# SITE INVESTIGATION
# REMEDIAL ALTERNATIVES REPORT

**Site Name:**

**1200 EAST MAIN STREET**
**CITY OF ROCHESTER**
**MONROE COUNTY, NEW YORK**

**BROWNFIELD PROJECT B-00129-8**

**Prepared for:**

**City of Rochester**
**Department of Environmental Services**

**BERGMANN**
**Associates**

**Prepared by:**
**Bergmann Associates**
**200 First Federal Plaza**
**28 East Main Street**
**Rochester, New York 14614**

**Revised**
**September 2005**

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STATE OF NEW YORK
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# CITY OF ROCHESTER, MONROE COUNTY, NEW YORK
# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# BROWNFIELD PROJECT (B-00129-8)

## 1.0 INTRODUCTION

### 1.1 Background

Bergmann Associates (Bergmann) is submitting this Site Investigation Remedial Alternatives Report (SI RAR) on behalf of the City of Rochester Department of Environmental Services (City) to the New York State Department of Environmental Conservation (NYSDEC). The report summarizes investigation activities conducted at 1200 East Main Street, Rochester, NY between 2000 and 2004.

The City began conducting the SI RAR at the subject parcel in accordance with the NYSDEC – 1996 Clean Water/Clean Air Bond Act Environmental Restoration Project – Title 5. Bergmann conducted site activities in accordance with the Supplemental Site Investigation Work Plan dated September 20, 2002 and subsequently revised with a work plan dated December 2002. During the course of this investigation, the site was moved into the 2003 Environmental Restoration Program.

### 1.2 Site Description

The study site for the SI RAR consists of the parcel of land located at 1200 East Main Street in the City of Rochester near the northwest intersection of East Main and Laura Streets. The subject parcel area is shown on Figure 1, USGS Topographic Map, included with the Figures section of this report. The Draft Site Investigation Report included a Phase I Environmental Site Assessment of the property. A summary of the site description and history is provided below.

The subject parcel is located at approximately 43°- 09’-43” latitude and 77°-34’-48” longitude. The parcel is approximately 0.52 acres in size and is located within a residential/commercial-zoned area. The location is bordered on the west by an Auto Zone retailer; to the east is a residential multi-family building at 1214/1215 East Main St.; to the south is East Main Street; and to the north are additional residential homes located on Hayward Street. Figure 2, Parcel Location Map, was prepared from the City of Rochester Tax Map for this area, depicts the general location of the site and is included in the Figures section of this report.

Approximately 75% of the parcel was covered with a weathered asphalt pavement. The northern most section transitioned into a dirt-covered area with brush and trees. Several light poles were on the parcel including two direct overhead of the fuel island. Associated utilities including electrical, gas, water main and sanitary sewers are believed to exist stemming from East Main Street. Sewer line and electric lines to the light poles were encountered during the 2000 Site Investigation (SI) and the 2003 Supplemental Site Investigation (SSI).

## 1.3 Site History

The parcel existed as a service garage and retail gasoline/convenience store, most recently known as a Pic ‘N’ Pay retail gasoline station. The study site was reportedly used as a retail gasoline station from 1928 until 1993, at which time it was abandoned and foreclosed on by the City.

A history of storage tanks at the subject parcel was prepared from information obtained from the City of Rochester Fire Marshall and NYSDEC in response of Freedom of Information Requests, and site conditions observed during the 2000 and 2003 removal activities. The use of UST’s at the subject parcel had historically been used for storage of gasoline, diesel fuel and kerosene.

The site was believed to contain five underground storage tanks (USTs) based on building permit records and registration records provided by the City. These tanks consisted of two 4,000 gallon capacity tanks, one 3,000-gallon capacity tank and two tanks of 6,000-gallon capacity. The tank sizes were based on measurements made during the June 2000 removal activities. The NYSDEC petroleum bulk storage registration for the facility (PBS #8-434175) listed five USTs at the site, but listed incorrect volume capacities for the three smaller tanks. The tanks were used for storage of gasoline, diesel fuel and kerosene. The location and orientation of the five USTs removed in 2000 are shown on Figure 3.

UST records provided by the City of Rochester Fire Marshall and the NYSDEC indicate that one UST that was moved prior to this investigation was listed in the NYSDEC petroleum bulk storage registration. This particular UST had a capacity of 2,000 gallons.

Other apparent former tanks at the study site included one fuel oil aboveground storage tank (AST), estimated capacity 550 gallons and one aboveground waste oil tank (estimated capacity 500 gallons). The tanks were formerly located along the north wall of the former service station building. According to City of Rochester Fire Marshall records both tanks were removed prior to this investigation.

An additional 275 gallon UST was encountered in June 2003 adjacent to the north side of the gasoline station building, during test trenches excavated as part of the SSI field work. This tank was an oval-shaped 275 gallon tank typical of heating oil or used oil storage. The tank was removed on June 20, 2003.

There was a fuel island that contained three dispenser pumps. Historic site sketches provided by the City of Rochester Fire Department indicated two other dispenser pumps that were located at the same location as the dispenser pump island that was removed in 2000.

On June 28 and 29, 2000 the USTs were excavated and removed from the study site. As of June 2000 the underground storage tanks west of the building had been removed from the study site, along with all dispenser pumps and readily accessible piping.

The north end of the study site may have been used as a site for illegal dumping of antifreeze, construction materials and similar wastes. This is based on an anonymous letter that was received by the City in June 2000 alleging illegal dumping of oil and antifreeze on the property.

## 1.4 2000 Site Investigation Results Summary

Site activities were conducted in 2000 by the City of Rochester in accordance with NYSDEC – 1996 Clean Water/Clean Air Bond Act Environmental Restoration Project-Title 5. The majority of site activities were conducted from June 26, 2000 to September 11, 2000. Results were summarized in the Draft Site Investigation Report dated October 27, 2000. A subsequent round of groundwater samples were collected in November, 2000 (Groundwater Sampling Event #2). Results of Sampling Event #2 were provided in a summary report dated January 16, 2001.

Figure 3 shows the locations of the monitoring wells, Geoprobe® test borings, and surface soil sample locations from the 2000 investigation. Figure 4 shows the orientation of the UST tank pit, dispenser pump pit and locations of suspect asbestos sample locations collected in 2000.

Figure 5 shows the location of all monitoring wells after installation of supplemental wells was completed in 2003 and 2004.

Figure 6 presents the results of the analytical results of total Volatile Organic Compounds (VOCs) detected in the overburden soil samples collected in 2000. Analytical Results on the 2000 soil samples are presented in Analytical Summary Tables II through IV.

Analytical results on groundwater samples collected on August 1, 2000 are presented in Analytical Summary Tables IX, X and XI. A summary of the detected total VOCs detected in the groundwater samples are posted on Figure 10.

The November 2000 groundwater analytical results are presented in Tables XII, XIII and XIV, contained in the Analytical Summary Tables Section.

August 2000 Groundwater Laboratory Analysis

- Analysis for VOCs (Summary Table IX)
- SVOCs (Summary Table X)
- Target Analyte List (TAL) of Metals (Summary Table XI)

November 2000 Groundwater Laboratory Analysis

- VOCs (Summary Table XII)
- SVOCS (Summary Table XIII)
- RCRA 8 Metals (Summary Table XIV)

Investigative activities completed and detailed in the November 27, 2000 Site Investigation Report included:

- Completion of a Phase I Environmental Site Assessment Report dated October 24, 2000.
- Sampling and analysis of suspect Asbestos Containing Material (ACM) from the service station building.
- Installation of direct-push Geoprobe® test borings.
- Excavation of test pits at underground storage tank locations and a dispenser pump island.
- Field screening.
- Installation of four groundwater monitoring wells (MW-1 through MW-4).
- Metal Detector survey for buried metallic objects (iron and steel).
- Laboratory analysis on soil and groundwater samples.
- Slug testing/hydraulic characterization of the local bedrock aquifer.
- Removal of five underground storage tanks, ancillary piping and dispenser pumps.
- Removal of petroleum-contaminated soil from the UST pit.
- Preparation of Geologic cross sections.
- Water table surface/flow mapping.
- Preparation of the October 27, 2000 Draft Site Investigation report.

### 1.5 2000 Tank Removal Program

Underground storage tanks (USTs) were removed from the subject parcel in June, 2000. Marcor Remediation was contracted to perform all of the tank removal and sub surface investigation work while being directed by a combination of Bergmann Associates and Fisher Associate's personnel.

Once the UST's were uncovered, each was purged of any residual product, power washed on site and made inert. The Rochester Fire Marshall came to the site and signed appropriate certifications allowing tank removals. Each tank was removed for disposition off site. A total of five UST's were pulled from the site between June 26, 2000 – June 30, 2000. This area was referred to as the tank pit and was located on the west side of the gas station building. Location of the tank pit from which 5 tanks were removed is shown on Figure 3 and also on all applicable subsequent drawings. The approximate size of the tank pit was 47-feet long by 27-feet wide by 9-feet deep. Eight grab samples were collected; two collected from the bottom and six from the side walls. Sample locations are shown on Figure 3. The analytical results were provided with the Draft Site Investigation/Remedial Alternatives Report dated October 27, 2000.

Two samples were also collected out of the larger tanks (6,000-gallon FRP) to distinguish leaded versus unleaded concentrations for proper off site blending/disposition. Grab samples were collected from each of the two tank bottoms. Less than 6-inches of fluid existed per each tank. Samples were sent to Columbia Analytical Services for analysis based on the need for quick turnaround of results. Both samples showed less than 1.0 MG/L of lead per Method 6010B. The contents of the three smaller, steel tanks were removed for disposal without any characterization sampling.

An additional excavation (pump pit) was also completed following the removal of the pump island on the south side of the parcel. Several lines were removed that connected the pump island to the UST's in the process of removing the island. The pump pit was roughly 40-feet long by 8-feet wide by 3-feet deep. Two grab samples were collected from the pump pit for analyses.

During these excavations, there were both visual and olfactory evidence of the presence of petroleum products within the subsurface. Free petroleum product was observed in the bottom of the tank pit and "stained" soils were observed in various spots of both the pump pit and the tank pit. Photo Ionization Detector (PID) readings were collected off of soils freshly removed using an H NU ISPI-101. Values ranged from non-detect to 125 parts per million (PPM) for total volatile organic compounds (VOC). Additional PID readings were collected from pit bottoms during sample collections and ranged from 1.2 PPM to 96 PPM.

The five USTs removed in June 2000. The fiberglass reinforced plastic (FRP) were crushed up and disposed of as scrap at the High Acres Landfill and Recycling Center in Perinton, NY on June 29, 2000. A copy of the disposal receipt for the RFP tank disposal is included in Appendix 1. The steel tanks were reportedly transported as scrap to Genesee Scrap and Tin 80 Steel Street, Rochester, NY. No verification on disposal of the scrap steel was provided by Marcor.

During the 2000 tank removal program approximately 700 gallons of product (gasoline) was pumped of the five USTs. The product was shipped to Industrial Oil Tank Services, Inc., Oriskany, NY for disposal. Copies of disposal records for the product removed from the tanks in 2000 are provided in Appendix 1.

