron, magnesium, manganese and sodium. These elements are common in regional soils and urban fill and as a result are often elevated in groundwater. In addition, cadmium was reported above its GSGV in one bedrock well, MW-BR3, in March 2001. Given the City's ordinance, which prohibits the use of drinking water wells, and the absence of completed exposure pathways, the site-wide presence of metals in groundwater does not warrant further investigation or remedial measures.

3.2.1 RAOC1

Groundwater samples collected during the RI were reported to contain low-level concentrations of VOCs in RAOC1 within MW-101 and MW-116 above NYSDEC groundwater standards and guidance values (GSGVs). During prior sampling events, VOCs were reported at much higher concentrations in both MW-101 and MW-116 suggesting that natural attenuation may be occurring.

Stantec observed a very thin (< 1/16-inch) light non-aqueous phase liquid (LNAPL) layer in MW-101. During a prior investigation, LNAPL was reported in nearby well MW-116. However, no LNAPL was detected in MW-116 or any other boring or well in the vicinity of MW-101 during the RI. Based upon these limited LNAPL findings, the presence of LNAPL appears to be a localized condition within RAOC1. Given the VOCs and LNAPL observed, remediation of groundwater impacts was recommended in RAOC1.

3.2.2 RAOC2

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC2.

3.2.3 RAOC3

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC3.

3.3 SOIL VAPOR ANALYTICAL RESULTS

A perimeter soil vapor survey was carried out as part of the RDI. Low level chlorinated and petroleum VOC concentrations were reported in both the soil vapor samples and background outdoor air sample collected on June 12, 2007 (refer to Appendix A for a summary of soil vapor analytical results). The results did not identify areas of significantly elevated concentrations of volatile chemicals in soil vapor nor do they indicate significant sources of subsurface vapor contamination that would present a significant risk of potential adverse SVI impacts on the Site or on adjacent properties. A possible explanation for the concentrations detected may be that the concrete slab and the asphalt parking surface are acting as a cap for capturing and containing residual volatile organic vapors.

4.0 Project Organization and Responsibility

This QAPP provides for designated qualified personnel to review products and provide guidance on QA matters. This QAPP also outlines the approach to be followed to ensure that products of sufficient quality are obtained. This structure will provide for direct and constant operational responsibility, clear lines of authority, and the integration of QA activities. The various QA functions of the project positions are explained in the following subsections.

Project Manager

The project manager will have overall responsibility for ensuring that the project meets the objectives and quality standards as presented in the Work Plan and this QAPP. He will be responsible for implementing the project and will have the authority to commit the resources necessary to meet project objectives and requirements. The project manager's primary function is to ensure that technical, financial, and scheduling objectives are achieved successfully. The project manager will provide the major point of contact and control for matters concerning the project. In addition, he will be responsible for technical quality control and project oversight, and will be the primary point-of-contact.

Team Leaders

The project manager will be supported by a team leader or leaders who will be responsible for leading and coordinating the day-to-day activities of the various resource specialists under their supervision. The team leader is a highly experienced environmental professional who will report directly to the project manager.

Technical Staff

The technical staff (team members) for this project will be drawn from corporate resources and appropriately qualified subcontractors. The technical team staff will be used to gather and analyze data, and to prepare various task reports and support materials. The designated technical team members will be experienced professionals who possess the degree of specialization and technical competence required to effectively and efficiently perform the required work.

Project QA Director

The Project QA Director will be responsible for maintaining QA for the project.

Laboratory Director

The laboratory director will be responsible for analytical work and works in conjunction with the QA unit. He maintains liaison with the QA officer regarding QA and custody requirements.

Laboratory Manager

The laboratory manager will maintain liaison with the laboratory director regarding QA elements of specific sample analyses tasks. He will report to the laboratory director and work in conjunction with the laboratory QA unit.

Laboratory QA Coordinator

The Laboratory QA officer will be responsible for overseeing the QA program within the laboratory and for maintaining all QC documentation. He reports directly to the laboratory director.

Laboratory Staff

Each member of the laboratory staff will perform an assigned QA or analytical function that is pertinent to and within the scope of his or her knowledge, experience, training, and aptitude. An individual will be assigned the responsibility for checking, reviewing, or otherwise verifying that a sample analysis activity has been correctly performed.

Laboratory Facilities

Laboratory work will be performed in accordance with guidelines established by NYSDEC, USEPA, the Water Pollution Control Federation, and/or the American Society for Testing and Materials (ASTM). In case of conflict, these guidelines and protocols will be considered in the order shown (i.e., NYSDEC criteria is of primary precedence). In addition, QA and QC programs will be maintained for the instruments and the analytical procedures used.

5.0 QA Objectives for Data Measurement

Measurements will be made to ensure that analytical results are representative of the media and conditions measured. Unless otherwise specified, data will be calculated and reported in units consistent with other organizations who report similar data to allow comparability of databases among organizations.

The key considerations for the QA assessment of generated data are accuracy, precision, completeness, representativeness, and comparability. These characteristics are defined below:

Accuracy: Accuracy is the degree of agreement of a measurement or average of measurements with an accepted reference or "true" value and is a measure of bias in the system.

Precision: Precision is the degree of mutual agreement among individual measurements of a given parameter.

Completeness: Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected to be obtained under correct normal conditions.

Representativeness: Representativeness expresses the degree to which data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition.

Comparability: Comparability expresses the confidence with which one data set can be compared to another.

5.1 QA/QC GOALS

The QA/QC goal will focus on controlling measurement error within the limits established and will ultimately provide a database for estimating the actual uncertainty in the measurement data.

Target values for detection limit, percent spike recovery and percent "true" value of known check standards, and relative percent difference of duplicates/replicates are provided in the referenced analytical procedures. It should be noted that target values are not always attainable. Instances may arise where high sample concentrations, non-homogeneity of samples, or matrix interferences preclude achievement of target detection limits or other quality control criteria. In such instances, the laboratory will report reasons for deviations from these detection limits or noncompliance with quality control criteria.

6.0 Sampling Procedures

The sampling of various environmental media will be completed as part of the investigation activities. Table 1 presents a Summary of Proposed Analytical Testing for the site including; location, matrix, and analytical requirements.

6.1 SAMPLING PROTOCOL

The following sections outline the sampling procedures for the collection of environmental media samples of soils and groundwater. Groundwater monitoring well installation procedures are described in the Work Plan.

6.1.1 Groundwater Samples from Monitoring Wells

New and existing groundwater monitoring wells will be developed prior to purging and sampling using disposable polyethylene bailers, dedicated Waterra inertial pumps or dedicated peristaltic pump tubing. Prior to development, wells will be allowed to equilibrate for at least 48-hours following installation. All development water will be collected and stored on site in 55-gallon drums or passive diffusion bags (PDBs). All drums or PDBs will be labeled with paint markers according to matrix, location and date of generation. Turbidity readings and the number of consecutive well volumes removed will be recorded during well development. The wells will be developed to reduce sediment and turbidity to the maximum extent practical.

Following well development, each well will be allowed to equilibrate for at least 24-hours prior to purging and sampling. Purging of each new and existing well will be performed with a low flow peristaltic pump and dedicated polyethylene tubing or disposable polyethylene bailers. Purging of each well for at least three consecutive well volumes or until dry will allow representative formation water to enter the well prior to sample collection. Water quality field parameters (turbidity, pH, specific conductance and temperature) will be recorded during purging and sampling.

Immediately following the completion of purging and monitoring well recovery, groundwater samples will be collected using a dedicated disposable polyethylene bailer. The groundwater sample will be collected from the middle portion of the water column. New latex gloves will be used for collection of each sample. Each sample container will be labeled, handled, packaged, and shipped in accordance with the procedures as outlined in Section 6.0.

6.1.2 Soil Sampling from Open Excavations

Soil at the bottom and sidewalls of the open excavations will be screened with a photoionization detector (PID) in the field. Based upon the PID readings and visual or olfactory evidence of impacts, Stantec proposes to take one sample from the bottom of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.

Using this information, the following samples are required for each RAOC.

RAOC 1 – Five (5) total samples, four (4) sidewalls and one (1) floors.

RAOC 2 – Ten (10) total samples, Eight (8) sidewalls and two (2) floors.

RAOC 3 – Five (5) total samples, four (4) sidewalls and one (1) floor.

Samples will be collected with a stainless steel trowel. New latex gloves will be used for placing the sample into the laboratory glassware.

6.2 FIELD QUALITY CONTROL SAMPLES

A summary of the following quality control samples is presented in attached Table 2.

6.2.1 Field Duplicates

Field quality control samples will be collected to verify reproducibility of the sampling and analytical methods. Field duplicates will be obtained as outlined in Table 1 and include the following:

- one field duplicate groundwater sample collected from representative groundwater monitoring well (baseline);
- one field duplicate soil sample collected from representative final excavation.

6.2.2 Trip Blanks

Trip blanks will be used to assess whether groundwater, has been exposed to volatile constituents during sample storage and transport. Trip blanks will be submitted at a frequency of once per day, per cooler containing water to be analyzed for volatile organics. The trip blank for water samples will consist of a container filled by the laboratory with analyte-free water. The trip blank will remain unopened throughout the sampling event and will only be analyzed for volatile organics.

6.2.3 Matrix Spike/Matrix Spike Duplicates

Matrix Spike/Matrix Spike Duplicates (MS/MSD) will be obtained as outlined on Table 1 and include the following:

- one MS/MSD groundwater sample collected from representative groundwater monitoring well (baseline).
- one MS/MSD soil sample collected from representative final excavation.

6.2.4 Laboratory Quality Control Checks

Internal laboratory quality control checks will be used to monitor data integrity. These checks include method (equipment) blanks, spike blanks, internal standards, surrogate samples, calibration standards, and reference standards.

6.3 SAMPLE CONTAINERS

The volumes and containers required for the sampling activities are included in Table 3. Pre-washed sample containers will be provided by the laboratory. All bottles are to be prepared in accordance with EPA bottle washing procedures.

6.4 DECONTAMINATION

Dedicated and/or disposable sampling equipment will be used to minimize decontamination requirements and the possibility of cross-contamination.

The water level indicator and stainless steel trowels are pieces of sampling equipment that can be used at more than one location. They will be decontaminated between locations by the following decontamination procedures:

- Initial cleaning of any foreign matter with paper towels;
- Low phosphate detergent wash;
- De-ionized water rinse; and
- Air dry.

6.5 LEVELS OF PROTECTION/SITE SAFETY

Field sampling will be conducted under a documented Health and Safety Plan. On the basis of air monitoring, the level of protection may be downgraded or upgraded at the discretion of the site safety officer. Crew members will stand upwind of excavations and open boreholes or wellheads during the collection of samples, when possible.

All work will initially be conducted in Level D (refer to Site Specific Health and Safety Plan). Air purifying respirators (APRs) will be available if monitoring indicates an upgrade to Level C is appropriate.

7.0 Sample Custody

This section describes standard operating procedures for sample identification and chain-of-custody to be used for all field activities. The purpose of these procedures is to ensure that the quality of the samples is maintained during collection, transportation, storage, and analysis. All chain-of-custody requirements comply with standard operating procedures indicated in USEPA and NYSDEC sample-handling protocol.

Sample identification documents will be carefully prepared so that sample identification and chain-of-custody can be maintained and sample disposition controlled. Sample identification documents include:

- Field records,
- Sample label,
- Custody seals, and
- Chain-of-custody records.

7.1 CHAIN-OF-CUSTODY

The primary objective of the chain-of-custody procedures is to provide an accurate written or computerized record that can be used to trace the possession and handling of a sample from collection to completion of all required analyses.

7.1.1 Sample Labels

Sample labels attached to or affixed around the sample container must be used to properly identify all samples collected in the field. The sample labels are to be placed on the bottles so as not to obscure any QA/QC lot numbers on the bottles. Sample information must be printed in a legible manner using waterproof ink. Field identification must be sufficient to enable cross-reference with the field sampling records or sample logbook. For chain-of-custody purposes, all QC samples are subject to exactly the same custodial procedures and documentation as "real" samples.

7.1.2 Custody Seals

Custody seals are preprinted adhesive-backed seals with security slots designed to break if the seals are disturbed. Sample shipping containers (coolers, cardboard boxes, etc., as appropriate) are sealed in as many places as necessary to ensure security. Seals must be signed and dated before use. On receipt at the laboratory, the custodian must check (and certify, by completing logbook entries) that seals on shipping containers are intact. Strapping or other clear packaging tape should be placed over the seals to ensure that seals on shipping containers are not accidentally broken during shipment.

7.1.3 Chain-Of-Custody Record

The chain-of-custody record must be fully completed at least in duplicate by the field technician who has been designated by the project manager as being responsible for sample shipment to the appropriate laboratory for analysis. In addition, if samples are known to require rapid turnaround in the laboratory because of project time constraints or analytical concerns (e.g., extraction time or sample retention period limitations, etc.), the person completing the chain-of-custody record should note these constraints in the "Remarks" section of the custody record.

7.1.4 Field Custody Procedures

- As few persons as possible should handle samples.
- Sample bottles will be obtained pre-cleaned by the laboratory and shipped to the sampling personnel in charge of the field activities. Coolers or boxes containing cleaned bottles should be sealed with a custody tape seal during transport to the field or while in storage prior to use.
- The sample collector is personally responsible for the care and custody of samples collected until they are transferred to another person or dispatched properly under chain-of-custody rules.
- The sample collector will record sample data in a controlled field notebook and/or on appropriate field sampling records.
- The site team leader will determine whether proper custody procedures were followed during the fieldwork and decide if additional samples are required.

7.2 DOCUMENTATION

7.2.1 Sample Identification

All containers of samples collected from the project will be identified using the following format on a label or tag affixed to the sample container:

XX-AA-BBB.C.D-YY-ZZ

XX – This set of initials identifies the project, in this case the Gregory Street Remediation Project:

GR

AA – These initials identify the sample origin. Actual sample locations will be numbered sequentially:

SB – Soil Boring

TP – Test Pit

MW – Monitoring Well

ES – Excavation Sidewall

EB – Excavation Bottom

SV – Soil Vapor Probe

AA – Ambient Indoor or Outdoor Air

BBB.C.D – These initials identify the borehole, test pit, air/vapor sampling point or monitoring well number (BBB, three digits), and in the case of excavation sidewall and/or excavation bottom samples, the sample location number (BBB, starting at 001) followed by a number from 1 to 9 (shallow to deep) identifying the depth interval, only in the case of sidewall samples (C), and a letter from A-Z identifying the number of over-excavations (D), the initial sidewall or bottom sample being designated by “A”.

YY – These initials identify the sample matrix in accordance with the following abbreviations:

S – Soil

GW – Groundwater

SW – Surface Water

SE – Sediment

SV – Soil Vapor

IA – Indoor Air

OA – Outdoor Air

ZZ – Sub Sample Type – Field duplicates, rinsate blanks and trip blanks will be assigned unique sample numbers (if applicable):

DU – Duplicate Sample

RB – Rinsate (Equipment) Blank

TB – Trip Blank

MS/MSD – Matrix Spike/Matrix Spike Duplicate

Each sample will be labeled, chemically preserved, if required, and sealed immediately after collection. To minimize handling of sample containers, labels will be filled out prior to sample collection. The sample label will be filled out using waterproof ink and will be firmly affixed to the sample containers. The sample label will give the following information:

- Name of sampler;
- Date and time of collection;
- Sample number;
- Intended analysis; and
- Preservation required.