Approximately 412.5 tons of contaminated soil was removed from the UST tank pit in June 2000. This soil was staged on site on plastic and was covered with plastic sheeting until off-site disposal could be arranged. The soil was accepted for disposal at the Monroe County Mill Seat Landfill in Riga, NY as non-hazardous petroleum contaminated soil. The soil was transported for disposal Silvarole Trucking, Inc. on August 10, 2000 to the Monroe County facility. A total of 12 truck loads were required to transport and dispose of the 312.5 tons of soil. Copies of the disposal receipts for the 412.5 tons of removed soil are included in Appendix 1.

## 1.6 Asbestos Containing Materials Abatement

A survey of potential Asbestos Containing Materials (ACM) at the service station building was performed in 2000 as part of initial site activities. The presence of ACM was confirmed. Suspect ACM sample locations are shown on Figure 4. The analytical results on the suspect ACM samples are presented in Analytical Summary Table I in the Summary Tables Section.

Removal of ACM from the service station building was completed as a task of the SSI. ACM had to be removed prior to demolition. All identified ACM was removed prior to demolition on December 4, 2002 by A.A. C. Contracting, Inc., a New York State Department of Labor certified abatement contractor. ACM debris was properly disposed of at an appropriate off-site facility. ACM abatement records are provided in Appendix 2.

The types and quantity of ACM identified and removed consisted of the following:

- Window Glazing Compound on the windows at the rear of the building – 14 linear feet.
- Window Calk on the windows at the rear of the building – approximately 8 linear feet.
- Gray roofing tar sealant along the perimeter of rolled roofing and at the base of the dividing wall in the middle of the roof – approximately 100 square feet.
- White glue under the green Formica wall board on interior walls – 352 square feet.

## 1.7 1214-1216 East Main Street IAQ Study January 2001

On January 12, 2001 Bergmann performed an initial assessment of Indoor Air Quality (IAQ) at the residence identified as 1214-1216 East Main Street. One indoor air sample was collected in the basement of the structure. The basement is partitioned off into two sections. The side closest to the 1200 East Main Street site was selected for Summa® canister sampling. A short term grab sample of ambient conditions was collected and submitted to Performance Analytical, an ELAP certified laboratory in Pennsylvania, for TO-14 analysis.

## 1.8 Supplemental Site Investigation Objectives

The 2000 Site Investigation did not adequately determine the extent of impacted soil and groundwater at the subject parcel. The initial four monitoring wells were insufficient to define the local water table surface and flow direction. The draft SI report also recommended additional investigative activities.

A work plan for a supplemental site investigation (SSI) was prepared by Bergmann Associates for the City of Rochester. The NYSDEC and the City negotiated additional investigative tasks to be implemented. The final version of the SSI Work Plan, dated December 2002 was approved by the NYSDEC in 2003. The following objectives were addressed as part of the SSI:

- Installation of additional groundwater monitoring wells, including off-site wells.

- Excavation of additional test trenches at metal detector anomalies, along the north property perimeter, along the south perimeter and between the former dispenser pump and the property line.

- Implementation of an IAQ program at 1214-1216 East Main Street that complies with the NYSDOH Indoor Air Sampling & Analysis Protocol so that determination of potential hazard assessment may be conducted.

- Preparation of seasonal water table surface mapping and groundwater flow.

- Preparation of analytical results postings mapping, geologic cross-sections and plume mapping.

- Evaluation of Remedial Alternatives.

- Completion of this report.

## 2.0 2003 - 2004 SSI SITE INVESTIGATION FIELD ACTIVITIES

### 2.1 2003 Supplemental Site Investigation Activities

The work tasks to be completed as part of the SSI were outlined in the revised Work Plan dated December 2002 and subsequently revised with a correspondence letter dated September 4, 2003. Activities conducted in 2003 included the following tasks:

- Building Demolition (described in Section 2.2).
- Collection and laboratory analysis of surface soil samples.
- Excavation and field screening of test trenches.
- Evaluation of possible buried ferrous (iron/steel) objects from metal detector anomaly survey.
- Laboratory analysis on subsurface soil samples from test trenches.
- Installation of five additional on-site and three off-site monitoring wells.
- Updating the groundwater and aquifer hydraulic characteristics.
- Collection of groundwater samples from all 12 wells for laboratory analysis.
- Collection and laboratory analysis a sub-slab soil gas sample from the adjacent residence at 1214-1216 East Main St.

On-site SSI activities at the subject parcel began on June 16, 2003 with the excavation of test trenches. The 2003 Field work was completed on September 12, 2003 with the completion of in-situ hydraulic conductivity testing (slug tests) on the additional groundwater monitoring wells. The fieldwork was completed in accordance with the SSI work plan as approved by the NYSDEC and City. A summary of the SSI field investigation activities follows.

### 2.2 Building Demolition

The building had been vacant for several years and as of January 2001 was in an extreme state of disrepair, with damage to the roof. Demolition was conducted to allow for investigative work to be conducted beneath the slab/footprint to determine the occurrence and extent of any impacted soil and/or groundwater that may be present at the site. Demolition included the removal of the underlying concrete slab. Building demolition-related documents are provided in Appendix 3.

The building demolition is summarized as follows:

- Demolition dates - January 15, 16 and 17, 2003.
- L.M. Sessler Excavating and Wrecking Inc performed the demolition and disposal work, and also coordinated the following work tasks:
    - Conducted Pest Control – bate and trap.
    - Conducted "Dig Safely" for identification and marking of underground utilities.
    - Obtained City of Rochester Right-of-Way Permit.
    - Obtained City of Rochester A Permit.
- Disposition of building materials – concrete, block and brick materials were hauled off to be recycled. Building materials were taken to High Acres Landfill in Perinton, NY.

- Summary of excavation at time of demolition to track down pits/sumps and to trace lines - done during test pitting activities.
- Excavation and staging of apparent contaminated soil from the former lift pit area.
- The building slab was also removed. A foundation excavation program was conducted beneath the building slab to evaluate potential lift areas, drains or sumps. The foundation excavations and sampling was performed in June 2003 during excavation of on-site test trenches.

## 2.3 2003 Tank Removal, 275 Gallon Underground Storage Tank

A 275 gallon underground storage tank (UST) was encountered during the June 2003 test trench excavation program. The test trenches were excavated by SLC Environmental under the supervision of Bergmann Associates personnel. The tank was encountered by SLC Environmental in a test pit placed along the north wall, designated Test Trench TT-4.

The 275 gallon tank removed in 2003 was characterized based on dimensions, which correspond to a 275 gallon tank. Laboratory analysis was performed on a sample of the interior contents, which were indicative of residual gasoline, at low levels.

Three soil samples were collected from Test Trench TT-4: TT-4, from the bottom of the tank pit; TT-4A, a composite of the tank pit sidewalls; and TT-4B, collected from native soil beneath the tank. Petroleum SVOC compounds were detected above NYSDEC STARS levels in the sample. No VOCs were detected in any of the soil samples collected from Test Trench TT-4. No SVOCs were detected in either the sidewall ample or sample of native soil collected from beneath the tank. Laboratory analysis on the test trench soil samples are discussed in Section 3.2.

No soil was excavated from Test Trench TT-4. Soil was returned to the test trench upon removal of the small 275 gallon tank.

The 275 gallon UST was removed and cleaned on-site by SLC Environmental. Two drums of sludge/rinse water/ absorbent pads were generated during the removal of the 275 gallon UST in 2003. The drums were disposed of off-site at PennOhio (EPA ID No. OHR000028837), Ashtabula, Ohio in April, 2004. The drum contents were collected for disposal along with drums of drilling water/rinse water. Copies of the Non-Hazardous Waste Profile for the drum disposal are provided as part of Appendix 1.

The 275 gallon tank was collected in an SLC Environmental truck. The tank was then transported to Genesee Scrap and Tin Corp., 80 Steel Street, Rochester, NY for disposal as scrap metal.

## 2.4 2004 Activities

Investigative work was conducted in 2004 to complete the goals of the SSI. The work was intended to better define the extent of impacted groundwater in the down-gradient direction; evaluate and mitigate soil vapor intrusion at the adjacent residence at 1214 East Main Street; and obtain groundwater elevations, flow direction and groundwater analytical data during the Summer of 2004 to reflect seasonal conditions.

- Installation of two down-gradient monitoring wells (MW-13 and MW-14).
- Collection of groundwater samples from all 14 wells for laboratory analysis of volatile organic compounds and petroleum-based semi-volatile organic compounds.
- Collection of five surface soil samples to evaluate off-site properties for petroleum semi-volatile organic compounds (SVOCs).
- Gauging of all monitoring wells and preparation of water table mapping for summer conditions.
- Collection and analysis of sub-sub and ambient air samples for lab analysis associated with 1214-1216 East Main Street.
- Preparation of this Supplemental Site Investigation report.

## 3.0 SUPPLEMENTAL SITE INVESTIGATION FINDINGS

The findings and interpretation of the data for the SSI are discussed in this section.

### 3.1 Surface Soil Samples and Laboratory Analysis

Bergmann personnel collected surface soil samples for laboratory analysis in 2003 and 2004. Five surface soil samples were collected from the northern portion of the subject parcel for laboratory analysis in June 2003. The five samples were submitted to Columbia Analytical Services (CAS), a NYSDOH certified analytical laboratory for testing for laboratory analysis. A duplicate surface soil sample was also submitted. One sample, a matrix spike and a duplicate matrix spike sample were analyzed in accordance with ASP deliverable.

Four off-site surface soil samples were collected in June 2004 from properties adjacent to the 1200 East Main Street parcel for laboratory analysis. The off-site surface soil sampling was performed to evaluate possible impact of petroleum SVOCs (diesel fuel and motor oil) that may have migrated from the northern portion of the subject parcel onto adjacent parcels.

The 2003-2004 surface soil sample locations are shown on Figure 7. The laboratory analytical results on the surface soil samples collected in 2003 and 2004 are also shown on Figure 7. The samples were handled, labeled and preserved in accordance with the approved SSI plan. The soil samples were hand-delivered under Chain-of-Custody protocol to CAS.

The laboratory analytical results on the 2003 and 2004 surface soil samples are presented in tabular format compared to the appropriate NYSDEC cleanup objectives (TAGM HWR-4046)[1] in the Analytical Summary Tables section. The following analysis was performed on the surface soil samples:

- VOCs (2003 surface soil samples only) Summary Table V.
- SVOCs: (2003 and 2004 samples) Summary Table VI.
- PCBs and Ethylene Glycol (2003 samples only) Summary Table VII.
- RCRA 8 Heavy Metals (2003 samples only) Summary Table VIII.

The Chain-of-Custody forms for the soil samples collected in 2003 are provided in Appendix 7. The chain-of-custody forms on the surface soil samples collected in 2004 are provided in Appendix 8.

### 3.2 2003 Excavation of Test Trenches and Subsurface Soil Laboratory Analysis

13 test trenches were excavated at the subject parcel in June 16-20, 2003. The originally planned 12 test trenches were excavated in June 2003 by SLC Environmental Services under the direction of Bergmann personnel. Bergmann representatives coordinated field work, performed field screening and collected samples. NYSDEC personnel were present during excavation, field

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[1] NYSDEC HWR TAGM 4046 “Determination of Soil Cleanup Objectives and Cleanup Levels” Revised January 24, 1994.

screening and sampling activities. At the direction of the NYSDEC, a 13th test trench was excavated along the southern perimeter of the subject parcel, between the former dispenser pump island and the curb to East Main Street. The 13th test trench (designated TT-13) was excavated to evaluate potential off-site migration and potential impact to utilities buried beneath the street.

The purpose of each of the test trenches are summarized in Table 1. At least one soil sample was collected from each test trench for laboratory analysis. From three trenches, multiple soil samples were collected.

The locations and relative sizes of the test trenches excavated during 2003 are shown on Figure 8. All 13 test trenches were excavated using a Case 416 rubber tire backhoe. The backhoe bucket and arm were decontaminated between test trenches in accordance with the work plan. All soil samples were collected by Bergmann personnel. The samples were handled, labeled and preserved in accordance with the approved SSI plan. The soil samples were hand-delivered under Chain-of-Custody protocol to CAS for laboratory analysis.

Bergmann documented visual or olfactory evidence of contamination and performed field screening measurements of volatile organic compounds (VOCs) using a Photo-Ionization Detector in accordance with the Work Plan. Field screening observations are presented on the Test Trench Logs provided in Appendix 4.

Subsurface soil samples were collected from the test trenches in accordance with the approved SSI work plan. At least one soil sample was collected from each test trench for laboratory analysis. Two soil samples were collected from test trench TT-12, and two samples were also collected from TT-13. Three soil samples were obtained from Test Trench TT-4, to characterize an area where a 275 gallon UST was unexpectedly encountered. This tank removal is described in section 4.5.2.

The QA/QC program included analysis of sufficient Field Duplicate, Matrix Spike and Trip Blank samples to comply with New York State Analytical Services Protocol (ASP).

ASP reporting was performed on at least 20% soil samples collected during the 2003 test pit program.

19 soil samples were collected from the test trenches, designated as the "TT" series. Of these, six test trench soil samples were submitted for ASP (TT-3, TT-3 Dup, TT-8 Dup, TT-11 and TT-13A), representing 31% of the test trench samples.

Of the three soil samples collected from excavations in the former building foundation (Foundation #1, Foundation #2 and Foundation #3), one sample, Foundation #1 was submitted for ASP, 33% of the foundation samples.

Seven surface soil samples were also collected as part of the 2003 investigation. Two of the surface soil samples (SSU-1 and SSU-6) were submitted for ASP, 28 % of the surface soil samples collected in 2003.

## TABLE 1
## 2003 TEST TRENCH PURPOSE AND SOIL SAMPLE IDENTIFICATION

| Test Trench | Date Excavated | Purpose | Metal Locator Anomaly Summary |
|---|---|---|---|
| TT-1 | 06/18/2003 | Evaluate 2000 metal locator anomaly | Buried steel electrical conduit |
| TT-2 | 06/17/2003 | Evaluate 2000 metal locator anomaly | No source for anomaly detected |
| TT-3 | 06/17/2003 | Evaluate 2000 metal locator anomaly | Buried steel electrical conduit |
| TT-4 | 06/17/2003-06/20/2003 | Foundation evaluation and former AST area evaluation | Not Applicable:<br>No anomaly at this location |
| TT-5 | 06/17/2003 | Evaluate 2000 metal locator anomaly | Source was buried wire |
| TT-6 | 06/17/2003 | Evaluate 2000 metal locator anomaly and subsurface conditions | Metal pail handle. No other metal encountered |
| TT-7 | 06/17/2003 | Evaluate surface and subsurface conditions | Not Applicable:<br>No anomaly at this location |
| TT-8 | 06/16/2003 | Evaluate subsurface at north property line | Not Applicable:<br>No anomaly at this location |
| TT-9 | 06/16/2003 | Evaluate subsurface at north property line | Not Applicable:<br>No anomaly at this location |
| TT-10 | 06/16/2003 | Evaluate 2000 metal detector anomaly | Small metal doors from a heating unit |
| TT-11 | 06/16/2003 | Evaluate surface and subsurface conditions | Not Applicable:<br>No anomaly at this location |
| TT-12 | 06/17/2003 | Evaluate surface and subsurface conditions | Metal pail handle encountered |
| TT-13 | 06/18/2003 | Evaluate subsurface conditions at south property line | Not Applicable:<br>No anomaly at this location |

The analytical results summaries on the subsurface soil samples are posted adjacent to each sample location on Figure 8, 2003 Test Trench Soil Samples Analysis Summary Postings Map. The analytical results are presented in tabular format, compared to appropriate NYSDEC HWR TAGM 4046 Cleanup Objectives in the Analytical Summary Tables section. The Chain-of-Custody forms for the 2003 test trench soil samples are provided with Appendix 7.

Field screening observations and a summary of the laboratory analysis on the test trench samples are presented in Table 2.

At Test Trench TT-9 a small, approximate10 gallon drum encountered 2.0 feet below grade mixed in the fill that extended to 3.4 feet below grade at this location. The small drum was damaged, and contained dirt/soil. No labels or markings were evident on the drum. No staining or product was observed inside or adjacent to the drum. Field screening with the PID did not detect any VOCs above background levels around or adjacent to the drum. The 10 gallon drum was removed and left on the site.

## TABLE 2
## 2003 TEST TRENCH FIELD RESULTS

| Test Trench | Soil Sample Analyzed | Field Screening Summary | Laboratory Analysis Summary |
|---|---|---|---|
| TT-1 | TT-1 | No VOCs, staining or odor | No VOCs or SVOCs detected |
| TT-2 | TT-2 | No VOCs, staining or odor | Petroleum SVOCs detected above TAGM Levels |
| TT-3 | TT-3 | No VOCs, staining or odor | Petroleum SVOCs detected below TAGM Levels |
| TT-4 | TT-4,<br>TT-4A<br>TT-4B | 275 gallon UST encountered and removed; shallow contamination | Petroleum SVOCs detected above TAGM levels at and above the UST. No contamination below the UST |
| TT-5 | TT-5 | No VOCs, staining or odor | Petroleum SVOCs detected below TAGM Levels |
| TT-6 | TT-6 | No VOCs, staining or odor | Petroleum SVOCs detected below TAGM levels |
| TT-7 | TT-7 | No VOCs, staining or odor | Petroleum SVOCs detected below TAGM levels |
| TT-8 | TT-8 | Fill to 1.5 ft, then native soil to bedrock at 13.5 ft. | No Petroleum VOCs or SVOCs detected. |
| TT-9 | TT-9 | 10 gallon drum encountered in fill.<br>Fill to 3.4 ft, then native soil to bedrock at 14.6 ft. | No Petroleum VOCs or SVOCs detected. |
| TT-10 | TT-10 | Fill to 3.4 ft. No odors or staining. | Petroleum SVOCs detected below TAGM levels |
| TT-11 | TT-11 | Fill to 4.0 ft. No odors or staining | Petroleum SVOCs detected below TAGM levels |
| TT-12 | TT-12<br>TT-12A | Fill to 2.4 ft. No odors or staining | No Petroleum VOCs or SVOCs detected |
| TT-13 |  | Petroleum contamination/odor encountered at 8.0 feet | Petroleum VOCs and SVOCs above TAGM at depth of about 8.0 feet, below sewer lateral to street |

VOCs = Volatile Organic Compounds SVOCs = Semi-Volatile Organic Compounds
TAGM = NYSDEC HWR TAGM 4046 “Determination of Soil Cleanup Objectives and Cleanup Levels”

### 3.3 2003 Foundation Area Test Pit Excavation and Laboratory Analysis

Excavations were conducted in June 2003 beneath the footprint of the former gasoline service station. The foundation excavations were conducted to evaluate the former lift pit area and to locate possible discharge lines extending from the building, such as sewer lateral or abandoned septic lines. Logs on the foundation excavations are contained in Appendix 4.
The locations of the foundation excavation soil samples are shown on Figure 8. Three soil samples were collected for laboratory analysis. A summary of the laboratory analysis on the

foundation samples are shown on Figure 8. The laboratory analysis on the foundation soil samples was the same as for the test trench samples.

Analytical results on the foundation samples are provided with the Analytical Results Summary Tables. The chain-of-custody forms for the 2003 foundation soil samples are provided with Appendix 7. Field observations and the laboratory analytical results on the foundation excavation soil samples are summarized in Table 3.

### TABLE 3
### 2003 FOUNDATION EXCAVATION AND LABORATORY ANALYSIS SUMMARY

| Foundation Excavation Sample | Field Screening Summary | Soil Sample Location | Sample Depth | Laboratory Analysis Summary |
|---|---|---|---|---|
| Foundation Sample #1 Collected 06/18/2003 | No odors or staining encountered. Possible line to pump island encountered. | Southeast corner of the foundation, by a sewer pipe. | 3.5 feet below grade.<br>Collected by the sewer pipe. | No VOCs detected.<br>Petroleum SVOCs detected below TAGM Levels.<br>No PCBs detected.<br>Metals within background range for uncontaminated soil. |
| Foundation Sample #2 Collected 06/18/2003 | Stained soil, no odor or field VOCs, found within lift pit pad which was lined with cinder blocks.<br>Pit was 2'x 6' and extended to 5.0 feet below grade.<br>Excavated soil staged on-site. | Beneath former slab, at lift pit area. | 3.0 feet below former lift pit area. | Petroleum VOCs and SVOCs detected above TAGM levels.<br>PCBs detected below NYSDEC cleanup objectives.<br>Lead, Mercury and Cadmium above TAGM cleanup objectives. |
| Foundation Sample #3 Collected 06/18/2003 | Fill with brick and cinder blocks.<br>Extended to 5.5 feet below grade | Beneath center part of former slab. | 4.0 feet below grade.<br>Collected in fill. | No Petroleum VOCs detected.<br>Petroleum SVOCs detected above TAGM levels.<br>PCBs detected below TAGM cleanup objectives.<br>Mercury and Cadmium above TAGM cleanup objectives. |

VOCs = Volatile Organic Compounds SVOCs = Semi-Volatile Organic Compounds
TAGM = NYSDEC HWR TAGM 4046 "Determination of Soil Cleanup Objectives and Cleanup Levels"

## 3.4 Supplemental Monitoring Well Installation

The SSI fieldwork completed in 2003 and 2004 included installation of 10 groundwater monitoring wells. The wells were installed to refine the understanding of local hydrogeologic conditions, and to allow for groundwater monitoring at off-site locations north of the subject parcel. 8 of the monitoring wells were installed between July- and August 1, 2003 by Buffalo Drilling Inc. with oversight by Bergmann personnel. Two off-site monitoring wells were installed in May 2004, by Buffalo Drilling Inc. with Bergmann oversight.

Test borings for monitoring wells were installed by advancing 4 ¼ inch hollow stem augers to the top of underlying bedrock, identified by auger refusal. 6 inch diameter flush-joint casing was then spun down and advanced into underlying bedrock.