7.2.2 Daily Logs

Daily logs and data forms are necessary to provide sufficient data and observations to enable participants to reconstruct events that occurred during the project. All daily logs will be kept in a notebook and consecutively numbered. All entries will be made in waterproof ink, dated, and signed. Sampling data will be recorded in the sampling records. All information will be completed in waterproof ink. Corrections will be made according to the procedures given at the end of this section.

7.3 SAMPLE HANDLING, PACKAGING, AND SHIPPING

The transportation and handling of samples will be accomplished in a manner that not only protects the integrity of the sample, but also prevents any detrimental effects due to the possible hazardous nature of samples. Regulations for packaging, marking, labeling, and shipping hazardous materials are promulgated by the United States Department of Transportation (DOT) in the Code of Federal Regulations, 49 CFR 171 through 177.

All chain-of-custody requirements will comply with standard operating procedures in the NYSDEC and USEPA sample handling protocol. Field personnel will make arrangements for transportation of samples to the laboratory. When custody is relinquished to a shipper, field personnel will telephone the laboratory custodian to inform him of the expected time of arrival of the sample shipment and to advise him of any time constraints on sample analysis. All samples will be delivered to the laboratory no later than 48 hours from the day of collection.

8.0 Calibration Procedures and Frequency

Instruments and equipment used during sampling and analysis will be operated, calibrated, and maintained according to the manufacturer's guidelines and recommendations as well as criteria set forth in the applicable analytical methodology references.

8.1 FIELD INSTRUMENTS

A calibration program will be implemented to ensure that routine calibration is performed on all field instruments. Field team members familiar with the field calibration and operations of the equipment will maintain proficiency and perform the prescribed calibration procedures outlined in the Operation and Field Manuals accompanying the respective instruments. Calibration records for each field instrument used on the project will be maintained on-site during the respective field activities and a copy will be kept in the project files.

8.1.1 Portable Total Organic Vapor Monitor

Any vapor monitor used will undergo routine maintenance and calibration prior to shipment to the project site. Daily calibration and instrument checks will be performed by a trained team member at the start of each day. Daily calibrations will be performed according to the manufacturer's specifications and are to include the following:

- Battery check: If the equipment fails the battery check, recharge the battery.
- Gas standard: The gauge should display an accurate reading when a standard gas is used.
- Cleaning: If proper calibration cannot be achieved, then the instrument ports must be cleaned.

8.1.2 pH, Specific Conductance and Turbidity

The following steps should be observed by personnel engaged in groundwater sampling for pH and specific conductance:

- The operation of the instrument should be checked with fresh standard buffer solution (pH 4 and pH 10) prior to each day's sampling.
- The specific conductance meter should be calibrated prior to each day's sampling using a standard solution of known specific conductance.
- The turbidity meter should be calibrated prior to each day’s sampling using a standard solution of known turbidity.

More frequent calibrations may be performed as necessary to maintain analytical integrity. Calibration records for each field instrument used on the project should be maintained and a copy kept in the project files.

8.2 LABORATORY INSTRUMENTS

Laboratory calibration procedures are addressed in detail in the laboratory QAPP (Appendix A). All calibration procedures will be consistent with the method used for analysis.

9.0 Analytical Procedures

9.1 FIELD ANALYTICAL PROCEDURES

On-site procedures for analysis of total organic vapor and other field parameters are addressed in the Work Plan.

9.2 LABORATORY ANALYTICAL PROCEDURES

Analytical methods to be used for the sampling tasks are referenced in the NYSDEC's Analytical Services Protocols (ASP), 1995 or its most current version.

Specific analytical methods for constituents of interest in soil, groundwater, and air are listed in Table 1. The laboratory will maintain and have available for the appropriate operators standard operating procedures relating to sample preparation and analysis according to the methods stipulated in Table 1.

10.0 Data Reduction and Reporting

QA/QC requirements will be strictly adhered to during sampling and analytical work. Laboratory data generated will be reviewed by comparing and interpreting results from chromatograms (responses, stability of retention times), accuracy (mean percent recovery of spiked samples), and precision (reproducibility of results). Refer to Section 10 for further discussion of QA/QC protocol.

Data storage and documentation will be maintained using logbooks and data sheets that will be kept on file. Analytical QC will be documented and included in the analytical testing report. A central file will be maintained for the sampling and analytical effort after the final laboratory report is issued.

Relevant calculations and data manipulations are included in the appropriate methodology references. Control charts and calibration curves will be used to review the data and identify outlying results. Prior to the submission of the report to the client, all data will be evaluated for precision, accuracy, and completeness. Sections 4.0 and 13.0 of this document include some of the QC criteria to be used in the data evaluation process.

Laboratory reports will be reviewed by the laboratory supervisor, the QA officer, laboratory manager and/or director, and the project manager. Analytical reports will contain a data tabulation including results and supporting QC information will be provided. Raw data will be available for later inspection, if required, and maintained in the control job file.

11.0 Internal Quality Control Checks

QC data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of glassware and reagents. The procedures to be followed for internal quality control checks are to be consistent with NYSDEC ASP and NYSDOH Environmental Laboratory Approval Program (ELAP).

12.0 Performance and System Audits

12.1 FIELD AUDITS

The Project QA Director may conduct episodic audits of the operations at the site to ensure that work is being performed in accordance with the Work Plan and associated standard operating practice. The audit will cover, but not necessarily be limited to, such areas as:

- Conformance to standard operating procedures
- Completeness and accuracy of documentation
- Chain of custody procedures
- Construction specifications

12.2 LABORATORY AUDITS

In addition to any audits required by NYSDEC, the Project QA Director may chose to audit the laboratory. These additional audits may take the form of performance evaluation samples or on-site inspections of the laboratory. Performance evaluation samples may be either blind samples or samples of known origin to the laboratory. Reasonable notice will be provided if the audit is to include an on-site inspection of the laboratory.

13.0 Preventive Maintenance

13.1 FIELD

Field personnel assigned to complete the work will be responsible for preventative maintenance of all field instruments. The field sampling personnel will protect the portable total organic vapor monitors, temperature, conductivity, pH and turbidity instruments by placing them in portable boxes and/or protective cases.

Field equipment will be subjected to a routine maintenance program, prior to and after each use. The routine maintenance program for each piece of equipment will be in accordance with the manufacturer's operations and maintenance manual. All equipment will be cleaned and checked for integrity after each use. Necessary repairs will be performed immediately after any defects are observed, and before the item of equipment is used again. Equipment parts with a limited life (such as batteries, membranes and some electronic components) will be periodically checked and replaced or recharged as necessary according to the manufacturer's specifications.

13.2 LABORATORY

The laboratory's preventative maintenance procedures are provided in the laboratory's QAPP (Appendix A).

14.0 Data Assessment Procedures

Performance of the following calculations will be completed by Ms. Judy Harry of Data Validation Services for the completion of a Data Usability Summary Report (DUSR). The purpose of the DUSR will be to evaluate the accuracy, precision and completeness of collected measurement data.

14.1 PRECISION

Precision of a particular analysis is measured by assessing its performance with duplicate or replicate samples. Duplicate samples are pairs of samples taken in the field and transported to the laboratory as distinct samples. Their identity as duplicates is sometimes not known to the laboratory and usually not known to bench analysts, so their usefulness for monitoring analytical precision at bench level is limited. For most purposes precision is determined by the analysis of replicate pairs (i.e., two samples prepared at the laboratory from one original sample). Often in replicate analysis the sample chosen for replication does not contain target analytes so that quantification of precision is impossible. Replicate pairs of spiked samples, known as matrix spike/matrix spike duplicate samples, are used for precision studies. This has the advantage that two real positive values for a target analyte can be compared.

Relative Percent Difference (RPD), is calculated as follows:

$$RPD = \left| \frac{C_1 - C_2}{(C_1 + C_2)/2} \right| \times 100\%$$

where C_1 is the concentration in the original sample and C_2 is the concentration in the sample replicate.

RPDs must be compared to the method RPD for the analysis. The analyst or his supervisor must investigate the cause of RPDs outside stated acceptance limits. This may include a visual inspection of the sample for non-homogeneity, analysis of check samples, etc. Follow-up action may include sample re-analysis or flagging of the data as suspect if problems cannot be resolved.

14.2 ACCURACY

Accuracy of a particular analysis is measured by assessing its performance with “known” samples. These “knowns” can take the form of EPA or NBS traceable standards (usually spiked into a pure water matrix), or laboratory prepared solutions of target analytes in pure water or a sample matrix; or (in the case of GC or GC/MS analyses) solutions of surrogate compounds which can be spiked into every sample and are designed to mimic the behavior of target analytes without interfering with their determination. In each case the recovery of the analyte is measured as a percentage, corrected for analytes known to be present in the original sample if necessary, as in the case of a matrix spike analysis. For EPA or NBS supplied known solutions, this recovery is compared to the published data that accompany the solution. For prepared solutions, the recovery is compared to EPA-developed data or previous data as available. For surrogate compounds, recoveries are compared to USEPA CLP acceptable recovery tables. If recoveries do not meet required criteria, then the analytical data for the batch (or, in the case of surrogate compounds, for the individual sample) are considered potentially inaccurate.

Accuracy is expressed as the Percent Recovery (%R), which is calculated as follows:

$$\%R = \frac{(X_S - X_U)}{K} \times 100$$

Where:

X_S = Measured value of the spike sample

X_U = Measured value of the unspiked sample

K = Known amount of spike in the sample

For highly contaminated samples, recovery of the matrix spike may depend on sample homogeneity. As a rule, analyses are not corrected for recovery of matrix spike or surrogate compounds.

14.3 COMPLETENESS

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the total amount expected to be obtained under normal conditions. Completeness for each parameter is calculated as:

$$Completeness = \frac{N_S}{N_R} \times 100$$

where N_S is the number of successful analyses and N_R is the number of requested analyses.

Target value for completeness for all parameters is 100%. A completeness value of 95% will be considered acceptable. Incomplete results will be reported to the client project officer.

14.4 REPRESENTATIVENESS

The characteristic of representativeness is not quantifiable. Subjective factors to be taken into account are as follows:

- The degree of homogeneity of a site;
- The degree of homogeneity of a sample taken from one point in a site; and
- The available information on which a sampling plan is based.

To maximize representativeness of results, sampling techniques and sample locations will be carefully chosen so that they provide laboratory samples representative of the site and the specific area.

15.0 Corrective Action

Corrective actions can be initiated as a result of performance and system audits, laboratory and interfield comparison studies, data validation, and/or a QA program audit. They may also be required as a result of a request from project representatives. All corrective action necessary to resolve analytical problems will be taken. Success or failure of corrective actions will be reported with an estimate of effect on data quality, if any.

Corrective actions may include altering procedures in the field, conducting subsequent audits, or modifying project protocol. Time and type of corrective action, if needed, will depend on the severity of the problem and relative overall project importance. The project manager is responsible for initiating corrective action and the team leader is responsible for its implementation in the correction of field non-conformance corrective actions.

16.0 Quality Assurance Reports

Upon completion of a project sampling effort, analytical and QC data will be included in a comprehensive report that summarizes the work and provides a data evaluation. A discussion of the validity of the results in the context of QA/QC procedures will be made, as well as a summation of all QA/QC activity.

Serious analytical problems will be reported. Time and type of corrective action, if needed, will depend on the severity of the problem and relative overall project importance. Corrective actions may include altering procedures in the field, conducting an audit, or modifying laboratory protocol. Corrective actions will be implemented after notification of project representatives.

References

[1] "Phase II Investigation, Davidson's Collision, 399 Gregory Street, Rochester, New York. Prepared by Day Environmental, Inc., September 21, 1991."
[2] "Preliminary Site Assessment Report, Davidson's Collision, NYSDEC Site No. 828091, Rochester, New York. Prepared by ABB Environmental Services, August 1995."

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[3] "Site Investigation Report, Davidson's Collision, Site No. 828091, Rochester, New York. Prepared by Frank Sowers, PE, New York State Department of Environmental Conservation, Division of Environmental Remediation, Region 8, March 2003."
[4] "Remedial Investigation and Alternative Analysis Report, Former Davidson Collision Site, 399 Gregory Street, Rochester, New York. Prepared by Stantec Consulting Services Inc., September 2006, revised January 2008."
[5] "Remedial Design Investigation Report, Former Davidson Collision Site, 399 Gregory Street, Site No. C828091, City of Rochester, Monroe County. Prepared by Stantec Consulting Services Inc., December 2007."

Figures

This map may contain data from a variety of sources. This map is not intended to replace a survey by a Licensed Surveyor.
Stantec does not certify the accuracy of the data. This map is for reference only and should not be used for construction.

Geographic Information Systems

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Stantec Consulting
2250 Brighton Henrietta Townline Road
Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
www.stantec.com

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Figure 1 - Site Location

Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

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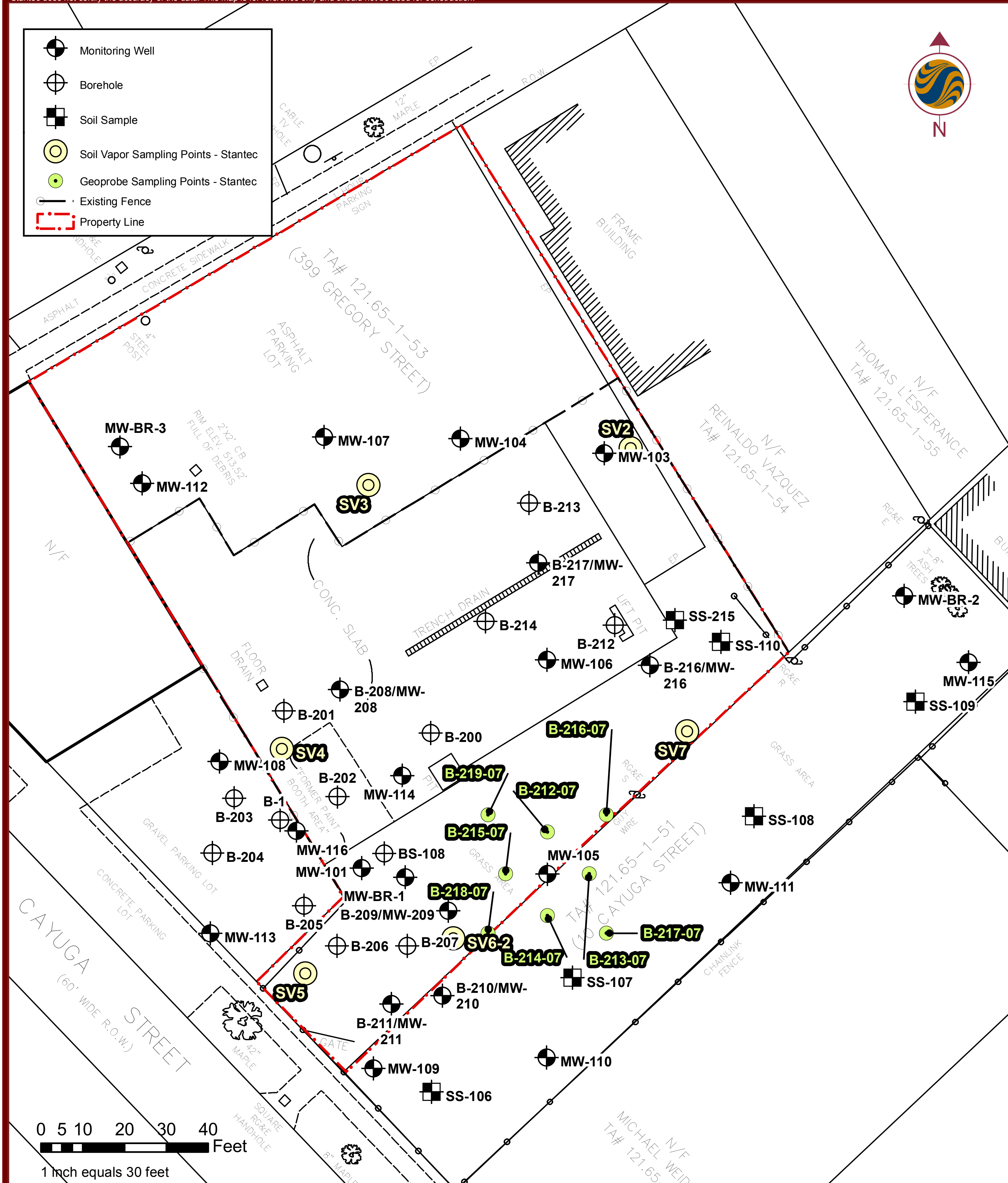