Completed monitoring wells ranged in depth from 19.7 feet to 26.5 feet below ground surface. Continuous soil samples were obtained at each boring. All monitoring wells were screened above and below the competent bedrock/overburden contact, with approximately 10 feet of the well screen placed below the bedrock surface.

Well locations were adjusted based on site access, overhead clearance and underground utilities. Monitoring well locations and elevation data for all wells are shown on Figure 5. Well construction details are included as Appendix 5. Monitoring well details are summarized in Table 4.

All drilling equipment was disassembled and decontaminated between locations in accordance with the approved SSI Work Plan. Soil cuttings from test borings were collected and placed in 55 gallon drums for disposal at an approved disposal facility as non-hazardous waste.

The monitoring wells were all constructed of 2-inch Schedule 40 PVC, 0.010 inch slot well screen with 2 inch diameter PVC riser. Well screens are 12.0 to 15.0 feet in length, as necessary to intercept the saturated thickness of the aquifer. Those wells constructed near roads were completed with flush mounted curb boxes, while those not in the potential path of vehicle or pedestrian traffic were completed with a protective steel casing extending above ground surface.

### 3.4.1 Field Screening of Test Boring Soil Samples

All soil samples collected from the additional monitoring wells were visually examined noting any unusual characteristics. Field screening and laboratory analysis were performed as part of the test boring/well installation program. The borings for the wells were advanced to underlying clay-glacial till deposits. The dates of installation, approximate depths to groundwater and depths to the underlying glacial till for the monitoring wells are summarized in Table 4. The test boring logs are included in Appendix 4.

### 3.4.2 Survey Work

Following completion of installation activities in 2003 and 2004, the additional monitoring wells were surveyed and added to the base map. Monitoring wells were also surveyed for elevation to establish a point from which to measure groundwater elevations. Elevations for ground surface for all wells were determined, relative to mean sea level. The elevation for the top of PVC well casing, and the top of the protective steel casing/roadway box was also determined relative to mean sea level. All elevation measurements for each well were determined to 0.010 foot accuracy. Well locations were determined to 0.10 foot accuracy, including northing and easting. Elevation data for grade and top of well casings are shown on the Water Table Surface and Groundwater Flow Maps, provided as Figures 13 – 17 and as Figure 21.

## TABLE 4
## MONITORING WELL CONSTRUCTION SUMMARY

| Well Number | Date Completed | Well Material | Top of Well Casing Elevation, Feet, Mean Sea Level | Approximate Depth to Groundwater | Well Screen Interval 0.010 inch slot | Length of Well Screen | Depth to Top of Bedrock |
|---|---|---|---|---|---|---|---|
| MW-1 | July 6, 2000 | 2” PVC | 495.35 | 15.8 | 7.5 - 22.5 | 15.0 | 15.5 |
| MW-2 | July 7, 2000 | 2” PVC | 496.02 | 13.4 | 9.0-24.0 | 15.0 | 12.0 |
| MW-3 | July 10, 2000 | 2” PVC | 492.02 | 15.8 | 8.0-23.0 | 15.0 | 13.0 |
| MW-4 | July 12, 2000 | 2” PVC | 492.00 | 14.1 | 6.5-21.5 | 15.0 | 11.5 |
| MW-5 | Aug. 1, 2003 | 2” PVC | 492.70 | 14.7 | 13.0-25.0 | 12.0 | 15.0 |
| MW-6 | July 30, 2003 | 2” PVC | 492.65 | 12.5 | 12.0-24.0 | 12.0 | 14.0 |
| MW-7 | July 28, 2003 | 2” PVC | 491.70 | 16.1 | 11.0-23.0 | 12.0 | 13.0 |
| MW-8 | July 25, 2003 | 2” PVC | 494.91 | 15.8 | 8.0-20.0 | 12.0 | 9.8 |
| MW-9 | July 24, 2003 | 2” PVC | 492.21 | 11.0 | 8.3-23.3 | 15.0 | 13.3 |
| MW-10 | July 22, 2003 | 2” PVC | 496.19 | 15.2 | 11.0-24.0 | 13.0 | 14.0 |
| MW-11 | July 23, 2003 | 2” PVC | 495.95 | 14.6 | 12.9-26.5 | 13.6 | 16.4 |
| MW-12 | July 29, 2003 | 2” PVC | 491.17 | 16.2 | 10.5-22.5 | 12.0 | 12.5 |
| MW-13 | May 26, 2004 | 2” PVC | 490.63 | 10.1 | 8.3-23.3 | 15.0 | 13.3 |
| MW-14 | May 27, 2004 | 2” PVC | 489.48 | 10.0 | 4.7-19.7 | 15.0 | 10.0 |

All measurements are in feet
Top of Casing elevations from the latest survey data in 2003 and 2004
Depth to groundwater measurements taken from below top of casing measured on June 4, 2004
All well diameters are 2-inches with 0.010 inch slot size well screen

### 3.4.3 Measurement of Groundwater Elevations

The depth to groundwater was measured in 2000, 2003 and 2004 for all groundwater monitoring wells in service at those dates. The data was converted to sea level-elevation based on surveyed elevations of the monitoring wells and developed into a surface plot. This information indicates the direction of groundwater flow. Depth and water table elevations are summarized in Table 5.

# TABLE 5
# SUMMARY OF DEPTH TO WATER AND GROUNDWATER TABLE ELEVATIONS

| Well # | Elevation TOC | Depth to Water 08/00 | Water Table Elevation 08/00 | Depth to Water 09/03 | Water Table Elevation 09/03 | Depth to Water 12/03 | Water Table Elevation 12/03 | Depth to Water 04/04 | Water Table Elevation 04/04 | Depth to Water 06/04 | Water Table Elevation 06/04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1[a] | 495.35 | 19.91 | 475.44 | 18.25 | 477.10 | 17.31 | 478.04 | 15.01 | 480.34 | 15.84 | 479.51 |
| MW-2[a] | 496.02 | 22.20 | 473.82 | 16.32 | 479.70 | 14.54 | 481.48 | 13.03 | 482.99 | 13.45 | 482.57 |
| MW-3[b] | 492.21[1]<br>492.02[2] | 17.83 | 474.38 | 16.95* | 475.15** | 16.46* | 475.65** | 15.61* | 476.86** | 15.75* | 476.43** |
| MW-4[b] | 492.57[1]<br>492.00[2] | 17.00 | 475.57 | 15.99* | 476.06** | 14.94* | 477.08** | 13.07* | 478.98** | 14.10* | 477.94** |
| MW-5[b] | 492.70 | NA | NA | 14.73 | 477.97 | 14.64 | 478.06 | 14.62 | 478.08 | 14.67 | 478.03 |
| MW-6[b] | 492.65 | NA | NA | 15.30 | 477.35 | 12.66 | 479.99 | 11.11 | 481.54 | 12.51 | 480.14 |
| MW-7[b] | 491.70 | NA | NA | 17.52* | 474.81** | 17.09* | 475.47** | 16.21* | 476.66** | 16.14* | 476.25** |
| MW-8[a] | 494.91 | NA | NA | 17.43 | 477.48 | 16.56 | 478.35 | 15.55 | 479.36 | 15.80 | 479.11 |
| MW-9[b] | 492.21 | NA | NA | 13.19 | 479.02 | 11.62 | 480.59 | 9.81 | 482.40 | 10.97* | 481.25** |
| MW-10[a] | 496.19 | NA | NA | 17.26 | 478.93 | 15.75 | 480.44 | 13.46 | 482.73 | 15.15 | 481.04 |
| MW-11[a] | 495.95 | NA | NA | 17.65 | 478.30 | 15.60 | 480.35 | 11.54 | 484.41 | 14.63 | 481.32 |
| MW-12[b] | 491.17 | NA | NA | 17.02 | 474.15 | 16.65 | 474.52 | 15.72 | 475.46 | 16.18 | 474.99 |
| MW-13[b] | 490.63 | NA | NA | NA | NA | NA | NA | NA | NA | 10.10 | 480.53 |
| MW-14[b] | 489.48 | NA | NA | NA | NA | NA | NA | NA | NA | 10.03 | 479.45 |

All elevations are in feet, relative to Mean Sea Level.

[a]: These monitoring wells extend above ground surface and are protected with steel protective piping.

[b]: These monitoring wells are flush-to-grade.

NA = Not Applicable. These monitoring wells were not installed at this time.

TOC = Top of PVC Casing, relative to mean sea level.

Top of Casing for MW-3 and MW-4 were damaged after 2000, and re-surveyed in 2003.

1 = TOC Elevation for MW-3 and MW-4 surveyed in 2000. 2 = TOC Elevation for MW-3 and MW-4 surveyed in 2003.

* Measurements with measurable free product on the water table surface.

**Water table elevations corrected using 80% density for product thickness to compensate for free product depressing the water table surface.

## 3.5 2003 Groundwater Sampling and Laboratory Analysis

All monitoring wells were sampled between September 4 and September 8, 2003. The new wells were developed to remove sediments from each filter pack, and to improve groundwater flow into the wells. All wells were sampled using low-flow techniques to remove stagnant water and to collect representative samples.

The wells were sampled using a combination of low flow pumping and surging using dedicated bailers, removing sufficient water to remove sediment from the filter pack. Wells were developed until turbidity levels decreased to 50 NTUs. Development is necessary to insure proper communication of the well screen with the aquifer for accurate measurements of hydrogeologic properties and for the collection of representative groundwater samples.
20% of the samples (including MS and MSD samples) were submitted for analyses according to NYSDEC ASP. For QA/QC purposes a duplicate sample was collected from monitoring well MW-10. Duplicate samples were also collected for Matrix Spike and Matrix Spike Duplicate analysis under ASP protocol.

Each well was purged of at least three well volumes of water using a peristaltic pump at a low flow rate, prior to sample collection to insure all stagnant water was removed. Purge water was collected in 55 gallon drums for off-site disposal. Field parameters of turbidity, conductivity, pH, and temperature were measured, with stability of those parameters used as an indication that each well was completely purged. Samples were then collected with a dedicated bailer, sealed in the appropriate containers, and placed on ice for hand-delivery shipment to the CAS facility in Rochester, NY under chain-of-custody protocol.

A postings summary of the laboratory analytical results on the 2003 groundwater samples are shown on Figure 11, 2003 Groundwater VOCs Analysis Summary Postings Map. Validated results on the laboratory analysis performed on the groundwater samples are presented in tabular format, compared to NYSDEC Class GA Groundwater standards, in Tables XV, XVI and XVII of the Analytical Summary Tables Section. The chain-of-custody forms on the groundwater samples collected in 2003 are provided as Appendix 7.

## 3.6 2004 Groundwater Sampling and Laboratory Analysis

All 14 groundwater monitoring wells were sampled in 2004. The well development, sampling and QA/AC protocol were in accordance with the approved SSI work plan. ASP deliverables were provided on the analysis on the groundwater samples from MW-13 and MW-14 using the Target Compound List (TCL). A duplicate sample was collected from MW-13. The samples were delivered under chain-of-custody protocol via hand delivery to the CAS facility in Rochester, NY. The chain-of-custody forms on the 2004 groundwater samples are provided as Appendix 8.