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Stantec Consulting
2250 Brighton Henrietta Townline Road
Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
www.stantec.com

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Figure 2 - Soil Boring and Monitoring Well Locations

Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY

Tables

TABLE 1
SUMMARY OF PROPOSED ANALYTICAL TESTING
QAPP - Remedial Action Work Plan
399 Gregory Street
Rochester, New York

LOCATION		Matrix	TCL VOCs	TCL SVOCs	TAL Metals	TCL PCBs	TPH
Confirmatory Soil Samples							
RAOC1	Side 1	soil	X				
	Side 2	soil	X				
	Side 3	soil	X				
	Side 4	soil	X				
	Floor 1	soil	X				
RAOC2A	Side 1	soil			X		
	Side 2	soil			X		
	Side 3	soil			X		
	Side 4	soil			X		
	Floor 1	soil			X		
RAOC2B	Side 1	soil			X		
	Side 2	soil			X		
	Side 3	soil			X		
	Side 4	soil			X		
	Floor 1	soil			X		
RAOC3	Side 1	soil			X		
	Side 2	soil			X		
	Side 3	soil			X		
	Side 4	soil			X		
	Floor 1	soil			X		
Soil DUP - Excavation		soil	4		4		
MS/MSD - Excavation		soil	2		2		
TOTAL (Confirmatory Soil Samples):			**5**	**0**	**15**	**0**	**0**
TOTAL (QA Confirmatory Soil Samples):			**6**	**0**	**6**	**0**	**0**

TABLE 1
SUMMARY OF PROPOSED ANALYTICAL TESTING
QAPP - Remedial Action Work Plan
399 Gregory Street
Rochester, New York

LOCATION	Matrix	TCL VOCs	TCL SVOCs	TAL Metals	TCL PCBs	TPH
Baseline Groundwater Samples						
Existing Wells						
MW-107	groundwater	X				
MW-113	groundwater	X				
MW-208	groundwater	X				
MW-209	groundwater	X				
New Wells						
MW-116R	groundwater	X				
MW-101R	groundwater	X				
MS/MSD	groundwater	X				
GW-DUP	groundwater	X				
Trip Blank	water	X				
TOTAL (Groundwater Samples per Monitoring Event):		**6**	**0**	**0**	**0**	**0**
TOTAL (QA Groundwater Samples per Monitoring Event):		**3**	**0**	**0**	**0**	**0**
Total Groundwater Samples for 1 Year of Monitoring		**24**	**0**	**0**	**0**	**0**
Total QA Groundwater Samples for 1 Year of Monitoring		**12**	**0**	**0**	**0**	**0**
Total Soil & Groundwater Analytical Samples:		**29**	**0**	**15**	**0**	**0**
Total Soil & Groundwater QA Samples:		**18**	**0**	**6**	**0**	**0**
Total Soil & Groundwater Samples for Project:		**47**	**0**	**21**	**0**	**0**

Notes:

1. TCL VOCs - Target Compound List Volatile Organic Compounds SOM01.2.
2. TCL SVOCs - Target Compound List Semi-volatile Organic Compounds SOM01.2.
3. TAL Inorganics - Target Analyte List Inorganics ILM05.4.
4. TCL PCBs - Target Compound List Polychlorinated Biphenyls SOM01.2.
5. MS/MSD - Matrix Spike/Matrix Spike Duplicate.
6. Dup = Field Duplicate Sample.
7. Quarterly groundwater samples will be the same as Baseline.

TABLE 2

SUMMARY OF QUALITY CONTROL CHECKS

QAPP - Remedial Action Work Plan
399 Gregory Street
Rochester, New York

Type of QC Check	Frequency	Min. Number Required for Project	Remarks
Laboratory Blanks			
Method Blanks	1 per sample batch	1 or 5% of batch size	Batch may include samples from other projects
Reagent/Solvent Blanks	1 per lot	1	
Standard Reference Blanks	1 per sample batch	1 or 5% of batch size	Batch may include samples from other projects
Field Samples			
Matrix Spike/Matrix Spike Duplicates	1 per matrix contingent on total number of samples [soil and groundwater]	1 or 5% of batch size	Batch may include samples from other projects
Trip Blanks	1 per shipment of water samples	1 minimum - based on number of water sample shipments	Trip Blanks to be prepared by Analytical Laboratory
Field Duplicates	1 per matrix	1 for soil	Select a sample with suspected contamination impacts.
		1 for groundwater	

TABLE 3
REQUIRED SAMPLE CONTAINERS, VOLUMES, PRESERVATION, AND HOLDING TIMES FOR ANALYTICAL SAMPLES

QAPP - Remedial Action Work Plan
399 Gregory Street
Rochester, New York

Media	Type of Analysis	Required Container	Preferred Sample Volume	Preservation	Maximum Holding Time
Soil	VOCs by EPA Method SOM01.2	4 oz.cwm	4 oz.	Cool 4°C	VSTR + 10 days
	SVOCs by EPA Method SOM01.2	4 oz.cwm	4 oz.	Cool 4°C	VSTR + 5 days
	PCBs by EPA Method SOM01.2	4 oz.cwm	4 oz.	Cool 4°C	VSTR + 5 days
	TAL Metals by EPA Method ILM05.4	4 oz.cwm	4 oz.	Cool 4°C	VSTR + 6 Months
Groundwater	VOCs by EPA Method SOM01.2	(2) 40 ml glass vials	80 ml	pH<2, HCL	VTSR + 10 days if acidified with HCL
	SVOCs by EPA Method SOM01.2	1000 ml amber glass jar	1000 ml	pH<2, HCL	VTSR + 5 days if acidified with HCL
	PCBs by EPA Method SOM01.2	1000 ml amber glass jar	1000 ml	Cool 4°C	VTSR + 5 days if acidified with HCL
	TAL Metals by EPA Method ILM05.4	100-200 ml plastic or glass jar	100-200 ml	pH<2, HNO3	VTSR + 6 Months

Notes:
1. Samples have to be received by the lab within 48 hours of the first sample being taken.
2. VTSR = Validated Time of Sample Receipt at laboratory
3. cwm = clear wide mouth jar

Appendix A
Laboratory QA/QC Manual

Appendix D
Health and Safety Plan

APPENDIX D
HEALTH AND SAFETY PLAN
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK

Prepared for:
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
6274 EAST AVON-LIMA ROAD
AVON, NEW YORK 14414

Prepared on Behalf of:
CITY OF ROCHESTER
30 CHURCH STREET, SUITE 300B
ROCHESTER, NEW YORK 14614

Prepared by:
STANTEC CONSULTING SERVICES INC.
2250 BRIGHTON HENRIETTA TOWN LINE ROAD
ROCHESTER, NEW YORK 14623

Stantec

FEBRUARY 2008

Stantec

APPENDIX D
HEALTH AND SAFETY PLAN
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
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1.0 Introduction

The following Health and Safety Plan (HASP) describes personal safety protection standards and procedures to be followed by Stantec staff during on-site Remedial Action Work Plan activities at 399 Gregory Street, Rochester, New York (Figure 1). Remedial Action activities include a Remedial Design Investigation (RDI) including Geoprobe soil borings, groundwater monitoring well decommissioning/ installations, excavation and disposal of impacted soils, application of an in-situ, bio-augmentation additive to the open RAOC 1 excavation, soil and groundwater analytical sampling and a one year of post excavation groundwater monitoring program.

This HASP establishes mandatory safety procedures and personal protection standards pursuant to the Occupational Safety and Health Administration (OSHA) regulations 29 Code of Federal Regulations (CFR) 1910.120. The HASP applies to all Stantec personnel conducting any site work, as defined in 29 CFR 1910.120(a). All personnel involved in the mentioned activities must familiarize themselves with this HASP, comply with its requirements and have completed the required health and safety training and medical surveillance program participation pursuant to 29 CFR 1910.120 prior to beginning any work on site.

THIS HASP IS FOR THE EXPRESSED USE OF STANTEC CONSULTING GROUP, INC. EMPLOYEES. ALL OTHER CONTRACTORS TO BE WORKING IN THE EXCLUSION AREAS ARE REQUIRED BY LAW TO DEVELOP THEIR OWN HASP, AS WELL TO MEET ALL PERTINENT ASPECTS OF OSHA REGULATIONS. STANTEC RESERVES THE RIGHT TO STOP ANY SITE WORK, WHICH IS DEEMED TO POSE A HEALTH AND SAFETY THREAT TO ITS STAFF.

On-site daily safety meetings will be conducted by Stantec for its employees and subcontractors. The form included in Appendix A will be used for guidance during these meetings. The purpose of the meetings is to familiarize the site workers with the known hazards at the site and to discuss the proper safety and emergency procedures.

1.1 SITE BACKGROUND

This project is being performed as part of the City of Rochester’s 2003 Brownfield Assessment grant from the United States Environmental Protection Agency (EPA). The remediation of the Davidson Collision site is a key to the City’s efforts to redevelop vacant and abandoned properties located throughout the City in densely populated commercial and residential areas.

The former Davidson Collision Site (Site No. 828091) is located at 399 Gregory Street and operated as an auto body shop from the early 1960s until it went out of business in March 1993. The City of Rochester (City) acquired the 399 Gregory Street parcel (County of Monroe Tax ID No. 121-650-0001.053.000) in November 2004 through delinquent tax foreclosure proceedings. The adjacent undeveloped grass-covered 10 Cayuga Street parcel was also part of Davidson Collision, however, it was purchased by a third party, Mr. John Trickey. Therefore, 10 Cayuga Street is not part of the site subject to the BCA.

Previous investigations at the site between 1991 and 1994 identified the disposal of a consequential amount of hazardous waste (primarily paint waste including paint thinner) through a pipe leading from a paint booth inside the shop to a storage container outside the building. This method of discharging paints and paint thinner, contaminated soil near the southwestern corner of the auto body shop. In January 1993, some contaminated soil from the waste disposal area was excavated, however, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and 1993 activities were performed without NYSDEC approval or oversight. In 1994 the NYSDEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the site. As such, the NYSDEC conducted an investigation in 2000-2002 to obtain additional information regarding the nature and extent of contamination at the site and to determine if the site represents a significant threat to human health or the environment.

1.2 INTRODUCTION OF 6 NYCRR PART 375 SCOS

NYSDEC 6 NYCRR Part 375 Regulations and Soil Cleanup Objectives came into effect in December 2006. It was agreed with the NYSDEC that TAGM 4046 RSCOs would be utilized for all reporting requirements for the Former Davidson Collision Site up to and including the revised Remedial Investigation and Alternatives Analysis Report first issued in September 2006 and revised in January 2008. Subsequent reports, including the Remedial Design Investigation Report issued in December 2008, would employ the new Part 375 SCOs instead of TAGM. For this Site, the City of Rochester selected the restricted use soil cleanup objective for the protection of public health in a restricted-residential setting as the recommended soil cleanup objective (Restricted Residential SCO)

2.0 Summary of Prior Investigations

Environmental studies that have been completed at the 399 Gregory Street Site and the adjacent 10 Cayuga Street parcel and for which reports were either reviewed by or prepared by Stantec include:

- a September 1991 Phase II Investigation[1];
- an August 1995 Preliminary Site Assessment Report[2];
- a March 2003 Site Investigation Report[3];
- a September 2006 Remedial Investigation and Alternatives Analysis Report (revised in January 2008)[4]; and
- a December 2007 Remedial Design Investigation Report[5].

Previous investigations at the Site between 1991 and 1994 identified the disposal of paint waste including paint thinner through a pipe leading from a paint booth inside the shop to a storage container outside the building. In January 1993, some contaminated soil from the waste disposal area was excavated. However, confirmatory soil samples were not taken and the vertical and lateral limits of impacted soil were not determined prior to backfilling. The 1991 and 1993 activities were performed without NYSDEC approval or oversight. In 1994, the NYSDEC conducted an investigation and determined the 1993 soil removal activity did not remove all of the subsurface contamination at the Site.

As such, the NYSDEC conducted an investigation in 2000-2002 to obtain additional information regarding the nature and extent of contamination at the Site and to determine if the Site represents a significant threat to human health or the environment. The NYSDEC concluded there was a small, highly impacted Volatile Organic Compound (VOC) source area, but nearby residents were not impacted. The City subsequently obtained an EPA Brownfield grant and applied to the NYSDEC to address the Site through the State's Brownfield Cleanup Program (BCP).

Given the results from the investigations performed prior to Stantec's involvement, Stantec's 2005 Remedial Investigation (RI) (revised in January 2008) focused on two areas of concern (AOCs) previously identified by the NYSDEC, based on TAGM 4046 Recommended SCOs. These two AOCs include the former waste paint disposal area (AOC1) and the former vehicle maintenance/trench drain area (AOC2). A third AOC was identified by the NYSDEC in their 2000-2002 investigation and was further delineated by a Remedial Design Investigation (RDI) performed by Stantec in 2007. In subsequent discussions, AOCs will be referred to as Remedial Areas of Concern (RAOC). The numbering scheme of AOCs and RAOCs has been maintained, such that AOC1 coincides with RAOC1, and so on.

The following summary of analytical results for soils utilizes Restricted Residential SCOs instead of the TAGM 4046 Recommended SCOs used in previous studies.

2.1 SOILS ANALYTICAL RESULTS

A summary of analytical results in excess of Restricted Residential SCOs is presented in Table 4. Also refer to Appendix A (Soil Management Plan) for complete analytical results for Stantec's RI and RDI.

2.1.1 RAOC1

Results from previous site investigations indicate no impacts from VOCs to soils at concentrations above Restricted Residential SCOs outside the previously investigated waste disposal and paint booth area (RAOC 1). Within RAOC1, comparison to Restricted Residential SCOs indicates exceedances for ethylbenzene, toluene and xylenes between 6 and 8 ft. bgs.

2.1.2 RAOC2

Within RAOC2, soil samples collected in B-213, B-216/MW-216 and B-217/MW-217 exceed Restricted Residential SCOs for metals. Cadmium exceeds its SCO in B-213 from ground surface to a depth of 4 feet, lead exceeds its SCO in B-217/MW-217 from 0 to 4 ft. bgs, while copper and lead exceed their respective SCOs in B-216/MW-216 from 0 to 4 ft. bgs. RAOC2 consists of two sub-areas: RAOC2A to the north, encompassing B-213 and B-217/MW-217, and RAOC2B to the south, which includes B-216/MW-216.

2.1.3 RAOC3

A third potential Remedial Area of Concern (RAOC3) was identified at the MW-105 location where metals impacts in excess of Restricted Residential SCOs (arsenic, cadmium and selenium) were reported in a 6-8 ft. bgs soil sample. This boring/monitoring well is located on the City property slightly east of RAOC1 along the common property line with 10 Cayuga Street. The RDI found no metals impacts in boreholes installed radially at regular intervals around MW-105 (refer to Figure 4 for borehole locations and Appendix A for RDI analytical results).

2.2 GROUNDWATER ANALYTICAL RESULTS

Metals in site-wide groundwater have exhibited elevated concentrations for iron, magnesium, manganese and sodium. These elements are common in regional soils and urban fill and as a result are often elevated in groundwater. In addition, cadmium was reported above its GSGV in one bedrock well, MW-BR3, in March 2001. Given the City's ordinance, which prohibits the use of drinking water wells, and the absence of completed exposure pathways, the site-wide presence of metals in groundwater does not warrant further investigation or remedial measures.

2.2.1 RAOC1

Groundwater samples collected during the RI were reported to contain low-level concentrations of VOCs in RAOC1 within MW-101 and MW-116 above NYSDEC groundwater standards and guidance values (GSGVs). During prior sampling events, VOCs were reported at much higher concentrations in both MW-101 and MW-116 suggesting that natural attenuation may be occurring.

Stantec observed a very thin (< 1/16-inch) light non-aqueous phase liquid (LNAPL) layer in MW-101. During a prior investigation, LNAPL was reported in nearby well MW-116. However, no LNAPL was detected in MW-116 or any other boring or well in the vicinity of MW-101 during the RI. Based upon these limited LNAPL findings, the presence of LNAPL appears to be a localized condition within RAOC1. Given the VOCs and LNAPL observed, remediation of groundwater impacts was recommended in RAOC1.

2.2.2 RAOC2

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC2.

2.2.3 RAOC3

No VOCs or SVOCs were reported at concentrations above NYSDEC GSGVs in the 2005 RI monitoring wells within RAOC3.

2.3 SOIL VAPOR ANALYTICAL RESULTS

A perimeter soil vapor survey was carried out as part of the RDI. Low level chlorinated and petroleum VOC concentrations were reported in both the soil vapor samples and background outdoor air sample collected on June 12, 2007 (refer to Appendix A for a summary of soil vapor analytical results). The results did not identify areas of significantly elevated concentrations of volatile chemicals in soil vapor nor do they indicate significant sources of subsurface vapor contamination that would present a significant risk of potential adverse SVI impacts on the Site or on adjacent properties. A possible explanation for the concentrations detected may be that the concrete slab and the asphalt parking surface are acting as a cap for capturing and containing residual volatile organic vapors.

2.4 SITE-SPECIFIC CHEMICALS OF CONCERN

Based on previous studies completed at the site and the Site's use history, the primary chemicals of concern at the subject site include the following volatile organic compounds (VOCs):

- methylene chloride
- trichloroethene
- ethylbenzene;
- toluene; and
- total xylenes.

VOCs were historically used on the site as part of the painting operations. The potential source of the VOCs are believed to have been historical use as a cleaning solvent in the painting operations.

In addition, the following SVOCs and metals have been identified as chemicals of concern at the subject site:

- Naphtalene;
- Butyl benzyl phthalate;
- Arsenic;
- Beryllium;
- Cadmium;
- Copper;

- Lead; and
- Selenium.

Available Material Safety Data Sheets (MSDS) for the chemicals of concern present at the Site are presented in Appendix B. The volatile organic air monitoring action levels will be based on trichloroethene. SVOCs and metals in airborne dust will be monitored as per the CAMP.

3.0 STANTEC PERSONNEL ORGANIZATION

The following personnel will be involved in remedial actions at the Site

3.1 PROJECT MANAGER

The Project Manager is responsible for ensuring that all procedures and methods are carried out, and that all personnel abide by the provisions of this Health and Safety Plan.

3.2 SITE SAFETY OFFICER/FIELD TEAM LEADER

The Field Team Leader will report directly to the Project Manager and will be responsible for the implementation of this HASP as well as daily calibration of safety monitoring instruments. The Field Team Leader will keep a log book of all calibration data and instrument readings for the site. The Site Safety Officer will be responsible for conducting the daily on-site safety meetings.

3.3 HEALTH AND SAFETY COORDINATOR

The Project Health and Safety Coordinator will coordinate Health and Safety issues on the project as required.

4.0 MEDICAL SURVEILLANCE REQUIREMENTS

4.1 INTRODUCTION

Hazardous waste site workers can often experience high levels of physical and chemical stress. Their daily tasks may expose them to toxic chemicals, physical hazards, biologic hazards, or radiation. They may develop heat stress while wearing protective equipment or while working under temperature extremes. They can face life-threatening emergencies such as explosions and fires. Therefore, a medical program is essential to: assess and monitor worker's health and fitness both prior to employment and during the course of the work; provide emergency and other treatment as needed; and keep accurate records for future reference.

OSHA requires a medical evaluation for employees that may be required to work on hazardous waste sites and/or wear a respirator (29 CFR Part 1910.120 and 1910.134), and certain OSHA standards include specific medical surveillance requirements (e.g., 29 CFR Part 1926.62, Part 1910.95 and Parts 1910.1001 through 1910.1045).

4.2 MEDICAL EXAMINATIONS

A. All Stantec personnel working in contaminated areas of the site shall have been examined by a licensed physician as prescribed in 29 CFR Part 1910.120, and shall be determined to be medically fit to perform their duties for work conditions which require respirators. Employees will be provided with medical examinations as outlined below:

- Pre-job physical examination;
- Annually thereafter;
- Termination of employment;
- Upon reassignment in accordance with CFR 29 Part 1910.120(f)(3)(i)(C);
- If the employee develops signs or symptoms of illness related to workplace exposures;
- If the physician determines examinations need to be conducted more often than once a year; and
- When an employee develops a lost time injury or illness during the employment period.

B. Examinations will be performed by, or under the supervision of a licensed physician, preferably one knowledgeable in occupational medicine, and will be provided without cost to the employee, without loss of pay and at a reasonable time and place. Medical surveillance protocols and examination and test results shall be reviewed by the Occupational Physician.

5.0 ON-SITE HAZARDS

5.1 CHEMICAL HAZARDS

The primary potential chemical hazards on-site are expected to be exposure to petroleum related VOCs, as well as SVOCs and metals in airborne dust.

Many of the soil and groundwater contaminants identified to date are volatile; therefore, any activity at the site which causes physical disturbance of the soil can potentially allow the release of contaminants into the air. In addition, aeration of the groundwater may cause volatilization of chemicals into the air, particularly VOCs. Such an occurrence may be recognized by noticeable chemical odors. Field personnel should be aware of the odor threshold for these chemicals and their relation to the action levels and Permissible Exposure Limits.

To prevent dermal exposure to VOCs, dermal contact will be minimized by using disposable gloves and work gloves (as appropriate) when handling soil, groundwater equipment or samples.

To prevent inhalation of VOCs, real-time, breathing zone levels of total VOCs will be monitored using a portable photoionization detector (PID-Minirae Model 2000 or equivalent) equipped with a 10.6 eV lamp. If ambient levels exceed action levels, all site activities will be performed using level C personal protection until ambient concentrations dissipate. Where levels exceed 50 ppm, work will cease and the project manager will be notified immediately.

To prevent inhalation of dust, fugitive dust emissions will be monitored as per the CAMP. Level C personal protection shall be worn if particulate levels are above background. If fugitive particulate levels cannot be maintained below 100 $\mu g/m^3$ above background using the dust suppression measures prescribed in the CAMP, all work activities must be halted until particulate levels can be controlled.

5.2 PHYSICAL HAZARDS

Hazards typically encountered during drilling, well installation and sampling will be a concern at this site. These hazards include slippery ground surfaces, holes, and operation of heavy machinery and equipment. Basic Level D safety apparel including steel-toed shoes, hard hat and safety glasses will be worn during all activities by field team members.

Under no circumstance will Stantec personnel enter excavations or other confined spaces to collect soil samples for any reason.

Multi-purpose fire extinguishers, functional and with proof of valid annual inspection, will be staged and readily accessible for use.

The use of electrical equipment in any established exclusion zones will be limited to areas verified as containing non-explosive atmospheres (<10% LEL) prior to operation, unless the equipment has been previously demonstrated or designed to be FM or UL rated as intrinsically safe. Care will be taken to avoid an ignition source while working in the presence of vapors.

The contractor shall make all necessary contacts with utilities and/or underground utility locator hotlines prior to drilling, and shall meet OSHA requirements for distances between the heavy equipment and overhead utilities.

5.2.1 Noise

The use of heavy machinery/equipment and operation may result in noise exposures, which require hearing protection. Exposure to noise can result in temporary hearing losses, interference with speech communication, interference with complicated tasks or permanent hearing loss due to repeated exposure to noise.

During the investigative activities, all Stantec field team members will use hearing protection when sound levels are in excess of 90 dB TWA. All aspects of the Stantec Hearing Conservation Program (HCP) will apply when noise levels are in excess of 85 dB TWA. Drill rig and excavator operations do not typically result in noise exposures requiring an HCP.

5.2.2 Heat Stress Exposure

This project may be completed during all seasons. Therefore, both heat and cold are potential threats to the health and safety of site personnel. The Site Safety Officer under the direction of the Project Manager will determine the schedule of work and rest. These schedules will be employed as necessary so that personnel do not suffer adverse effects from heat.

Table 1: Exposure Symptoms and First Aid for Heat Exposure

Hazard	Exposure Symptoms	First-Aid Instructions
Heat Stress & Heat Stroke	Fatigue, sweating, irritability	rest; take fluids
	Dizziness, disorientation,	remove from hot area,

	perspiration ceases, loss of consciousness	activate 911, and administer first aid. No fluids to be administered to unconscious victim.
Cold Stress	Shivering, blanching of the extremities, numbness or burning sensations, blue, purple or gray discoloration of hands and feet, frostbite, hypothermia, and loss of consciousness.	Prevention: Acclimatization, increase fluid intake, avoid caffeine and alcohol, maintain proper salt and electrolyte intake, eat a well-balanced diet, wear proper clothing, build heated enclosures to work in, and take regular breaks to warm up. Treatment: Remove from hot area, activate 911, and administer first aid. No fluids to be administered to unconscious victim.

6.0 SITE WORK ZONES

The following work zones will be physically delineated by Stantec during the remedial activities.

6.1 CONTROL ZONES

Control boundaries will be established within the areas of site activities. Examples of boundary zones include: the work zone and decontamination zone. All boundaries will be dynamic, and will be determined by the planned activities for the day. The Field Team Leader will record the names of any visitors to the site.

6.2 WORK ZONE

The controlled portion of the site will be delineated to identify the work zone, wherein a higher level of personal protective equipment may be required for entry during intrusive activities. The limits of the work zone will be appropriately designated and demarcated at each work location. A decontamination zone will be located immediately outside the entrance to the work zone. All personnel leaving the work zone will be required to adhere to proper decontamination procedures.

6.3 DECONTAMINATION ZONE

The decontamination zone will be located immediately outside the entrance to the work zone on its apparent upwind side, if feasible, and will be delineated with caution tape and traffic cones. This zone will contain the necessary decontamination materials for personnel decontamination. Decontamination procedures are outlined in Section 8.0 of this plan.

7.0 SITE MONITORING/ACTION LEVELS

7.1 SITE MONITORING

Field activities associated with the earth disturbing activities may create potentially hazardous conditions due to the migration of contaminants into the breathing zone. These substances may be in the form of mists, vapors, dusts, or fumes that can enter the body through ingestion, inhalation, absorption, and direct dermal contact. Monitoring for VOCs will be performed in order that appropriate personal protective measures are employed during site activities.

Although the anticipated concentrations of contaminants in soil/groundwater should not present an explosive hazard, explosive environments or conditions may be encountered unexpectedly during the course of this project. Monitoring for explosivity in the atmosphere will be routinely conducted during site activities as a precautionary measure to ensure site personnel are not subjected to any dangerous conditions.

The following describes the conditions that will be monitored for during the remediation activities. All calibrations, etc., carried out on instruments, as well as background and site readings, will be logged.

Organic Vapor Concentrations – Organic vapors will be monitored continuously in the work area with a portable photoionization detector (PID-Minirae Model 2000 or equivalent) with a 10.6 eV lamp. The instrument will be calibrated daily. PID readings will be used as the criteria for upgrading or downgrading protective equipment and for implementing additional precautions or procedures.

If applicable, split spoons or other soil sampling devices will be monitored using the PID at the time they are opened, with appropriate PPE to be used where soils exhibit measurable volatile organic compound levels.

Explosivity – Explosivity will be monitored using an explosive gas meter in the work area during excavation operations. Explosivity measurements will be made periodically at the excavation. Measurements obtained from this monitoring instrument will also be used as criteria for implementation of work stoppage or site evacuation.

Particulates – Particulates will be monitored with a particulate monitor, as per the CAMP.

7.2 ACTION LEVELS

During the course of any activity, as long as sustained volatile organic vapor readings in the breathing zone are less than 5 ppm above background for total organic vapors above background, Level D protection will be deemed adequate.

If concentrations in the work zone exceed 50 ppm for a period of 5 minutes or longer, work will immediately be terminated by the Site Safety Officer. Options to allow continued remedial activities will then be discussed amongst all parties.

If the lower explosive limit exceeds 10% LEL at the borehole, work will be immediately terminated by the Site Safety Officer. Options to allow continued remedial activities will then be discussed amongst all parties.

Level C protection will need to be worn if particulate levels in air are measured above background. Work activities will be halted if dust suppression measures cannot maintain particulate levels below 100 $\mu g/m^3$ above background.

8.0 PERSONAL PROTECTIVE EQUIPMENT

Based on an evaluation of the hazards at the site, personal protective equipment (PPE) will be required for all personnel and visitors entering the exclusion zone. It is anticipated that all oversight work will be performed in Level D. The contractors will be responsible for selection and implementation of PPE for their personnel.

8.1 PROTECTIVE CLOTHING/RESPIRATORY PROTECTION:

Protective equipment for each level of protection is as follows:

When HNu readings range above 50 ppm total organic vapors, or particulate levels are measured above background, upgrade to Level C:

Level C

- Full face, air purifying respirator with organic/HEPA cartridge;
- Disposable chemical resistant one-piece suit (Tyvek or Saranex, as appropriate);
- Inner and outer chemical resistant gloves;
- Hard hat;
- Steel-toed boots; and
- Disposable booties.

When HNu readings range between background and 50 ppm for total organic vapors, and particulate levels are measured at background levels, use Level D:

Level D

- Safety glasses;
- Steel-toed boots;
- Protective cotton, latex or leather gloves depending on site duties;
- Hard hat; and
- Tyvek coverall (optional).

9.0 DECONTAMINATION

9.1 PERSONNEL DECONTAMINATION

For complete decontamination, all personnel will observe the following procedures upon leaving the exclusion zone:

1. Remove outer boots and outer gloves and place in disposal drum.
2. If using a respirator, remove respirator, dispose of cartridges if necessary, and set aside for later cleaning.
3. Remove disposable chemical resistant suit and dispose of in drum.
4. Remove and dispose of inner gloves.

Decontamination solutions shall be supplied at the decontamination zone. The wash solution will consist of water and detergent such as Alconox or trisodium phosphate (TSP), and the rinse solution will consist of clean water.

Contaminated wash solutions shall be collected in drums for disposal. All disposable health and safety equipment will be decontaminated and disposed of as non-hazardous waste.

9.2 EQUIPMENT DECONTAMINATION

If equipment is used during field activities, it will be properly washed or steam-cleaned prior to exiting the decontamination zone.