A postings summary of the laboratory analytical results on the groundwater samples collected in 2004 are shown on Figure 12, 2004 Groundwater VOCs Analysis Summary Postings Map.

Validated laboratory analytical results on the groundwater samples are presented in tabular format compared to NYSDEC Class GA Groundwater samples along with the 2003 laboratory analysis, as shown in Tables XV and XVI of the Analytical Summary Tables Section.

## 3.7 Data Usability and QA/QC

### 2000 DUSR Summary

Data Validation Services of North Creek, New York was subcontracted to provide a third party validation of ASP data packages and generate a data usability summary review (DUSR) on the 2000 analytical program. The 2000 DUSR report is provided Appendix 9.

The data packages were reviewed for quality control parameters such as:

- Custody documentation.
- Holding times.
- Surrogate and matrix spike recoveries.
- LCS recoveries.
- Duplicate correlation.
- Calibration standard/blank performance
- Instrument performance
- Blank contamination
- Matrix interference
- Method compliance.

The field samples processed by NYSDEC 2000 ASP were reported with full laboratory deliverables. This includes review of all summary form and sample raw data. The remaining analytical packages were processed by USEPA SW846 methodologies with summary level data packages. This includes review of data packages and any observed anomalies in QC. The data has been reviewed for application of qualifiers per the NYSDEC Division of Environmental Remediation Guidance for the Development of Data Usability Summary Reports as it relates to the usability of this sample data.

### 2003 DUSR Summary

Data Validation Services provided third party validation of analytical results performed on the sample analysis performed in 2003 similar to service provided in 2000. The 2003 DUSR report is provided as Appendix 10.

### 2004 DUSR Summary

Data Validation Services provided third party validation of analytical results performed on the sample analysis performed in 2004. As a whole, the data set was qualified as being usable: as reported, with minor edits or with qualification of some results as “estimated.” The 2004 DUSR report is provided as Appendix 11.

### 3.8 Soil Vapor Intrusion Analysis

During the course of this investigation the NYSDOH requested that potential impacts to the neighboring residence east of the Site (1214-1216 East Main Street) be evaluated for indoor air quality (IAQ). An initial physical assessment of this structure was performed on January 9, 2001. The assessment was conducted by Bergmann Associates personnel following the approval of the building owner. A NYSDOH IAQ Questionnaire and Building Inventory Record were completed during the initial site visit. On January 12, 2001 a grab sample of the ambient basement air at 1214 East Main Street (directly east to the project site) was collected.

The Summa canister sample was analyzed by Performance Analytical (a division of Columbia Analytical Services) located in Simi Valley, California. The analytical list included MTBE and BTEX compounds only. Each compound was analyzed with a reporting limit of 5.0 $\mu g/M^3$. All results were below the reporting limit except for toluene (6.7 $\mu g/M^3$) and m- & p- xylenes (4.5 $\mu g/M^3$). A full report of the initial IAQ assessment at this residence was submitted to the NYSDEC and the NYSDOH in a January 24, 2001 correspondence to Ms. Anne Spaulding of the City entitled Indoor Air Sampling Event.

In a May 30, 2003 correspondence from the NYSDEC to Mark Gregor of the City, it was pointed out the NYSDOH recently modified the way it evaluated potential indoor air impacts. The NYSDEC requested that the IAQ sampling and analysis identified in the SSI Work Plan (Section 4.7) be replaced with sub-slab soil gas testing procedures approved by the NYSDOH. Bergmann provided a response to the NYSDEC's comment on September 4, 2003 agreeing to the Department's request with a detailed procedure to install and sample subsurface soil vapor from a point beneath the building slab at 1214 East Main Street. Bergmann collected an initial sub-slab sample on September 18, 2003. The sample was analyzed by CAS using the US EPA Method TO-15. More than twenty organic compounds were detected in varying concentrations.

Based on the analytical results from the September 2003 sub-slab sampling point analysis, the NYSDEC requested the installation of a radon-type basement ventilation system. Bergmann subcontracted Mitigation Technology of Brockport, New York to install three sub-slab extraction points on the west side of the basement at 1214 East Main Street. These points were tied into an extraction header that is exhausted by a fully enclosed radon mitigation fan. Three test points were also established as vacuum monitoring locations. Installation and activation of the system Basement Ventilation System (BVS) was completed as of May 13, 2004. Installation, operational and maintenance details were provided in the Bergmann manual "Basement Ventilation at 1214 East Main Street" dated and submitted on May 21, 2004.

Monthly sample collection from the exhaust of the BVS as well as a background and basement ambient sample locations were also collected on:

- June 1, 2004 - Exhaust
- July 8, 2004 – Exhaust and Background
- August 9, 2004 – Exhaust and Basement Ambient
- September 8, 2004 – Basement
- October 14, 2004 – Background, Basement Ambient and 1st Floor Living Space

Subsequent sampling and operation of the BVS was originally scheduled to continue through November 2004.

Soil gas sampling results collected within a dwelling may be influenced by factors beyond the release of vapors from impacted groundwater, such as substances stored within the building and off-site atmospheric sources that have entered the building.

VOCs that have been confirmed is subsurface soils or groundwater at the 1200 East Main Street site have also been detected in the various IAQ related samples collected at or adjacent to 1214 East Main Street. Most predominantly, these include petroleum related constituents:

- Benzene
- Toluene
- Ethyl Benzene
- M-Xylene
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- MTBE

Other VOCs have been detected in air samples collected from 1214 East Main Street. However, the groundwater and soil data from samples on site do not support a correlation that these other VOCs are originating from the 1200 East Main Street.

Table XIX presents the analytical results related to 1214 East Main Street. Complete laboratory analytical reports on indoor air samples from the 1214 East Main Street property, BVS exhaust samples and background ambient samples along with IAQ inspection forms are attached as part of Appendix 12.

## 4.0 INTERPRETATION OF SUPPLEMENTAL SITE INVESTIGATION DATA

The findings, based on the SSI activities at the 1200 East Main Street, Rochester, NY site are summarized below.

### 4.1 Site Geology

Subsurface geologic units present at the 1200 East Main Street site include the following in ascending order:

- Bedrock, consisting of fractured Lockport Dolomite.
- Glacial till (lodgment or ablation-type glacial till).
- Fill deposits, consisting of locally obtained re-worked native deposits.

The geology of the site consists of unconsolidated glacial soils overlying carbonate bedrock. Geologic maps of the Rochester region[2] indicate that the unconsolidated glacial soils consist of lacustrine (lake environment) silts and clays deposited in the Late Pleistocene. Figure 1 was prepared from the U.S. Geological Survey (USGS) topographic map for the study site area.

During field investigative activities, the subsurface soil type was observed and recorded by field technicians at two-foot intervals. Soil type, presence of odors, presence of staining (discoloration), presence of groundwater and depth of refusal were documented. The tank pit and pump pit sample locations also provide similar data.

During the installation of the initial four monitoring wells completed in 2000, geological descriptions were documented by on site field technicians. Geologic sampling was conducted during the installations and consisted of continuous soil sampling to the bedrock surface and coring of the uppermost 10-feet of bedrock. Representative bedrock cores were collected and retained in wax covered cardboard boxes at Bergmann Associates. During the 2003 and 2004 SSI well installation all test borings were advanced to auger refusal, inferred to be the top of competent bedrock. Table 4 provides a summary of depth to bedrock measurements.

During the 2000 bedrock coring program refusal was encountered between 11.5-feet (MW-4) and 15.5-feet (MW-1). The rock was cored at each location a total of 10-feet except for monitoring well MW-1 which was cored only 7.0-feet. Boring logs show construction of the four monitoring wells along with geology description that was encountered at various depths during installation. Bedrock log descriptions for the 4 wells that were cored are provided with Appendix 5.

Evaluation of the on-site subsurface logs and cores had shown that the bedrock at the site is the Lockport Group Dolomite, which locally consists of massive to medium-bedded, argillaceous dolomite with minor amounts of dolomitic limestone and shale. This interpretation is consistent

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[2] Muller, E.H., and Cadwell, D.H., 1986, Surficial Geologic Map of New York – Finger Lakes Sheet: New York State Museum Geological Survey, Map and Chart Series #40.

with published geologic reports for the area[3]. Based on actual measurements made at the subject parcel between 2000 and 2004 groundwater occurs in the upper portion of the bedrock, with a limited extent of a thin, perched water table in overburden sediments on top of bedrock at the central and northern portions of the site. Actual site measurements showed an average depth to bedrock of 13.1 feet below ground surface, and an average depth to groundwater ranging from 15.43 feet (September 2003) to 13.06 feet (June 2004) adjusted for height of the PVC riser above or below ground surface.

The stratigraphy at the site, including thickness of the overburden glacial till, depth to bedrock and water table elevations are shown on two geologic cross-sections. The orientation of cross-sections A-A$^2$ and B-B$^2$ are shown on Figure 18. Section A-A$^1$ is shown on Figure 19, and Section B-B$^2$ is shown on Figure 20.

The bedrock topography was determined from depth to bedrock values, from surveyed elevations at the ground level. The top of the bedrock surface is shown on Figure 21.

Existing maps of the groundwater table and bedrock surface available at the Monroe County Environmental Management Council[4] indicate that depth to bedrock would be 15 feet below grade, and estimated depth to water would be 30 feet, based on general 10 foot contour intervals.

## 4.2 Site Hydrogeology and Groundwater Flow Regime

The depths to water measurements and equivalent groundwater elevations (relative to mean sea level) for 2000, 2003 and 2004 are summarized in Table 5. Monitoring Well Depth Gauging and Development Forms are provided as Appendix 6.

Groundwater flow direction is determined by observing the elevation of the water table at various locations and calculating the slope (hydraulic gradient) of that surface, with flow being in the direction of high to low elevation, or potential.

### 2000 Groundwater Flow Regime

Delineation of the water table surface in 2000 was limited to 4 on-site monitoring wells. The 2000 monitoring indicated that water table in the bedrock was determined to be relatively flat, with a relatively low hydraulic gradient. Measurements obtained in August 2000 showed a very flat water table surface, with localized groundwater flow to both the east-southeast and west-northwest directions across the study site. The August 2000 water table surface and estimated groundwater flow pattern is shown on Figure 13.

The installation of additional groundwater monitoring wells in 2003 and 2004 allowed for a better understanding of the local groundwater regime and flow pattern.

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[3] Rickard, L.V., and Fisher, D.W., 1970, Geologic Map of New York State: New York State Museum Geological Survey, Map and Chart Series #15.

[4] Young, R.A., 1980, Explanation to Accompany Subsurface Bedrock Contour Maps, Generalized Groundwater Contour Maps, and Overburden Thickness Maps, Monroe County, New York: report prepared under contract to the Monroe County Environmental Management Council.

## September 2003

Eight supplemental monitoring wells were developed following installation in August 2003. Depth to groundwater measurements were obtained on September 4, 2003.

The September 2003 water table surface and flow pattern is shown on Figure 14. Equipotential lines representing areas of equal water table elevation were prepared using the groundwater elevations established for the 12 monitoring wells. Groundwater flow is estimated at right angles to the equipotential lines. The water table surface for September 2003 indicted a bi-radial flow pattern, with flow across the center and southern portions of the site flowing to the south-southeast, towards MW-7. Flow at the northern portion of the site appeared to be flowing to the north-northeast. The highest water table elevation was measured at MW-2, an area of possible recharge. The average depth to groundwater was 15.43 feet below ground surface.

Evidence of a perched water table or water bearing unit in the overburden, unconsolidated sediments was encountered in a limited area above bedrock at the northern portions of the site. The limited overburden water table was not observed in 2000, but was detected in the 2003 and subsequent 2004 sampling events.

## December 2003

The December 2003 water table surface and flow pattern is shown on Figure 15. The water table surface shows a site-wide rise in elevation compared to the September 2003 data. On average, the December 2003 measurements show a site-wide average water table surface that is approximately 1.23 feet higher.

The rise in the water table surface is most pronounced at monitoring wells located in grassy or un-paved areas. At MW-11 the water table surface showed a rise of 2.05 feet. The rise was much less, but still evident, at wells in paved areas at the southern portion of the site, such as MW-7 and MW-12.

The water table in the central-northern portions of the site (MW-9 and MW-11), is noticeably above the top of the bedrock surface with groundwater present in the unconsolidated sediments.

At the southern portion of the site the water table is still limited to below bedrock, with no perched water table in the overburden. Groundwater is present in joints and fissures in the bedrock in this area. Free product is present in the bedrock at the southern-southeastern corner of the site.

The groundwater flow regime for December 2003 continued to indicate a bi-modal distribution pattern. For the central-southern portion of the site, groundwater is limited to bedrock and is flowing in a southeast to southerly direction, with free product at MW-7 to MW-3 area.

At the northern portion of the site, where groundwater is above bedrock, the water table surface is relatively flat, with a component of flow moving in an apparent northwesterly direction towards MW-10 and MW-11.

### April 2004

The April 2004 water table surface and flow pattern is shown on Figure 16. The April 2004 monitoring indicates groundwater flow from the north-northwest to the south-southeast. The water table in the central-northern portions of the site (MW-9 and MW-11) is above the top of the bedrock surface, with groundwater present in unconsolidated sediments.

The April 2004 water table surface shows a site-wide rise in average elevation compared to the December 2003 data. On average, the measurements show a site-wide average water table surface average that is approximately 1.51 feet higher than December 2003. The rise in the water table surface is most pronounced at monitoring wells located in grassy or un-paved areas in the center to northern portions of the site. At MW-11 the water table surface showed a rise of 4.06 feet, the greatest rise in water table elevations per well at the site. The rise was much less, but still evident, at wells in paved areas at the southern portion of the site (MW-7 and MW-12).

At MW-9, free phase product consisting of apparent weathered gasoline was detected in the unconsolidated sediments above bedrock. At the southern portion of the site the water table is still limited to below bedrock, with no perched water table in the overburden. Groundwater is present in joints and fissures in the bedrock in this area. Free product was present in the bedrock at the southern-southeastern corner of the site.

### June 2004

Depth to groundwater measurements were collected in June 2004, subsequent to the installation and development of down-gradient monitoring wells MW-13 and MW-14. Sufficient time was given to allow the new wells and the surrounding piezometric surface to stabilize. The water table surface and flow pattern for June 2004 is shown on Figure 17.

The June 2004 water table surface shows groundwater at the subject parcel to be flowing in a bi-directional pattern similar to previous mapping, with the northern portion of the site flowing to the northwest, and the southern portion of the site flowing to the southeast. The addition of MW-13 and MW-14 assisted in evaluating the northerly flow. The area of highest groundwater elevation was at MW-2, along the western side of the parcel. An apparent groundwater rise extended from MW-2 to the northwest, dividing the flow pattern at the site into 2 opposite directions. Free product continued to be present in the bedrock at the southern-southeastern corner of the site.

## 4.3 Slug Test Results, Hydraulic Conductivity & Bedrock Seepage Velocity

As part of the 2000 field work, A, In-Situ Troll™ 4000 was used to conduct in well data logging of water level displacement for hydraulic conductivity testing on wells MW-1, MW-3 and MW-4. MW-2 (due to water column being too low to submerse the sensor) was measured manually.

For MW-1, MW-3 and MW-4, water levels were measured prior to testing. The data logger was installed in each well and allowed to equilibrate while water level became static. One bailer slug (approximately .25-gallons) was removed from each well and placed into a 5-gallon pail. The data logger was activated to record recharge in each well. Static conditions were achieved prior to testing each location a second time to confirm results. For MW-2, a manual data collection method was used by recording water level data using a water level probe following slug removal. Measurements were collected each 30-seconds for the first minute and then each minute following that until static conditions were met. This manual process was repeated three times with average to reach static conditions being approximately eight minutes.

Following the collection of field data on August 04, 2000, a permeability factor for each well was generated using AQTESOLV Version 3.01 software program. The Bouwer and Rice Method for unconfined aquifers was applied as the method for determining the factors.

Slug testing was also performed in September 2003 on additional monitoring wells, including an off-site monitoring well (MW-6) using an In Situ MiniTroll ® data logger connected to a lap top PC. The data logger was installed in each well and allowed to equilibrate while water level became static. The data logger was activated to record recharge in each well. A slug consisting of one-inch PVC piping was inserted into the water column, to act as a slug to raise the water table. The PVC pipe was inserted quickly to act as a near-instantaneous slug. Static conditions were achieved prior to testing each location a second time to confirm results.

Results from the 2003 slug tests were evaluated using the AQTESOLV Version 3.01 software program. The Bouwer and Rice Method for unconfined aquifers was applied as the method for determining the factors. Results for all hydraulic conductivity values are summarized in Table 6. Print-outs of the evaluations using the Bower and Rice Method are provided in Appendix 13**.** Results for most of the additional monitoring wells were within the range from the 2000 tests ($10^{-4}$ cm/sec range). However, conductivity values for three wells were lower by an order of magnitude, in the $10^{-5}$ to $10^{-6}$ cm/sec range. The lower conductivity may be due to fewer fractures, less weathering, no perched water table and generally denser, more competent bedrock.

## TABLE 6
## SUMMARY OF HYDRAULIC CONDUCTIVITY VALUES

| Monitoring Well | Hydraulic Slug Test Date | Hydraulic Conductivity |
|---|---|---|
| MW-1 | August 2000 | $3.49 \times 10^{-4}$ cm/sec |
| MW-2 | August 2000 | $5.53 \times 10^{-4}$ cm/sec |
| MW-3 | August 2000 | $5.69 \times 10^{-4}$ cm/sec |
| MW-4 | August 2000 | $4.19 \times 10^{-4}$ cm/sec |
| MW-5 | September 2003 | $4.58 \times 10^{-4}$ cm/sec |
| MW-6 | September 2003 | $1.49 \times 10^{-4}$ cm/sec |
| MW-7 | September 2003 | $2.08 \times 10^{-4}$ cm/sec |
| MW-8 | September 2003 | $6.21 \times 10^{-6}$ cm/sec |
| MW-9 | September 2003 | $7.55 \times 10^{-5}$ cm/sec |
| MW-10 | September 2003 | $6.52 \times 10^{-5}$ cm/sec |
| MW-11 | September 2003 | $1.70 \times 10^{-4}$ cm/sec |
| MW-12 | September 2002 | $2.95 \times 10^{-4}$ cm/sec |

Average hydraulic conductivity value: $K = 2.71 \times 10^{-4}$ cm/sec

Groundwater flow velocity is determined using the hydraulic gradient, hydraulic conductivity, and the porosity of the material through which the flow is occurring. The calculated values of these parameters for the water table aquifer are discussed below.

Average bedrock permeability: K = 2.71 x $10^{-4}$ cm/sec

Estimated hydraulic gradient, northwest direction, MW-2 towards MW-14: 0.023 feet/foot
Estimated hydraulic gradient, southeast direction, MW-2 towards MW-7: 0.064 feet/foot
Estimated effective porosity of the dolomite limestone bedrock = 15% (Fetter, 1988)

Seepage Velocity = Vs
Vs = K * I/Ne
K = Hydraulic Conductivity Average K = 2.71 x $10^{-4}$ cm/sec = 1.338 ft/day
I = Hydraulic Gradient, feet/foot
Ne = effective porosity of the dolomite limestone bedrock, assumed to be 15%

Groundwater seepage velocity in the southeast direction of flow, towards MW-7 was estimated at 0.57 feet per day, based on the hydraulic gradient determined for June 2004.

Groundwater seepage velocity in the northwest direction of flow, towards MW-14, was estimated at 0.27 feet per day, based on the hydraulic gradient determined for June 2004. Bedrock groundwater flows initially through pore spaces, as well as along fractures, joints and bedding planes. The porosity of sedimentary rocks is highly variable. Reported values for limestone and dolomites range from less than 1 to 30 percent. Recharge to the aquifer at the subject parcel is likely due to vertical infiltration of precipitation, migrating vertically through the vadose zone. The presence of asphalt and the building footprint reduces this effect.[5]

## 4.4 Nature and Extent of Contamination

Based on laboratory analysis conducted on soil and groundwater samples collected in 2000, 2003 and 2004, the predominant contaminants at the subject parcel are related to the release of petroleum distillates, mainly gasoline with lesser amounts of diesel fuel. Measurable concentrations of aromatic VOCs and petroleum-based SVOCs were detected in groundwater, surface soil and subsurface samples collected from the 1200 East Main Street site.

### 4.4.1 Groundwater

The laboratory analysis performed in 2000, 2003 and 2004 detected petroleum VOCs in groundwater samples. Figure 10 presents a summary of total VOCs from the August 2000 sampling event. Figure 11 presents a summary of the September 2003 sampling event, with detected VOCs concentrations plotted by each monitoring well. Figure 12 presents a posting of the distribution of VOCs detected in the June 2004 groundwater samples.

Based on the June 2004 groundwater laboratory analysis, an inferred groundwater contamination plume was identified extending from the inferred source area. The plume is shown as Figure 22.

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[5] Fetter, C.W., 1988, “Applied Hydrogeology”, pp. 64-71.

Isopleths, lines of equal VOCs concentrations are shown at the 10,000 PPB, 1,000 PPB, 100 PPB and 10 PPB intervals.

Figure 22 delineates the approximate extent of light non-aqueous phase product (LNAPL), free-phase gasoline at the subject parcel. Laboratory analysis on samples of the LNAPL determined the product to be gasoline. As of June 2004 the plume of free product encompasses an area of approximately 8,200 square feet, at the southwestern portion of the parcel. Free product was detected at the subject parcel wells only. No off-site free product was detected. Maximum measured thickness of free product was 1.46 feet detected in MW-7 on April 21, 2004. Free product has been detected in four monitoring wells:

- MW-3: 0.06 feet to 0.56 feet in thickness
- MW-4: 0.02 feet to 0.23 feet in thickness
- MW-7: 0.79 feet to 1.46 feet in thickness
- MW-9: 0.01 feet to 0.875 feet in thickness

Free phase gasoline does not appear to extend off-site. Figure 20 indicates that free phase gasoline terminates near the property line at the southeastern corner of the parcel, just past MW-3. During gauging events free product was recovered by hand using a bailer. The thickness of free product was quickly reduced, then recovered to previous levels within a few days. Laboratory analysis on groundwater samples has also detected a dissolved phase of impacted groundwater, with gasoline-derived VOCs present. The plume of contaminated groundwater impacted with VOCs correlates with the occurrence of free product, with an apparent radial migration pattern. The occurrence of total detected VOCs for all 4 groundwater sampling vents is summarized in Table 7.