Monitoring instruments will be either wrapped in poly sheeting or carried by personnel not involved in handling contaminated materials, to reduce the need for decontamination. All instruments will be wet-wiped prior to removal from the work zone.

10.0 EMERGENCY PROCEDURES

The Site Safety Officer will coordinate emergency procedures and will be responsible for initiating emergency response activities. Emergency communications at the site will be conducted verbally. All personnel will be informed of the location of the cellular or public telephone.

10.1 LIST OF EMERGENCY CONTACTS

Ambulance: 911

Hospital: Highland Hospital (585) 341-6880 - emergency department

Fire Department: 911

Police: 911

Poison Control Center: (585) 275-3232

Electric or Gas Emergency: (585) 546-1100

Mark Gregor, City of Rochester, Project Manager: (585) 428-5978

Frank Sowers, New York State Department of Environmental Conservation, Region 8 Office: (585) 226-5357

Joseph Albert, Monroe County Health Department, (585) 753-5904

Debby McNaughton, New York State Health Department: (585) 423-8069

10.2 DIRECTIONS TO HIGHLAND HOSPITAL

A map presenting directions to Highland Hospital is included in the back of the document (Figure 2). The route shall be reviewed at the initial site safety meeting on site.

The accident report form is illustrated in Table 2.

10.3 ACCIDENT INVESTIGATION AND REPORTING

A. All accidents requiring first aid, which occur incidental to activities on-site, will be investigated. The investigation format will be as follows:

- interviews with witnesses;
- pictures, if applicable; and

- necessary actions to alleviate the problem.

B. In the event that an accident or some other incident such as an explosion or exposure to toxic chemicals occurs during the course of the project, the Project Health and Safety Officer will be telephoned as soon as possible and receive a written report within 24 hours. The report will include the following items:

- Name of injured;
- Name and title of person(s) reporting;
- Date and time of accident/incident;
- Location of accident/incident, building number, facility name;
- Brief summary of accident/incident giving pertinent details including type of operation ongoing at the time of the accident/incident;
- Cause of accident/incident;
- Casualties (fatalities, disabling injuries), hospitalizations;
- Details of any existing chemical hazard or contamination;
- Estimated property damage, if applicable;
- Nature of damage; effect on contract schedule;
- Action taken to insure safety and security; and
- Other damage or injuries sustained (public or private).

Where reportable injuries, hospitalizations or fatalities occur amongst Stantec personnel, the necessary document required by OSHA will be submitted within timeframes allowed by law.

Table 2: Accident Report

Project: ______________________ ***Date of Occurrence:*** ______________________

Location: ____

Type of Occurrence (Check all that apply)

- ❑ Disabling Injury
- ❑ Other Injury
- ❑ Property Damage
- ❑ Equip. Failure
- ❑ Chemical Exposure
- ❑ Fire
- ❑ Explosion
- ❑ Vehicle Accident
- ❑ Other (explain) ______________________________

Witnesses to Accident/Injury:

______________________ ______________________
______________________ ______________________
______________________ ______________________

Injuries

Name of Injured: ______________________________

What was being done at the time of the accident/injury?

____
____

What corrective actions will be taken to prevent reoccurrence?

____
____
____

Signatures

Health and Safety Officer: ______________________ Date: __________
Project Manager: ______________________ Date: __________
Reviewer: ______________________ Date: __________
Comments by reviewer: ______________________________

References

[1] "Phase II Investigation, Davidson's Collision, 399 Gregory Street, Rochester, New York. Prepared by Day Environmental, Inc., September 21, 1991."
[2] "Preliminary Site Assessment Report, Davidson's Collision, NYSDEC Site No. 828091, Rochester, New York. Prepared by ABB Environmental Services, August 1995."
[3] "Site Investigation Report, Davidson's Collision, Site No. 828091, Rochester, New York. Prepared by Frank Sowers, PE, New York State Department of Environmental Conservation, Division of Environmental Remediation, Region 8, March 2003."
[4] "Remedial Investigation and Alternative Analysis Report, Former Davidson Collision Site, 399 Gregory Street, Rochester, New York. Prepared by Stantec Consulting Services Inc., September 2006, revised January 2008."
[5] "Remedial Design Investigation Report, Former Davidson Collision Site, 399 Gregory Street, Site No. C828091, City of Rochester, Monroe County. Prepared by Stantec Consulting Services Inc., December 2007."

Figures

This map may contain data from a variety of sources. This map is not intended to replace a survey by a Licensed Surveyor.
Stantec does not certify the accuracy of the data. This map is for reference only and should not be used for construction.

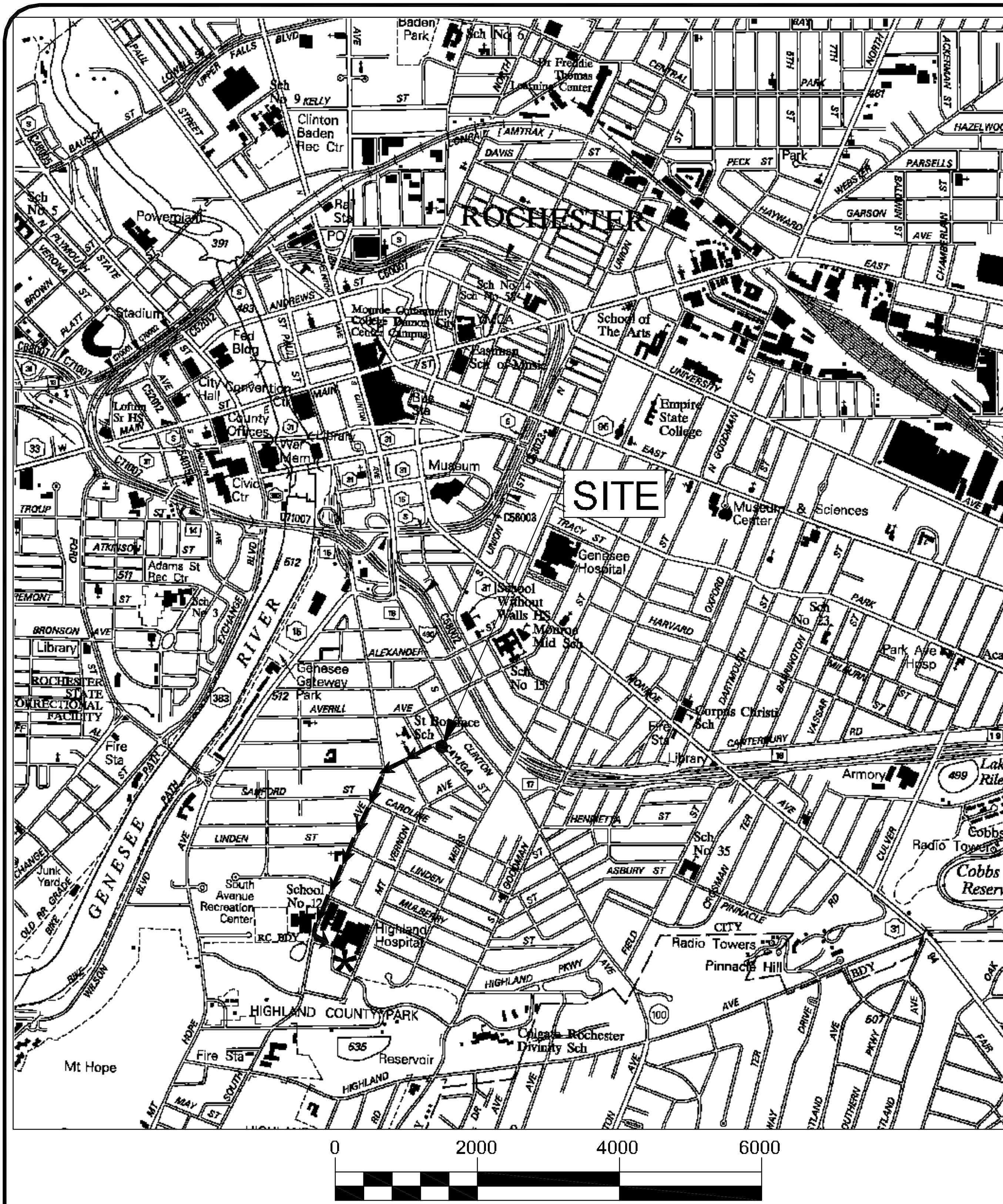
Geographic Information Systems

Cartographic Design By: Marc Bouchard

Thursday, January 24, 2008 6:37:03 AM
\\us1275-f02\shared_projects\190500196\drawing\RAWP_January2008\Figure1_RAWP_Site_Location_Jan08.mxd

Stantec
Stantec Consulting
2250 Brighton Henrietta Townline Road
Rochester, NY 14623
Phone 585.475.1440 Fax 585.424.5951
www.stantec.com

Figure 1 - Site Location
Remedial Action Work Plan
Brownfield Assessment Site
399 Gregory Street, Rochester NY



SCALE IN FEET

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DRAWING ALTERATION

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PROJECT ENGINEER/ARCHITECT	D. BELASKAS, P.E.
PROJECT MANAGER	M. STORONSKY
DRAWN BY	M. CONLEY, E.I.T.
SCALE	AS SHOWN
FIRST ISSUE DATE	JAN. 08

STANTEC CONSULTING GROUP, INC.
2250 Brighton-Henrietta
Town Line Road
Rochester, N.Y. 14623-2706
Tel:(585) 475-1440
Fax: (585) 272-1814
www.stantec.com

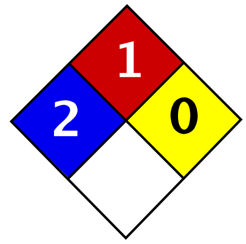
PROJECT
REMEDIAL ACTION WORK PLAN
FORMER DAVIDSON COLLISION SITE
399 GREGORY STREET
ROCHESTER, NEW YORK 14620

TITLE OF DRAWING
HOSPITAL ROUTE MAP

PROJECT NO.
190500196

DRAWING NO.
FIG. 2

Appendix A
Material Safety Data Sheets



Health	2
Fire	1
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Methylene chloride MSDS

Section 1: Chemical Product and Company Identification

Product Name: Methylene chloride

Catalog Codes: SLM2398, SLM3772, SLM1297, SLM2677, SLM4054

CAS#: 75-09-2

RTECS: PA8050000

TSCA: TSCA 8(b) inventory: Methylene chloride

CI#: Not available.

Synonym: Dichloromethane

Chemical Name: Methylene Chloride

Chemical Formula: C-H2-Cl2

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Methylene chloride	75-09-2	100

Toxicological Data on Ingredients: Methylene chloride: ORAL (LD50): Acute: 1600 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects: Very hazardous in case of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (irritant, permeator). Inflammation of the eye is characterized by redness, watering, and itching.

Potential Chronic Health Effects: CARCINOGENIC EFFECTS: Classified + (Proven.) by OSHA. Classified 2B (Possible for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, the nervous system, liver, mucous membranes, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 556°C (1032.8°F)

Flash Points: Not available.

Flammable Limits: LOWER: 12% UPPER: 19%

Products of Combustion: These products are carbon oxides (CO, CO2), halogenated compounds.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions: Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: TWA: 50 from ACGIH (TLV) [United States] TWA: 174 from ACGIH (TLV) [United States] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 84.93g/mole

Color: Not available.

pH (1% soln/water): Not available.

Boiling Point: 39.75°C (103.5°F)

Melting Point: -96.7°C (-142.1°F)

Critical Temperature: Not available.

Specific Gravity: 1.3266 (Water = 1)

Vapor Pressure: 46.5 kPa (@ 20°C)

Vapor Density: 2.93 (Air = 1)

Volatility: Not available.

Odor Threshold: 214 ppm

Water/Oil Dist. Coeff.: The product is equally soluble in oil and water; log(oil/water) = 0.1

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether, n-octanol, acetone.

Solubility: Easily soluble in methanol, diethyl ether, n-octanol, acetone. Partially soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 1600 mg/kg [Rat]. Acute toxicity of the vapor (LC50): 52000 1 hours [Rat].

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified + (Proven.) by OSHA. Classified 2B (Possible for human.) by IARC. Causes damage to the following organs: lungs, the nervous system, liver, mucous membranes, central nervous system (CNS).

Other Toxic Effects on Humans: Very hazardous in case of ingestion, of inhalation. Hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Human: passes through the placenta, excreted in maternal milk.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Dichloromethane UNNA: 1593 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations: California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Methylene chloride California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Methylene chloride Pennsylvania RTK: Methylene chloride Massachusetts RTK: Methylene chloride TSCA 8(b) inventory: Methylene chloride SARA 313 toxic chemical notification and release reporting: Methylene chloride CERCLA: Hazardous substances.: Methylene chloride

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R22- Harmful if swallowed. R38- Irritating to skin. R41- Risk of serious damage to eyes. R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment: Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 10:43 AM

Last Updated: 12/02/2005 11:49 AM

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the

ScienceLab.com
Chemicals & Laboratory Equipment

Health	2
Fire	1
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Trichloroethylene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Trichloroethylene

Catalog Codes: SLT3310, SLT2590

CAS#: 79-01-6

RTECS: KX4560000

TSCA: TSCA 8(b) inventory: Trichloroethylene

CI#: Not available.

Synonym:

Chemical Formula: C2HCl3

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Trichloroethylene	79-01-6	100

Toxicological Data on Ingredients: Trichloroethylene: ORAL (LD50): Acute: 5650 mg/kg [Rat]. 2402 mg/kg [Mouse]. DERMAL (LD50): Acute: 20001 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified + (PROVEN) by OSHA. Classified A5 (Not suspected for human.) by ACGIH.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance is toxic to kidneys, the nervous system, liver, heart, upper respiratory tract.
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 420°C (788°F)

Flash Points: Not available.

Flammable Limits: LOWER: 8% UPPER: 10.5%

Products of Combustion: These products are carbon oxides (CO, CO_2), halogenated compounds.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Absorb with an inert material and put the spilled material in an appropriate waste disposal. Be careful that the

product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Carcinogenic, teratogenic or mutagenic materials should be stored in a separate locked safety storage cabinet or room.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 50 STEL: 200 (ppm) from ACGIH (TLV)
TWA: 269 STEL: 1070 (mg/m3) from ACGIH
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 131.39 g/mole

Color: Clear Colorless.

pH (1% soln/water): Not available.

Boiling Point: 86.7°C (188.1°F)

Melting Point: -87.1°C (-124.8°F)

Critical Temperature: Not available.

Specific Gravity: 1.4649 (Water = 1)

Vapor Pressure: 58 mm of Hg (@ 20°C)

Vapor Density: 4.53 (Air = 1)

Volatility: Not available.

Odor Threshold: 20 ppm

Water/Oil Dist. Coeff.: The product is equally soluble in oil and water; log(oil/water) = 0

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether, acetone.

Solubility:
Easily soluble in methanol, diethyl ether, acetone.
Very slightly soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity:
Extremely corrosive in presence of aluminum.
Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
Acute oral toxicity (LD50): 2402 mg/kg [Mouse].
Acute dermal toxicity (LD50): 20001 mg/kg [Rabbit].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified + (PROVEN) by OSHA. Classified A5 (Not suspected for human.) by ACGIH.
The substance is toxic to kidneys, the nervous system, liver, heart, upper respiratory tract.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Passes through the placental barrier in human. Detected in maternal milk in human.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Trichloroethylene : UN1710 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Trichloroethylene
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Trichloroethylene
Pennsylvania RTK: Trichloroethylene
Florida: Trichloroethylene
Minnesota: Trichloroethylene
Massachusetts RTK: Trichloroethylene
New Jersey: Trichloroethylene
TSCA 8(b) inventory: Trichloroethylene
CERCLA: Hazardous substances.: Trichloroethylene

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).
CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R36/38- Irritating to eyes and skin.
R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 08:54 PM

Last Updated: 10/10/2005 08:54 PM

Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Ethylbenzene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Ethylbenzene

Catalog Codes: SLE2044

CAS#: 100-41-4

RTECS: DA0700000

TSCA: TSCA 8(b) inventory: Ethylbenzene

CI#: Not available.