The type and frequency of individual petroleum VOCs detected for the 2003 and 2004 groundwater sampling events are summarized in Table 8. The type and frequency of petroleum SVOCs detected in the 2003 and 2004 groundwater sampling events are summarized in Table 9.

The June 2004 sampling and analysis indicates that the aerial extent of VOC contaminated groundwater that exceeds 10,000 PPB (Total VOCs) covers an area of approximately 9,500 square feet and is inferred to be located at the south-middle portion of the parcel, extending across the former UST tank pit, demolished building foundation and former dispenser pump island. The plume is inferred to radiate away from the source areas (former USTs and dispenser pump island), likely caused by the bi-modal groundwater flow pattern at the site.

The extent of groundwater impacted to 100 PPB of total VOCs from the June 2004 sampling event has been inferred to cover approximately 35,380 square feet. The inferred 100 PPB isopleth appears to extend off-site to the north, terminating just past the subject parcel boundary with 417 and 423 Hayward Avenue. To the east, the 10 PPB isopleth appears to terminate beneath the residence at 1214/1216 East Main Street, and beneath the grass yard at 1 Laura Street. To the west the 10 PPB isopleth appears to extend off-site to terminate beneath the Auto Zone store at 1154 East Main Street. To the south the 10 PPB isopleth appears to terminate beneath East Main Street.

## TABLE 7
## TOTAL DETECTED VOCS IN GROUNDWATER, 2000, 2003 and 2004

| Monitoring Well | Total VOCs, PPB 08/00 | Total VOCs, PPB 11/00 | Total VOCs, PPB 09/03 | Total VOCs, PPB 06/04 |
|---|---|---|---|---|
| MW-1 | 6,613 | 4,960 | 3,856 | 4,946 |
| MW-2 | 379 | 2,740 | 2,082 | 7,803 |
| MW-3 | 10,370 | 11,100 | 2,693 | 3,132 |
| MW-4 | 12,740 | 61,600 | 5,834 | 8,993 |
| MW-5 | NA | NA | ND | 2.9 |
| MW-6 | NA | NA | ND | 11.9 |
| MW-7 | NA | NA | 23,940 | 25,525 |
| MW-8 | NA | NA | 292 | 985.4 |
| MW-9 | NA | NA | 16,690 | 17,407 |
| MW-10 | NA | NA | 9,251 | 514 |
| MW-11 | NA | NA | 1,371 | 956.8 |
| MW-12 | NA | NA | ND | 2.2 J |
| MW-13 | NA | NA | NA | 1.4 J |
| MW-14 | NA | NA | NA | ND |

PPB = Parts per Billion (equivalent to micrograms per liter for aqueous samples)
NA= Not Applicable. These monitoring wells were not installed at this time
ND = Not Detected. All VOCs were less than method detection limit for each analyte
J = Estimated

## TABLE 8
## FREQUENCY & RANGE OF DETECTED VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

| Detected VOCs | Frequency Detected/Total Samples | Concentration Range PPB | Solubility in Water PPB |
|---|---|---|---|
| **2003 Groundwater Samples (Not including duplicate samples)** | | | |
| Benzene | 8/12 samples | ND – 1,900 (MW-7) | 1,780,000 |
| Ethylbenzene | 9/12 samples | ND – 2,200 (MW-7) | 152,000 |
| Toluene | 9/12 samples | ND – 8,600 (MW-7) | 515,000 |
| m,p-Xylene | 9/12 samples | ND – 8,600 (MW-7) | 302,000 |
| o-Xylene | 9/12 samples | ND – 2,600 (MW-9) | 170,000 |
| Isopropylbenzene | 3/12 samples | ND – 46 (MW-2) | 50,100 |
| N-Propylbenzene | Not Applicable [1] | Not Applicable [1] | 60,000 |
| Naphthalene | Not Applicable [1] | Not Applicable [1] | 30,000 |
| 1,3,5-Trimethylbenzene | Not Applicable [1] | Not Applicable [1] | 67,600 |
| 1,2,4-Trimethylbenzene | Not Applicable [1] | Not Applicable [1] | 57,000 |
| Sec-Butylbenzene | Not Applicable [1] | Not Applicable [1] | 38,000 |
| P-Isopropyltoluene | Not Applicable [1] | Not Applicable [1] | 28,000 |
| N-Butylbenzene | Not Applicable [1] | Not Applicable [1] | 21,000 |
| Tert-Butlbenzene | Not Applicable [1] | Not Applicable [1] | 34,000 |
| MTBE | 2/14 samples | ND – 200 | 48,000,000 |
| Cyclohexane | 9/14 samples | ND – 300 (MW-1) | 55,600 |
| Methylcyclohexane | 5/14 samples | ND – 160 (MW-1) | 14,000 |

**TABLE 8 (Continued)**
**2004 Groundwater Samples**

| | | | |
|---|---|---|---|
| Benzene | 9/14 samples | ND – 1,200 (MW-7) | 1,780,000 |
| Ethylbenzene | 9/14 samples | ND – 2,500 (MW-7) | 152,000 |
| Toluene | 9/14 samples | ND – 6,500 (MW-7) | 515,000 |
| m,p-Xylene | 9/14 samples | ND – 10,000 (MW-7) | 302,000 |
| o-Xylene | 9/14 samples | ND – 2,200 (MW-9) | 170,000 |
| Isopropylbenzene | 8/14 samples | ND-96 (MW-7 | 50,100 |
| N-Propylbenzene | 9/14 samples | ND – 250 (MW-7) | 60,000 |
| Naphthalene | 10/14 samples | ND – 490 (MW-7) | 30,000 |
| 1,3,5-Trimethylbenzene | 9/14 samples | ND – 560 (MW-7) | 67,600 |
| 1,2,4-Trimethylbenzene | 9/14 samples | ND – 2,200 (MW-7) | 57,000 |
| Sec-Butylbenzene | 4/14 samples | ND – 12 (MW-2&3) | 38,000 |
| P-Isopropyltoluene | 4/14 samples | ND-25 (MW-4) | 28,000 |
| N-Butylbenzene | 4/14 samples | ND – 19 (MW-2) | 21,000 |
| Tert-Butylbenzene | 1/4 sample | ND – 6.4 (MW-10) | 34,000 |
| MTBE | 2/14 samples | ND – 1.7 (MW-6) | 48,000,000 |
| Cyclohexane | Not Applicable | Not Applicable | 55,600 |
| Methylcyclohexane | Not Applicable | Not Applicable | 14,000 |

All results expressed as parts Per Billion (PPB), equivalent to Micrograms per Liter
ND = Not Detected at method detection limit
Not Applicable [1] = Analyte not included with this particular round of analysis

## TABLE 9
## FREQUENCY & RANGE OF DETECTED SEMI VOLATILE ORGANIC COMPOUNDS IN GROUNDWATER

| Detected SVOCs | Frequency Detected/Total Samples | Concentration Range PPB | Solubility in Water PPB |
|---|---|---|---|
| 2003 Groundwater Samples (Not including duplicate samples) | | | |
| 2-Methylnaphthalene | 10/12 samples | ND – 5,200 (MW-4) | 25,000 |
| Naphthalene | 10/12 samples | ND – 2,700 (MW-4) | 34,000 |
| Fluorene | 0/12 samples | All Results ND | 1,980 |
| Phenanthrene | 0/12 samples | All Results ND | 1,290 |
| Acetophenone | 1/12 samples | ND – 10 (MW-8) | 5,500,000 |
| Di-n-butyl phthalate | 7/12 samples * | ND – 13 (MW-5) | 300 |
| Bis(2-ethylhexyl)phthalate | 9/12 samples* | ND – 140 (MW-8) | 11,200 |
| 2004 Groundwater Samples | | | |
| 2-Methylnaphthalene | NA | NA | 25,000 |
| Naphthalene | 9/14 samples | ND – 800 (MW-4) | 34,000 |
| Fluorene | 1/14 samples | ND – 19 (MW-4) | 1,980 |
| Phenanthrene | 1/14 samples | ND – 12 (MW-4) | 1,290 |
| Acetophenone | NA | NA | 5,500,000 |
| Di-n-butyl phthalate | 0/2 samples | ND | 300 |
| Bis (2-ethylhexyl)phthalate | 0/2 samples | ND | 11,200 |

All results expressed as parts Per Billion (PPB), equivalent to Micrograms per Liter
ND = Not Detected at method detection limit
NA = Not Applicable, this analyte was not included in this round of analysis
* Compound also detected in associated method blanks

### 4.4.2 Surface Soil

Laboratory analysis on the test boring and surface soil samples collected in 2000, 2003 and 2004 indicated the presence of impacted surface soil at the subject parcel.

The predominant contaminants based on highest concentrations and widespread distributions are SVOCs including high-end polycyclic aromatic hydrocarbons (PAHs), indicative of diesel fuel, fuel oil and/or kerosene. Down-gradient from the source area, petroleum VOCs were detected in surface soil samples near the north and northeast property line. The laboratory analysis on the off-site surface soil samples collected in 2004 did not indicate significant off-site migration of petroleum SVOCs. Concentrations were well below detected on-site SVOC values and within the range for City of Rochester background for SVOCs (APCO Brownfield Cleanup Program Atlantic Avenue and Akron Streets).

The distributions of the detected analytes are shown on attached posting maps. Figure 6 shows a summary of total VOCs detected in soil samples in 2000. Figure 7 shows a posting of analytes detected in the surface soil samples collected in 2003 and 2004.

Table 10 presents a summary of SVOC PAHs detected in surface soil samples collected in 2003 and 204, including and evaluation of carcenogic PAHs. The BAP equivalents for the detected PAHs are presented in Analytical Summary Table XXIII. Rochester background values are also listed, based on analysis of surface soil samples collected from the APCO project in the City of Rochester. The distribution of PAHs and carcenogic equivalent BAPs are posted on Figure 23.