Synonym: Ethyl Benzene; Ethylbenzol; Phenylethane

Chemical Name: Ethylbenzene

Chemical Formula: C8H10

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Ethylbenzene	100-41-4	100

Toxicological Data on Ingredients: Ethylbenzene: ORAL (LD50): Acute: 3500 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator).

Potential Chronic Health Effects:
Slightly hazardous in case of skin contact (irritant, sensitizer).
CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC.
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 432°C (809.6°F)

Flash Points:
CLOSED CUP: 15°C (59°F). (Tagliabue.) OPEN CUP: 26.667°C (80°F) (Cleveland) (CHRIS, 2001)
CLOSED CUP: 12.8 C (55 F) (Bingham et al, 2001; NIOSH, 2001)
CLOSED CUP: 21 C (70 F) (NFPA)

Flammable Limits: LOWER: 0.8% - 1.6%UPPER: 6.7% - 7%

Products of Combustion: These products are carbon oxides (CO, CO_2).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.
Slightly explosive in presence of heat.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards:
Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. When heated to decomposition it emits acrid smoke and irritating fumes.

Special Remarks on Explosion Hazards: Vapors may form explosive mixtures in air.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid.
Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Sensitive to light. Store in light-resistant containers.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 100 STEL: 125 (ppm) from OSHA (PEL) [United States]
TWA: 435 STEL: 545 from OSHA (PEL) [United States]
TWA: 435 STEL: 545 (mg/m3) from NIOSH [United States]
TWA: 100 STEL: 125 (ppm) from NIOSH [United States]
TWA: 100 STEL: 125 (ppm) from ACGIH (TLV) [United States]
TWA: 100 STEL: 125 (ppm) [United Kingdom (UK)]
TWA: 100 STEL: 125 (ppm) [Belgium]
TWA: 100 STEL: 125 (ppm) [Finland]
TWA: 50 (ppm) [Norway]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweetish. Gasoline-like. Aromatic.

Taste: Not available.

Molecular Weight: 106.16 g/mole

Color: Colorless.

pH (1% soln/water): Not available.

Boiling Point: 136°C (276.8°F)

Melting Point: -94.9 (-138.8°F)

Critical Temperature: 617.15°C (1142.9°F)

Specific Gravity: 0.867 (Water = 1)

Vapor Pressure: 0.9 kPa (@ 20°C)

Vapor Density: 3.66 (Air = 1)

Volatility: 100% (v/v).

Odor Threshold: 140 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 3.1

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether.

Solubility:
Easily soluble in diethyl ether.
Very slightly soluble in cold water or practically insoluble in water.
Soluble in all proportions in Ethyl alcohol.
Soluble in Carbon tetrachloride, Benzene.
Insoluble in Ammonia.
Slightly soluble in Chloroform.
Solubility in Water: 169 mg/l @ 25 deg. C.; 0.014 g/100 ml @ 15 deg. C.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ingnition sources (flames, sparks, static), incompatible materials, light

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not considered to be corrosive for metals and glass.

Special Remarks on Reactivity:
Can react vigorously with oxidizing materials.
Sensitive to light.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation.

Toxicity to Animals: Acute oral toxicity (LD50): 3500 mg/kg [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC.
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
May cause damage to the following organs: central nervous system (CNS).

Other Toxic Effects on Humans:
Hazardous in case of ingestion, of inhalation.
Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals:
Lethal Dose/Conc 50% Kill:
LD50 [Rabbit] - Route: Skin; Dose: 17800 ul/kg
Lowest Published Lethal Dose/Conc:
LDL[Rat] - Route: Inhalation (vapor); Dose: 4000 ppm/4 H

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data.
May cause cancer based on animals data. IARC evidence for carcinogenicity in animals is sufficient. IARC evidence of carcinogenicity in humans inadequate.
May affect genetic material (mutagenic).

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: Can cause mild skin irritation. It can be absorbed through intact skin.
Eyes: Contact with vapor or liquid can cause severe eye irritation depending on concentration. It may also cause conjunctivitis. At a vapor exposure level of 85 - 200 ppm , it is mildly and transiently irritating to the eyes; 1000 ppm causes further irritation and tearing; 2000 ppm results in immediate and severe irritation and tearing; 5,000 ppm is intolerable (ACGIH, 1991; Clayton and Clayton, 1994). Standard draize test for eye irritation using 500 mg resulted in severe irritation (RTECS)
Inhalation: Exposure to high concentrations can cause nasal, mucous membrane and respiratory tract irritation and can also result in chest constriction and, trouble breathing, respiratory failure, and even death. It can also affect behavior/Central Nervous System. The effective dose for CNS depression in experimental animals was 10,000 ppm (ACGIH, 1991). Symptoms of CNS depression include headache, nausea, weakness, dizziness, vertigo, irritability, fatigue, lightheadedness, sleepiness, tremor, loss of coordination, judgement and conciousness, coma, and death. It can also cause pulmonary edema. Inhalation of 85 ppm can produce fatigue, insomnia, headache, and mild irritation of the respiratory tract (Haley & Berndt, 1987).
Ingestion: Do not drink, pipet or siphon by mouth. May cause gastroinestinal/digestive tract irritation with Abdominal pain, nausea, vomiting. Ethylbenzene is a pulmonary aspiration hazard. Pulmonary aspiration of even small amounts of the liquid may cause fatal pneumonitis. It may also affect behavior/central nervous system with

Section 12: Ecological Information

Ecotoxicity:
Ecotoxicity in water (LC50): 14 mg/l 96 hours [Fish (Trout)] (static). 12.1 mg/l 96 hours [Fish (Fathead Minnow)] (flow-through)]. 150 mg/l 96 hours [Fish (Blue Gill/Sunfish)] (static). 275 mg/l 96 hours [Fish (Sheepshead Minnow)]. 42.3 mg/l 96 hours [Fish (Fathead Minnow)](soft water). 87.6mg/l 96 hours [Shrimp].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Ethylbenzene UNNA: 1175 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Ethylbenzene
Illinois toxic substances disclosure to employee act: Ethylbenzene
Illinois chemical safety act: Ethylbenzene
New York release reporting list: Ethylbenzene
Rhode Island RTK hazardous substances: Ethylbenzene
Pennsylvania RTK: Ethylbenzene
Minnesota: Ethylbenzene
Massachusetts RTK: Ethylbenzene
Massachusetts spill list: Ethylbenzene
New Jersey: Ethylbenzene
New Jersey spill list: Ethylbenzene
Louisiana spill reporting: Ethylbenzene
California Director's List of Hazardous Substances: Ethylbenzene
TSCA 8(b) inventory: Ethylbenzene
TSCA 4(a) proposed test rules: Ethylbenzene
TSCA 8(d) H and S data reporting: Ethylbenzene: Effective Date: 6/19/87; Sunset Date: 6/19/97
SARA 313 toxic chemical notification and release reporting: Ethylbenzene

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
CLASSE D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R11- Highly flammable.
R20- Harmful by inhalation.
S16- Keep away from sources of ignition - No smoking.
S24/25- Avoid contact with skin and eyes.
S29- Do not empty into drains.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References:
-Manufacturer's Material Safety Data Sheet.
-Fire Protection Guide to Hazardous Materials, 13th ed., Nationial Fire Protection Association (NFPA)
-Registry of Toxic Effects of Chemical Substances (RTECS)
-Chemical Hazard Response Information System (CHRIS)
-Hazardous Substance Data Bank (HSDB)
-New Jersey Hazardous Substance Fact Sheet
-Ariel Global View
-Reprotext System

Other Special Considerations: Not available.

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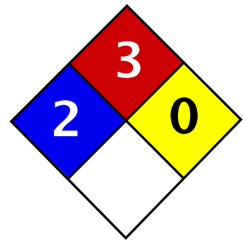

Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Toluene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Toluene

Catalog Codes: SLT2857, SLT3277

CAS#: 108-88-3

RTECS: XS5250000

TSCA: TSCA 8(b) inventory: Toluene

CI#: Not available.

Synonym: Toluol, Tolu-Sol; Methylbenzene; Methacide; Phenylmethane; Methylbenzol

Chemical Name: Toluene

Chemical Formula: C6-H5-CH3 or C7-H8

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Toluene	108-88-3	100

Toxicological Data on Ingredients: Toluene: ORAL (LD50): Acute: 636 mg/kg [Rat]. DERMAL (LD50): Acute: 14100 mg/kg [Rabbit]. VAPOR (LC50): Acute: 49000 mg/m 4 hours [Rat]. 440 ppm 24 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to blood, kidneys, the nervous system, liver, brain, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 480°C (896°F)

Flash Points: CLOSED CUP: 4.4444°C (40°F). (Setaflash) OPEN CUP: 16°C (60.8°F).

Flammable Limits: LOWER: 1.1% UPPER: 7.1%

Products of Combustion: These products are carbon oxides (CO, CO_2).

Fire Hazards in Presence of Various Substances:
Flammable in presence of open flames and sparks, of heat.
Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid, insoluble in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray or fog.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards:
Toluene forms explosive reaction with 1,3-dichloro-5,5-dimethyl-2,4-imidazolididione; dinitrogen tetraoxide;

concentrated nitric acid, sulfuric acid + nitric acid; N_2O_4; $AgClO_4$; BrF_3; Uranium hexafluoride; sulfur dichloride. Also forms an explosive mixture with tetranitromethane.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Toxic flammable liquid, insoluble or very slightly soluble in water.
Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 200 STEL: 500 CEIL: 300 (ppm) from OSHA (PEL) [United States]
TWA: 50 (ppm) from ACGIH (TLV) [United States] SKIN
TWA: 100 STEL: 150 from NIOSH [United States]
TWA: 375 STEL: 560 (mg/m3) from NIOSH [United States]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweet, pungent, Benzene-like.

Taste: Not available.

Molecular Weight: 92.14 g/mole

Color: Colorless.

pH (1% soln/water): Not applicable.

Boiling Point: 110.6°C (231.1°F)

Melting Point: -95°C (-139°F)

Critical Temperature: 318.6°C (605.5°F)

Specific Gravity: 0.8636 (Water = 1)

Vapor Pressure: 3.8 kPa (@ 25°C)

Vapor Density: 3.1 (Air = 1)

Volatility: Not available.

Odor Threshold: 1.6 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 2.7

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:
Soluble in diethyl ether, acetone.
Practically insoluble in cold water.
Soluble in ethanol, benzene, chloroform, glacial acetic acid, carbon disulfide.
Solubility in water: 0.561 g/l @ 25 deg. C.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources (flames, sparks, static), incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with strong oxidizers, silver perchlorate, sodium difluoride, Tetranitromethane, Uranium Hexafluoride.
Frozen Bromine Trifluoride reacts violently with Toluene at -80 deg. C.
Reacts chemically with nitrogen oxides, or halogens to form nitrotoluene, nitrobenzene, and nitrophenol and halogenated products, respectively.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 636 mg/kg [Rat].
Acute dermal toxicity (LD50): 14100 mg/kg [Rabbit].
Acute toxicity of the vapor (LC50): 440 24 hours [Mouse].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.
May cause damage to the following organs: blood, kidneys, the nervous system, liver, brain, central nervous system (CNS).

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation.
Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals:
Lowest Published Lethal Dose:
LDL [Human] - Route: Oral; Dose: 50 mg/kg
LCL [Rabbit] - Route: Inhalation; Dose: 55000 ppm/40min

Special Remarks on Chronic Effects on Humans:
Detected in maternal milk in human. Passes through the placental barrier in human. Embryotoxic and/or foetotoxic in animal. May cause adverse reproductive effects and birth defects (teratogenic). May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: Causes mild to moderate skin irritation. It can be absorbed to some extent through the skin.
Eyes: Cauess mild to moderate eye irritation with a burning sensation. Splash contact with eyes also causes conjunctivitis, blepharospasm, corneal edema, corneal abraisons. This usually resolves in 2 days.
Inhalation: Inhalation of vapor may cause respiratory tract irritation causing coughing and wheezing, and nasal discharge. Inhalation of high concentrations may affect behavior and cause central nervous system effects characterized by nausea, headache, dizziness, tremors, restlessness, lightheadedness, exhilaration, memory loss, insomnia, impaired reaction time, drowsiness, ataxia, hallucinations, somnolence, muscle contraction or spasticity, unconsciousness and coma. Inhalation of high concentration of vapor may also affect the cardiovascular system (rapid heart beat, heart palpitations, increased or decreased blood pressure, dysrhythmia,), respiration (acute pulmonary edema, respiratory depression, apnea, asphyxia), cause vision disturbances and dilated pupils, and cause loss of appetite.
Ingestion: Aspiration hazard. Aspiration of Toluene into the lungs may cause chemical pneumonitis. May cause irritation of the digestive tract with nausea, vomiting, pain. May have effects similar to that of acute inhalation.
Chronic Potential Health Effects:
Inhalation and Ingestion: Prolonged or repeated exposure via inhalation may cause central nervous system and cardiovascular symptoms similar to that of acute inhalation and ingestion as well liver damage/failure, kidney damage/failure (with hematuria, proteinuria, oliguria, renal tubular acidosis), brain damage, weight loss, blood (pigmented or nucleated red blood cells, changes in white blood cell count), bone marrow changes, electrolyte imbalances (Hypokalemia, Hypophostatemia), severe, muscle weakness and Rhabdomyolysis.
Skin: Repeated or prolonged skin contact may cause defatting dermatitis.

Section 12: Ecological Information

Ecotoxicity:
Ecotoxicity in water (LC50): 313 mg/l 48 hours [Daphnia (daphnia)]. 17 mg/l 24 hours [Fish (Blue Gill)]. 13 mg/l 96 hours [Fish (Blue Gill)]. 56 mg/l 24 hours [Fish (Fathead minnow)]. 34 mg/l 96 hours [Fish (Fathead minnow)]. 56.8 ppm any hours [Fish (Goldfish)].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may

arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Toluene UNNA: 1294 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Toluene
California prop. 65 (no significant risk level): Toluene: 7 mg/day (value)
California prop. 65 (acceptable daily intake level): Toluene: 7 mg/day (value)
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Toluene
Connecticut hazardous material survey.: Toluene
Illinois toxic substances disclosure to employee act: Toluene
Illinois chemical safety act: Toluene
New York release reporting list: Toluene
Rhode Island RTK hazardous substances: Toluene
Pennsylvania RTK: Toluene
Florida: Toluene
Minnesota: Toluene
Michigan critical material: Toluene
Massachusetts RTK: Toluene
Massachusetts spill list: Toluene
New Jersey: Toluene
New Jersey spill list: Toluene
Louisiana spill reporting: Toluene
California Director's List of Hazardous Substances.: Toluene
TSCA 8(b) inventory: Toluene
TSCA 8(d) H and S data reporting: Toluene: Effective date: 10/04/82; Sunset Date: 10/0/92
SARA 313 toxic chemical notification and release reporting: Toluene
CERCLA: Hazardous substances.: Toluene: 1000 lbs. (453.6 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R11- Highly flammable.
R20- Harmful by inhalation.
S16- Keep away from sources of ignition - No smoking.
S25- Avoid contact with eyes.
S29- Do not empty into drains.
S33- Take precautionary measures against static discharges.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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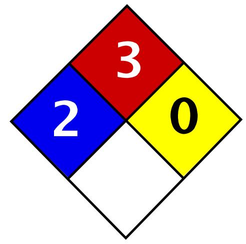

Health	2
Fire	3
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Xylenes MSDS

Section 1: Chemical Product and Company Identification

Product Name: Xylenes

Catalog Codes: SLX1075, SLX1129, SLX1042, SLX1096

CAS#: 1330-20-7

RTECS: ZE2100000

TSCA: TSCA 8(b) inventory: Xylenes

CI#: Not available.

Synonym: Xylenes; Dimethylbenzene; xylol; methyltoluene

Chemical Name: Xylenes (o-, m-, p- isomers)

Chemical Formula: C6H4(CH3)2

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Xylenes	1330-20-7	100

Toxicological Data on Ingredients: Xylenes: ORAL (LD50): Acute: 4300 mg/kg [Rat]. 2119 mg/kg [Mouse]. DERMAL (LD50): Acute: >1700 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to blood, kidneys, liver, mucous membranes, bone marrow, central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 464°C (867.2°F)

Flash Points: CLOSED CUP: 24°C (75.2°F). (Tagliabue.) OPEN CUP: 37.8°C (100°F).

Flammable Limits: LOWER: 1% UPPER: 7%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Highly flammable in presence of open flames and sparks, of heat.
Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Slightly explosive in presence of open flames and sparks, of heat.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Vapors may travel to source of ignition and flash back.

Special Remarks on Explosion Hazards:
Vapors may form explosive mixtures with air.
Containers may explode when heated.

May polymerize explosively when heated.
An attempt to chlorinate xylene with 1,3-Dichloro-5,5-dimethyl-2,4-imidazolidindione (dichlorohydrantoin) caused a violent explosion

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid.
Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids.

Storage:
Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 100 (ppm) [Canada]
TWA: 435 (mg/m3) [Canada]
TWA: 434 STEL: 651 (mg/m3) from ACGIH (TLV) [United States]
TWA: 100 STEL: 150 (ppm) from ACGIH (TLV) [United States]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Sweetish.

Taste: Not available.

Molecular Weight: 106.17 g/mole

Color: Colorless. Clear

pH (1% soln/water): Not available.

Boiling Point: 138.5°C (281.3°F)

Melting Point: -47.4°C (-53.3°F)

Critical Temperature: Not available.

Specific Gravity: 0.864 (Water = 1)

Vapor Pressure: 0.9 kPa (@ 20°C)

Vapor Density: 3.7 (Air = 1)

Volatility: Not available.

Odor Threshold: 1 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 3.1

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility:
Insoluble in cold water, hot water.
Miscible with absolute alcohol, ether, and many other organic liquids.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatibles

Incompatibility with various substances: Reactive with oxidizing agents, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Store away from acetic acid, nitric acid, chlorine, bromine, and fluorine.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 2119 mg/kg [Mouse].

Acute dermal toxicity (LD50): >1700 mg/kg [Rabbit].
Acute toxicity of the vapor (LC50): 5000 4 hours [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
May cause damage to the following organs: blood, kidneys, liver, mucous membranes, bone marrow, central nervous system (CNS).

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals:
Lowest Lethal Dose:
LDL [Human] - Route: Oral; Dose: 50 mg/kg
LCL [Man] - Route: Oral; Dose: 10000 ppm/6H

Special Remarks on Chronic Effects on Humans:
Detected in maternal milk in human. Passes through the placental barrier in animal. Embryotoxic and/or foetotoxic in animal.
May cause adverse reproductive effects (male and femael fertility (spontaneous abortion and fetotoxicity)) and birth defects based animal data.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: Causes skin irritation. Can be absorbed through skin.
Eyes: Causes eye irritation.
Inhalation: Vapor causes respiratory tract and mucous membrane irritation. May affect central nervous system and behavior (General anesthetic/CNS depressant with effects including headache, weakness, memory loss, irritability, dizziness, giddiness, loss of coordination and judgement, respiratory depression/arrest or difficulty breathing, loss of appetite, nausea, vomiting, shivering, and possible coma and death). May also affects blood, sense organs, liver, and peripheral nerves.
Ingestion: May cause gastrointestinal irritation including abdominal pain, vomiting, and nausea. May also affect liver and urinary system/kidneys. May cause effects similar to those of acute inhalation.
Chronic Potential Health Effects:
Chronic inhalation may affect the urinary system (kidneys) blood (anemia), bone marrow (hyperplasia of bone marrow) brain/behavior/Central Nervous system. Chronic inhalation may alsocause mucosal bleeding.
Chronic ingestion may affect the liver and metabolism (loss of appetite) and may affect urinary system (kidney damage)

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Xylenes UNNA: 1307 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Xylenes
Illinois chemical safety act: Xylenes
New York acutely hazardous substances: Xylenes
Rhode Island RTK hazardous substances: Xylenes
Pennsylvania RTK: Xylenes
Minnesota: Xylenes
Michigan critical material: Xylenes
Massachusetts RTK: Xylenes
Massachusetts spill list: Xylenes
New Jersey: Xylenes
New Jersey spill list: Xylenes
Louisiana spill reporting: Xylenes
California Director's List of Hazardous Substances: Xylenes
TSCA 8(b) inventory: Xylenes
SARA 302/304/311/312 hazardous chemicals: Xylenes
SARA 313 toxic chemical notification and release reporting: Xylenes
CERCLA: Hazardous substances.: Xylenes: 100 lbs. (45.36 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R10- Flammable.
R21- Harmful in contact with skin.
R36/38- Irritating to eyes and skin.
S2- Keep out of the reach of children.
S36/37- Wear suitable protective clothing and gloves.
S46- If swallowed, seek medical advice immediately and show this container or label.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/11/2005 12:54 PM

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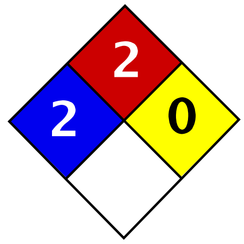

Health	2
Fire	2
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Naphthalene MSDS

Section 1: Chemical Product and Company Identification

Product Name: Naphthalene

Catalog Codes: SLN1789, SLN2401

CAS#: 91-20-3

RTECS: QJ0525000

TSCA: TSCA 8(b) inventory: Naphthalene

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: C10H8

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Naphthalene	91-20-3	100

Toxicological Data on Ingredients: Naphthalene: ORAL (LD50): Acute: 490 mg/kg [Rat]. 533 mg/kg [Mouse]. 1200 mg/kg [Guinea pig]. DERMAL (LD50): Acute: 20001 mg/kg [Rabbit]. VAPOR (LC50): Acute: 170 ppm 4 hour(s) [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of ingestion. Hazardous in case of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (irritant, permeator). Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Classified Development toxin [POSSIBLE].
The substance is toxic to blood, kidneys, the nervous system, the reproductive system, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 567°C (1052.6°F)

Flash Points: CLOSED CUP: 88°C (190.4°F). OPEN CUP: 79°C (174.2°F).

Flammable Limits: LOWER: 0.9% UPPER: 5.9%

Products of Combustion: These products are carbon oxides (CO, CO_2).

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable solid.
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Flammable solid.
Stop leak if without risk. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:
Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
Israel: TWA: 10 (ppm)
TWA: 10 STEL: 15 (ppm) from ACGIH (TLV) [1995]
TWA: 52 STEL: 79 (mg/m3) from ACGIH [1995]
Australia: STEL: 15 (ppm)
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Crystalline solid.)

Odor: Aromatic.

Taste: Not available.

Molecular Weight: 128.19 g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: 218°C (424.4°F)

Melting Point: 80.2°C (176.4°F)

Critical Temperature: Not available.

Specific Gravity: 1.162 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: 4.4 (Air = 1)

Volatility: Not available.

Odor Threshold: 0.038 ppm

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties:
Partially dispersed in hot water, methanol, n-octanol.
Very slightly dispersed in cold water.
See solubility in methanol, n-octanol.

Solubility:
Partially soluble in methanol, n-octanol.
Very slightly soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Highly reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: May attack some forms of rubber and plastic

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 490 mg/kg [Rat].
Acute dermal toxicity (LD50): 20001 mg/kg [Rabbit].
Acute toxicity of the vapor (LC50): 170 ppm 4 hour(s) [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.

DEVELOPMENTAL TOXICITY: Classified Development toxin [POSSIBLE].
The substance is toxic to blood, kidneys, the nervous system, the reproductive system, liver, mucous membranes, gastrointestinal tract, upper respiratory tract, central nervous system (CNS).

Other Toxic Effects on Humans:
Very hazardous in case of ingestion.
Hazardous in case of inhalation.
Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 305.2 ppm 96 hour(s) [Trout].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 4.1: Flammable solid.

Identification: : Naphthalene, refined : UN1334 PG: III

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:
Rhode Island RTK hazardous substances: Naphthalene
Pennsylvania RTK: Naphthalene
Florida: Naphthalene
Minnesota: Naphthalene
Massachusetts RTK: Naphthalene
TSCA 8(b) inventory: Naphthalene
TSCA 8(a) PAIR: Naphthalene
TSCA 8(d) H and S data reporting: Naphthalene: 06/01/87
SARA 313 toxic chemical notification and release reporting: Naphthalene: 1%
CERCLA: Hazardous substances.: Naphthalene: 100 lbs. (45.36 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-4: Flammable solid.
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).
CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R36- Irritating to eyes.
R40- Possible risks of irreversible effects.
R48/22- Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R48/23- Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R63- Possible risk of harm to the unborn child.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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Last Updated: 10/11/2005 01:30 PM

BUTYL BENZYL PHTHALATE

0834
October 2005

CAS No: 85-68-7 RTECS No: TH9990000 UN No: 3082 EC No: 607-430-00-3	Benzyl butyl phthalate 1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester BBP 1,2-$C_6H_4(COOCH_2C_6H_5)(COOC_4H_9)$ / $C_{19}H_{20}O_4$ Molecular mass: 312.4

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames.	Alcohol-resistant foam. Powder, carbon dioxide. Water spray.
EXPLOSION			
EXPOSURE	**See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.**	**PREVENT GENERATION OF MISTS! AVOID EXPOSURE OF (PREGNANT) WOMEN!**	
Inhalation		Ventilation, local exhaust, or breathing protection.	Fresh air, rest.
Skin		Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap.
Eyes		Safety spectacles.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion		Do not eat, drink, or smoke during work.	Rinse mouth.

SPILLAGE DISPOSAL	PACKAGING & LABELLING	
Personal protection: filter respirator for organic gases and vapours. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place.	T Symbol N Symbol R: 61-62-50/53 S: 45-53-60-61 UN Hazard Class: 9 UN Pack Group: III	Marine pollutant.

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-90GM6-III NFPA Code: H1; F1; R0	Store in an area without drain or sewer access. Separated from strong oxidants.

SEE IMPORTANT INFORMATION ON THE BACK.

IMPORTANT DATA

Physical State; Appearance
COLOURLESS OILY LIQUID

Chemical dangers
The substance decomposes on burning producing toxic fumes. Reacts with oxidants.

Occupational exposure limits
TLV not established.
MAK not established.

Routes of exposure
The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

Inhalation risk
Evaporation at 20/C is negligible; a harmful concentration of airborne particles can, however, be reached quickly on spraying.

Effects of long-term or repeated exposure
Animal tests show that this substance possibly causes toxicity to human reproduction or development.

PHYSICAL PROPERTIES

Boiling point: 370/C
Melting point: -35/C
Relative density (water = 1): 1.1
Solubility in water: 0.71 mg/l (very poor)
Vapour pressure, Pa at 20/C: negligible
Relative vapour density (air = 1): 10.8
Flash point: 198/C
Auto-ignition temperature: 425/C
Octanol/water partition coefficient as log Pow: 4.77

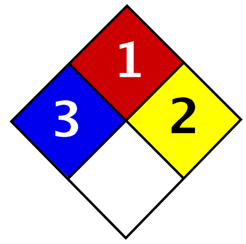
ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms. Bioaccumulation of this chemical may occur in fish.

NOTES

Saniticizer 160, Sicol 160, Unimoll BB and Palatinol BB are trade names.

ADDITIONAL INFORMATION



Health	3
Fire	1
Reactivity	2
Personal Protection	E

Material Safety Data Sheet
Arsenic MSDS

Section 1: Chemical Product and Company Identification

Product Name: Arsenic

Catalog Codes: SLA1006

CAS#: 7440-38-2

RTECS: CG0525000

TSCA: TSCA 8(b) inventory: Arsenic

CI#: Not applicable.

Synonym:

Chemical Name: Arsenic

Chemical Formula: As

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Arsenic	7440-38-2	100

Toxicological Data on Ingredients: Arsenic: ORAL (LD50): Acute: 763 mg/kg [Rat]. 145 mg/kg [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance is toxic to kidneys, lungs, the nervous system, mucous membranes.
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of heat, of oxidizing materials.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:
Material in powder form, capable of creating a dust explosion. When heated to decomposition it emits highly toxic fumes.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not

present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, acids, moisture.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.01 from ACGIH (TLV) [United States] [1995]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Lustrous solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 74.92 g/mole

Color: Silvery.

pH (1% soln/water): Not applicable.

Boiling Point: Not available.

Melting Point: Sublimation temperature: 615°C (1139°F)

Critical Temperature: Not available.

Specific Gravity: 5.72 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents, acids, moisture.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 145 mg/kg [Mouse].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH.
Causes damage to the following organs: kidneys, lungs, the nervous system, mucous membranes.

Other Toxic Effects on Humans:
Very hazardous in case of ingestion, of inhalation.
Slightly hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Arsenic UNNA: UN1558 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Arsenic
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Arsenic
Pennsylvania RTK: Arsenic
Massachusetts RTK: Arsenic
TSCA 8(b) inventory: Arsenic

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R22- Harmful if swallowed.
R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 1

Reactivity: 2

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 1

Reactivity: 2

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Safety glasses.

Section 16: Other Information

References:

-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987.
-Liste des produits purs tératogènes, mutagènes, cancérogènes. Répertoire toxicologique de la Commission de la Santé et de la Sécurité du Travail du Québec.
-Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec.
-SAX, N.I. Dangerous Properties of Indutrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984.
-The Sigma-Aldrich Library of Chemical Safety Data, Edition II.
-Guide de la loi et du règlement sur le transport des marchandises dangeureuses au canada. Centre de conformité internatinal Ltée. 1986.

Other Special Considerations: Not available.

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BERYLLIUM

0226
October 1999

CAS No: 7440-41-7
RTECS No: DS1750000
UN No: 1567
EC No: 004-001-00-7

Glucinium
Be
Atomic mass: 9.0

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Special powder, dry sand, NO other agents.
EXPLOSION	Finely dispersed particles form explosive mixtures in air.	Prevent deposition of dust; closed system, dust explosion-proof electrical equipment and lighting.	

EXPOSURE		**PREVENT DISPERSION OF DUST! AVOID ALL CONTACT!**	**IN ALL CASES CONSULT A DOCTOR!**
Inhalation	Cough. Shortness of breath. Sore throat. Weakness. Symptoms may be delayed (see Notes).	Local exhaust. Breathing protection.	Fresh air, rest. Refer for medical attention.
Skin	Redness.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower.
Eyes	Redness. Pain.	Face shield or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion		Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Do NOT induce vomiting. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING	
Evacuate danger area! Consult an expert! Carefully collect the spilled substance into containers; if appropriate moisten first, then remove to safe place. Chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment.	**EU classification** T+ Symbol R: 49-25-26-36/37/38-43-48/23 S: 53-45 Note: E **UN classification** UN Hazard Class: 6.1 UN Subsidiary Risks: 4.1 UN Pack Group: II	Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-61GTF3-II NFPA Code: H3; F1; R0	Separated from strong acids, bases, chlorinated solvents, food and feedstuffs.

0226	BERYLLIUM

IMPORTANT DATA

Physical State; Appearance
GREY TO WHITE POWDER.

Physical dangers
Dust explosion possible if in powder or granular form, mixed with air.

Chemical dangers
Reacts with strong acids and strong bases forming flammable/explosive gas (hydrogen - see ICSC0001). Forms shock sensitive mixtures with some chlorinated solvents, such as carbon tetrachloride and trichloroethylene.

Occupational exposure limits
TLV: 0.002 mg/m^3 as TWA, 0.01 mg/m^3 as STEL; A1 (confirmed human carcinogen); (ACGIH 2004). Intended change 0.00002 mg/m^3 Skin, Inhal. SEN (ACGIH 2005).
MAK: sensitization of respiratory tract and skin (Sah); Carcinogen category: 1; (DFG 2004).

Routes of exposure
The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

Inhalation risk
Evaporation at 20/C is negligible; a harmful concentration of airborne particles can, however, be reached quickly when dispersed.

Effects of short-term exposure
The aerosol of this substance is irritating to the respiratory tract. Inhalation of dust or fumes may cause chemical pneumonitis. Exposure may result in death. The effects may be delayed. Medical observation is indicated.

Effects of long-term or repeated exposure
Repeated or prolonged contact may cause skin sensitization. Lungs may be affected by repeated or prolonged exposure to dust particles, resulting in chronic beryllium disease (cough, weight loss, weakness). This substance is carcinogenic to humans.

PHYSICAL PROPERTIES

Boiling point: above 2500/C
Melting point: 1287/C
Density: 1.9 g/cm^3
Solubility in water: none

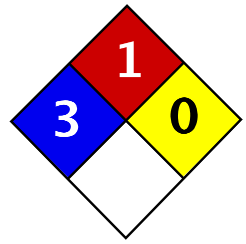
ENVIRONMENTAL DATA

The substance is very toxic to aquatic organisms.

NOTES

Depending on the degree of exposure, periodic medical examination is suggested.
Do NOT take working clothes home.
Card has been partly updated in October 2005. See sections Occupational Exposure Limits, Emergency Response.

ADDITIONAL INFORMATION



Health	3
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Cadmium MSDS

Section 1: Chemical Product and Company Identification

Product Name: Cadmium

Catalog Codes: SLC3484, SLC5272, SLC2482

CAS#: 7440-43-9

RTECS: EU9800000

TSCA: TSCA 8(b) inventory: Cadmium

CI#: Not applicable.

Synonym:

Chemical Name: Cadmium

Chemical Formula: Cd

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Cadmium	7440-43-9	100

Toxicological Data on Ingredients: Cadmium: ORAL (LD50): Acute: 2330 mg/kg [Rat.]. 890 mg/kg [Mouse]. DUST (LC50): Acute: 50 ppm 4 hour(s) [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant). Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified A2 (Suspected for human.) by ACGIH, 2 (Reasonably anticipated.) by NTP.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance is toxic to kidneys, lungs, liver.
Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact: No known effect on eye contact, rinse with water for a few minutes.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 570°C (1058°F)

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances:
Non-flammable in presence of open flames and sparks, of heat, of oxidizing materials, of reducing materials, of combustible materials, of moisture.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:
Material in powder form, capable of creating a dust explosion. When heated to decomposition it emits toxic fumes.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.01 (ppm)
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Lustrous solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 112.4 g/mole

Color: Silvery.

pH (1% soln/water): Not applicable.

Boiling Point: 765°C (1409°F)

Melting Point: 320.9°C (609.6°F)

Critical Temperature: Not available.

Specific Gravity: 8.64 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water, hot water, methanol, diethyl ether, n-octanol.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not considered to be corrosive for metals and glass.

Special Remarks on Reactivity: Reacts violently with potassium.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.
Acute oral toxicity (LD50): 890 mg/kg [Mouse].
Acute toxicity of the dust (LC50): 229.9 mg/m3 4 hour(s) [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A2 (Suspected for human.) by ACGIH, 2 (Reasonably anticipated.) by NTP.
The substance is toxic to kidneys, lungs, liver.

Other Toxic Effects on Humans:
Hazardous in case of ingestion, of inhalation.
Slightly hazardous in case of skin contact (irritant, sensitizer).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: An allergen. 0047 Animal: embryotoxic, passes through the placental barrier.

Special Remarks on other Toxic Effects on Humans: May cause allergic reactions, exzema and/or dehydration of the skin.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification:

Identification:

Special Provisions for Transport:

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Cadmium
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Cadmium
Pennsylvania RTK: Cadmium
Massachusetts RTK: Cadmium
TSCA 8(b) inventory: Cadmium
SARA 313 toxic chemical notification and release reporting: Cadmium
CERCLA: Hazardous substances.: Cadmium

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R26- Very toxic by inhalation.
R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Safety glasses.

Section 16: Other Information

References:

-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987.
-Liste des produits purs tératogènes, mutagènes, cancérogènes. Répertoire toxicologique de la Commission de la Santé et de la Sécurité du Travail du Québec.
-Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec.
-SAX, N.I. Dangerous Properties of Indutrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984.
-The Sigma-Aldrich Library of Chemical Safety Data, Edition II.
-Guide de la loi et du règlement sur le transport des marchandises dangeureuses au canada. Centre de conformité internatinal Ltée. 1986.

Other Special Considerations: Not available.

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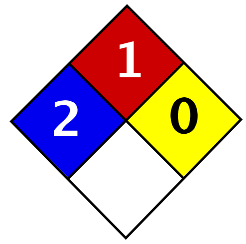

Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Copper MSDS

Section 1: Chemical Product and Company Identification

Product Name: Copper

Catalog Codes: SLC4939, SLC2152, SLC3943, SLC1150, SLC2941, SLC4729, SLC1936, SLC3727, SLC5515

CAS#: 7440-50-8

RTECS: GL5325000

TSCA: TSCA 8(b) inventory: Copper

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: Cu

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Copper	7440-50-8	100

Toxicological Data on Ingredients: Copper LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of ingestion. Hazardous in case of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (irritant).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance is toxic to lungs, mucous membranes.
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation: Not available.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Avoid contact with eyes Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If you feel unwell, seek medical attention and show the label when possible.

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 1 (mg/m3) from ACGIH [1990]
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Not available.

Taste: Not available.

Molecular Weight: 63.54 g/mole

Color: Not available.

pH (1% soln/water): Not applicable.

Boiling Point: 2595°C (4703°F)

Melting Point: 1083°C (1981.4°F)

Critical Temperature: Not available.

Specific Gravity: 8.94 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available.
LC50: Not available.

Chronic Effects on Humans: The substance is toxic to lungs, mucous membranes.

Other Toxic Effects on Humans:
Very hazardous in case of ingestion.
Hazardous in case of inhalation.
Slightly hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Human: passes through the placenta, excreted in maternal milk.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Copper
Massachusetts RTK: Copper
TSCA 8(b) inventory: Copper
CERCLA: Hazardous substances.: Copper

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R36- Irritating to eyes.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an
approved/certified respirator or
equivalent. Wear appropriate respirator

when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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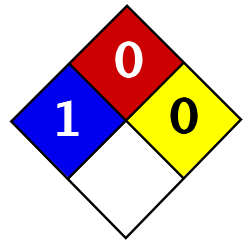
Last Updated: 10/09/2005 04:58 PM



Health	1
Fire	0
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Lead MSDS

Section 1: Chemical Product and Company Identification

Product Name: Lead

Catalog Codes: SLL1291, SLL1669, SLL1081, SLL1459, SLL1834

CAS#: 7439-92-1

RTECS: OF7525000

TSCA: TSCA 8(b) inventory: Lead

CI#: Not available.

Synonym: Lead Metal, granular; Lead Metal, foil; Lead Metal, sheet; Lead Metal, shot

Chemical Name: Lead

Chemical Formula: Pb

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Lead	7439-92-1	100

Toxicological Data on Ingredients: Lead LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:
Slightly hazardous in case of skin contact (permeator).
CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
The substance may be toxic to blood, kidneys, central nervous system (CNS).
Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances: Non-flammable in presence of open flames and sparks, of shocks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: When heated to decomposition it emits highly toxic fumes of lead.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not

present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.05 (mg/m3) from ACGIH (TLV) [United States]
TWA: 0.05 (mg/m3) from OSHA (PEL) [United States]
TWA: 0.03 (mg/m3) from NIOSH [United States]
TWA: 0.05 (mg/m3) [Canada]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Metal solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 207.21 g/mole

Color: Bluish-white. Silvery. Gray

pH (1% soln/water): Not applicable.

Boiling Point: 1740°C (3164°F)

Melting Point: 327.43°C (621.4°F)

Critical Temperature: Not available.

Specific Gravity: 11.3 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, excess heat

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Can react vigorously with oxidizing materials.
Incompatible with sodium carbide, chlorine trifluoride, trioxane + hydrogen peroxide, ammonium nitrate, sodium azide, disodium acetylide, sodium acetylide, hot concentrated nitric acid, hot concentrated hydrochloric acid, hot concentrated sulfuric acid, zirconium.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available.
LC50: Not available.

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC.
May cause damage to the following organs: blood, kidneys, central nervous system (CNS).

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:
Acute Potential:
Skin:
Lead metal granules or dust: May cause skin irritation by mechanical action.
Lead metal foil, shot or sheets: Not likely to cause skin irritation
Eyes:
Lead metal granules or dust: Can irritate eyes by mechanical action.

Lead metal foil, shot or sheets: No hazard. Will not cause eye irritation.
Inhalation:
In an industrial setting, exposure to lead mainly occurs from inhalation of dust or fumes.
Lead dust or fumes: Can irritate the upper respiratory tract (nose, throat) as well as the bronchi and lungsby mechanical action. Lead dust can be absorbed through the respiratory system. However, inhaled lead does not accumulate in the lungs. All of an inhaled dose is eventually abssorbed or transferred to the gastrointestinal tract. Inhalation effects of exposure to fumes or dust of inorganic lead may not develop quickly. Symptoms may include metallic taste, chest pain, decreased physical fitness, fatigue, sleep disturbance, headache, irritability, reduces memory, mood and personality changes, aching bones and muscles, constipation, abdominal pains, decreasing appetite. Inhalation of large amounts may lead to ataxia, deliriuim, convulsions/seizures, coma, and death.
Lead metal foil, shot, or sheets: Not an inhalation hazard unless metal is heated. If metal is heated, fumes will be released. Inhalation of these fumes may cause "fume metal fever", which is characterized by flu-like symptoms. Symptoms may include metallic taste, fever, nausea, vomiting, chills, cough, weakness, chest pain, generalized muscle pain/aches, and increased white blood cell count.
Ingestion:
Lead metal granules or dust: The symptoms of lead poisoning include abdominal pain or cramps (lead cholic), spasms, nausea, vomiting, headache, muscle weakness, hallucinations, distorted perceptions, "lead line" on the gums, metallic taste, loss of appetite, insomnia, dizziness and other symptoms similar to that of inhalation. Acute poisoning may result in high lead levels in the blood and urine, shock, coma and death in extreme cases.
Lead metal foil, shot or sheets: Not an ingestion hazard for usual industrial handling.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Lead
California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which would require a warning under the statute: Lead
California prop. 65: This product contains the following ingredients for which the State of California has found to

cause reproductive harm (male) which would require a warning under the statute: Lead
California prop. 65 (no significant risk level): Lead: 0.0005 mg/day (value)
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Lead
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Lead
Connecticut hazardous material survey.: Lead
Illinois toxic substances disclosure to employee act: Lead
Illinois chemical safety act: Lead
New York release reporting list: Lead
Rhode Island RTK hazardous substances: Lead
Pennsylvania RTK: Lead

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R20/22- Harmful by inhalation and if swallowed.
R33- Danger of cumulative effects.
R61- May cause harm to the unborn child.
R62- Possible risk of impaired fertility.
S36/37- Wear suitable protective clothing and gloves.
S44- If you feel unwell, seek medical advice (show the label when possible).
S53- Avoid exposure - obtain special instructions before use.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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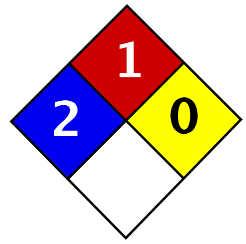

Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Selenium MSDS

Section 1: Chemical Product and Company Identification

Product Name: Selenium

Catalog Codes: SLS2629

CAS#: 7782-49-2

RTECS: VS7700000

TSCA: TSCA 8(b) inventory: Selenium

CI#: Not available.

Synonym:

Chemical Name: Not available.

Chemical Formula: Se

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Selenium	7782-49-2	100

Toxicological Data on Ingredients: Selenium: ORAL (LD50): Acute: 6700 mg/kg [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available.
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.
DEVELOPMENTAL TOXICITY: Not available.
Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Material in powder form, capable of creating a dust explosion.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label.

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.2 (mg/m3)
Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Solid metallic powder.)

Odor: Odorless.

Taste: Not available.

Molecular Weight: 78.96 g/mole

Color: Not available.

pH (1% soln/water): Not applicable.

Boiling Point: 684.9°C (1264.8°F)

Melting Point: 217°C (422.6°F)

Critical Temperature: Not available.

Specific Gravity: 4.81 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 6700 mg/kg [Rat].

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans:
Hazardous in case of ingestion, of inhalation.
Slightly hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Passes through the placental barrier in animal. Excreted in maternal milk in human.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Selenium powder : UN2658 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Selenium
Massachusetts RTK: Selenium
TSCA 8(b) inventory: Selenium
SARA 313 toxic chemical notification and release reporting: Selenium
CERCLA: Hazardous substances.: Selenium

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada): CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).

DSCL (EEC): R36- Irritating to eyes.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves.
Lab coat.
Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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Last Updated: 10/09/2005 06:24 PM

Appendix B
On-Site Safety Meeting Forms

DAILY
ON-SITE SAFETY MEETING

Project: Gregory Street Brownfield Assessment Site

Date:_______________ Time:_______________ Job No.: 190500196

Address: 399 Gregory Street, Rochester, New York

Scope of Work: ____

____

____

Weather Temp:________________ Wind direction/speed:__________________

Sky Conditions:______________________ Humidity:______________________________

Weather Conditions affecting work:____

____

Safety Topics Discussed

Protective Clothing/Equipment: ____

____

____

Chemical Hazards: ____

____

Physical Hazards: ____

____

Personnel/Equipment Decontamination: _______________________________________

____

Personnel/Job Functions: ____

____

____

Emergency Procedures: ____

____

____

Special Equipment:

____

Other: ____

____

Emergency Phone Numbers/Addresses

Ambulance, Fire Police: 911

Hospital: Highland Hospital (585) 341-6880 - emergency department

Poison Control Center: (585) 275-3232

Electric or Gas Emergency: (585) 546-1100

DEC: (585) 226-5438

DOH: (585) 423-8069

On-Site Safety Meeting
ATTENDEES

Name Printed	Signature	Job function

Meeting Conducted By:	______________________	______________________
	Name Printed	Signature
Site Safety Officer	______________________	______________________
Team Leader	______________________	______________________