PAHs are a class of compounds identified as carcinogens and are may be chemicals of concern at hazardous waste sites. Remedial goals for carcinogenic PAHs found is surface soil are typically established based on exposure risk. These compounds are components of petroleum based products. Background concentrations are often above risk-based criteria resulting in remedial goals to be of limited practical use as targeted cleanup objectives. Because of the frequency of PAHs detected in naturally occurring environments, it is important that reasonably practical remediation goals be established

# TABLE 10
# SURFACE SOIL PAH ANALYSIS SUMMARY

| Surface Soil Sample | Collection Date | Sample Location | Total PAHs PPB | Total CPAH PPB | Total BAP CPAH PPB |
|---|---|---|---|---|---|
| SU-17 | 07/07/2000 | On-Site | 8,600 | ND | ND |
| SU-18 | 07/07/2000 | On-Site | 13,200 | ND | ND |
| SU-19 | 07/07/2000 | On-Site | 21,960 | 7,800 | 2,355 |
| SSU-1 | 06/20/2003 | On-Site | 30,000 | 7,900 | 430 |
| SSU-2 | 06/20/2003 | On-Site | 30,890 | 20,320 | 4,939 |
| SSU-3 | 06/20/2003 | On-Site | 50,900 | 23,600 | 3,939 |
| SSU-4 | 06/20/2003 | On-Site | 274,000 | 105,000 | 24,360 |
| SSU-5 | 06/20/2003 | On-Site | 133,600 | 68,600 | 17,390 |
| SSU-6 | 06/20/2003 | Off-Site<br>1214 E. Main St. | 11,312 | 4,870 | 1,176 |
| SSU-7 | 06/20/2003 | Off-Site<br>1214 E. Main St. | 16,200 | 7,100 | 1,709 |
| SSU-8 | 06/01/2004 | Off-Site<br>405 Hayward Ave. | 9,563 | 4,320 | 1,077 |
| SSU-9 | 06/01/2004 | Off-Site<br>417 Hayward Ave. | 7,012 | 3,260 | 812 |
| SSU-10 | 06/01/2004 | Off-Site<br>427 Hayward Ave. | 26,074 | 11,700 | 2,943 |
| SSU-11 | 06/04/2004 | Off-Site<br>7 Laura Street | 14,991 | 7,220 | 1,825 |
| SSU-11 Duplicate | 06/04/2004 | Off-Site<br>7 Laura Street | 13,454 | 6,540 | 1,595 |
| Rochester Background-APCO Site | 01/23/1998 | Off-Site<br>Atlantic Ave/ Akron Street | Not Applicable-Data Not Provided | Average = 12,346<br>Minimum = 1,820<br>Maximum = 20,910 | Average = 3,196<br>Minimum = 481<br>Maximum = 5,583 |

PAH = Polynuclear Aromatic Hydrocarbons via EPA Method 8270
PPB = Parts per Billion (UG/KG)
CPAH = Carcinogenic Polynuclear Aromatic hydrocarbons
BAP CPAH = The PAH Benzo (a)pyrene toxicity equivalent for individual CPAHs

Rochester Background-APCO Site: Background CPAH concentrations based on the average, maximum and minimum total CPAH values for sample points SS-17, SS-18, SS-19 SS-20 and SS-21 collected January 23, 1998.

### 4.4.3 Subsurface Soil

The 2000 Site Investigation and 2003 Supplemental Site Investigation detected evidence of subsurface contamination at the subject parcel.

The predominant contaminants based on highest concentrations and widespread distributions are SVOCs including high-end PAHs. Aromatic VOCs indicative of gasoline were detected in a single subsurface soil sample collected in 2003, from Test Trench 13, placed south of the occurrence of free-phase product south of the former dispenser island area. Other detected compounds indicated limited PCBs and Mercury and Cadmium detected above NYSDEC recommended cleanup objectives in a single subsurface soil sample, from Foundation Sample #3 collected in 2003 from directly beneath the former building foot print.

Figure 8 shows a posting of detected analytes in the subsurface test trench soil samples collected in 2003. Figure 9 shows a posting of detected analytes in the foundation soil samples collected in 2003.

## 4.5 Sources of Contamination

Leakage from the removed USTs (previously located in the tank pit west of the former service station building), the former dispenser pump island for petroleum related products, and surface releases of petroleum at the northern portion of the subject parcel are the likely sources of contamination. Groundwater contamination has been detected in two regimes; free product in the bedrock to the southeast, and dissolved VOCs in the shallow bedrock and overburden extending to the north.

### 4.5.1 Asbestos Containing Materials (ACM)

All ACM materials were removed from the building in December 2002 prior to demolition. The ACM abatement was summarized in Section 1.6 of this report. The source of ACM which could serve as a potential source of contamination was removed during abatement and no longer exists. Appendix 2 contains documentation on the ACM abatement activities.

### 4.5.2 Underground Storage Tanks

The removal of USTs completed in 2000 resulted in an excavation that was approximately 23-feet by 47-feet by 9-feet deep and produced five UST's. Bedrock was located approximately at 11.5-feet below ground surface, based on the log for monitoring well MW-4. All tank contents were removed from the tanks prior to unearthing. Two samples were collected in 2000 for content specification and disposition requirements. Tanks 5 and 6 contained several inches of what appeared to be groundwater with a faint petroleum odor. Since no determination could be made to verify leaded versus unleaded contents (necessary separation for fuel blending), samples were collected and submitted to Columbia Analytical Services for 24-hour analysis. Method 6010B was used to measure for lead. Each of the tank's contents was less than 0.50 mg/L and their contents were handled accordingly by the construction contractor – Marcor Environmental Services.

The original work plan called for two separate tank pits to be created, but site conditions made it more practical to create one large pit as the removal of the UST's progressed. The tanks were removed from north to south. Tanks 1 and 2 were estimated at 4,000-gallon capacity. Tank 3 was estimated at 3,000-gallon capacity. Tanks 4 and 5 were estimated at 6,000-gallon capacity. Tanks 1-3 were aligned east to west and Tanks 4-5 were aligned north to south. Figure 3 shows the locations of the tanks removed in 2000.

Eight grab samples were collected on June 28 – June 29, 2000 from the excavation and labeled TP-1 through TP-8. TP-1 was collected on the north wall. TP-2 was collected on the south wall. TP-3 and TP-4 were collected on the west wall. TP-5 and TP-6 were collected on the east wall. TP-7 and TP-8 were collected on the pit bottom. All samples were collected at approximately 9.0-feet below ground surface per instructions of NYSDEC field representatives. TP-8 is noted as being collected "At Bottom". This sample was collected slightly lower than 9.0-feet below ground surface due to crushed stone found around Tanks 5 and 6.

The previously undocumented 275 gallon UST encountered in Test Trench TT-4 was removed in June 2003. Laboratory analysis on the three soil samples collected from trench TT-4 detected petroleum SVOCs below recommended cleanup objectives at a depth equal to the tank. Analysis on the sample collected from the trench adjacent to the tank (TT-4A) and from several feet below the tank (TT-4B) did not detect any VOCs or SVOCs. The analysis indicates that no significant release occurred from the 275 gallon UST at the north side of the building. Figures7 through 9 show the location of test trench TT-4 and the approximate location of the removed UST.

### 4.5.3 Dispenser Pump Island

In addition to the tank pit, a pump pit was also excavated in 2000 along the dispenser pump that was located on the south side of the gas station building. The intent was to investigate potential contamination due to leaking that originated from the fuel island and conveyance lines from the UST's. The pump pit measured approximately 43-feet by 10-feet by 3-feet deep. Figure 3 and Figure 4 show the general location of the excavation and sample locations by the pump island. This was the only dispenser pump area at the subject parcel. Based on records provided by the City of Rochester Fire Marshall, this area had historically been used as the pump island at the subject parcel. No indications of other dispenser pumps were identified at the subject parcel.

### 4.5.4 Surface Dumping

Based on historic reports of vehicle parking on the northern portion of the parcel, and the presence of earth fill in the same area, petroleum-based VOCs and SVOCs may have been released onto the ground surface in this area. The area of impacted soil does not appear to extend off-site onto adjacent properties, based on laboratory analysis of the off-site surface soil samples collected in 2004.

## 5.0 EXPOSURE PATHWAYS ANALYSIS & QUALITATIVE RISK ASSESSMENT

An Exposure Pathways Analysis and Qualitative Risk Assessment has been conducted to evaluate potential routes of exposure by which people or the environment may come into contact with the contaminant associated with the site.

### 5.1 Applicable Standards, Criteria and Guidance

In order to identify potential exposure pathways, applicable standards, criteria and guidance (SCGs) need to be identified. For this review SCGs are categorized as compound specific, location specific and action specific. These categories are defined as the following:

#### Soil SCGs

- NYSDEC Division of Hazardous Waste Remediation Technical and Administrative Guidance Memorandum (TAGM) 4046 (HWR-94-4046), "Determination of Soil Cleanup Objectives and Cleanup Levels", Revised January 24, 1994.

- NYCRR Part 371, Identification and Listing of Hazardous Wastes.

- NYSDEC Division of Hazardous Substance Regulation Technical and Administrative Guidance Memorandum (TAGM) 3028, "Contained in Criteria for Environmental Media," dated November 1992.

- City of Rochester Background CPAH concentrations from samples collected by Sear Brown during the 1998 investigation related to the APCO project. Background sample data was derived from Atlantic Avenue and Akron Streets.

#### Groundwater SCGs

- NYCRR Part 700-705, Water Quality Regulations for Surface Water and Groundwater.

- NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations", Reissued June 1998, April 2000 Addendum.

#### Indoor Air SCGs

The NYSDOH "Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes" (http://www.health.state.ny.us/nysdoh/indoor/fuel_oil.htm), February, 2005. This document references petroleum-based aromatic VOCs along with select chlorinated VOCs.

Daft "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (http://www.health.state.ny.us/nysdoh/gas/svi_guidance), February, 20005. This document also includes decision matrices for actions to be taken for both petroleum-based aromatic VOCs along with chlorinated VOCs.

- NYSDOH Division of Environmental Health Assessment, Bureau of Toxic Substance Assessment "Indoor Air Sampling & Analysis Guidance".

## 5.2 On-Site Release of Contamination

Based on past records, environmental studies, and observed contaminant distribution and migration patterns, the main source of contamination were subsurface releases of gasoline and a lesser amount of diesel fuel from the UST pit area west of the service station building and the dispenser pump island south of the building, near the southern property line. Migration of detected petroleum-based VOCs and has apparently occurred as both a free phase and dissolved constituents in the ground water possibly from product that historically infiltrated vertically from source locations through the vadose zone into the aquifer.

Comparison of the distribution of detected VOCs in test boring soil samples, both vertically and laterally to values detected in groundwater samples can assist in evaluating locations where substances were released.

Figure 18 shows the orientation of the cross-sections. The extent of the area of greatest impact to groundwater shows correlation with subsurface geologic conditions determined from test borings and shown on Cross-Sections A-A$^1$ (Figure 19) and B-B$^1$ (Figure 20). The top of the bedrock surface is shown on Figure 21. The bedrock topography forms a trough or depression in the vicinity of MW-7 and MW-3 at the south-southwestern portion of the subject parcel. No evidence of a perched water table in the overburden was detected in this area. Based on bedrock topography the free product released into the subsurface at the former dispenser pump area and possibly from the former UST pit has collected at the south/southwestern portion of the subject parcel.

The area of highest concentration of dissolved petroleum VOCs in groundwater samples varied between the 2000, 2003 and 2004 sampling events, as shown in Table 7. For the August 2000 sampling event, the highest total VOCs were detected in MW-4 (12,7400 PPB), just outside the southwest corner of the former UST pit. VOCs at MW-3 (10,370 PPB), at the southeast corner, were in a similar range. For the November 2000 sampling event the highest total VOCs continued to be detected at MW-4 (61,600 PPB). The September 2003 sampling event included six additional wells, and the highest total VOCs were detected at MW-7 (23,940 PPB), a well with free phase product at the southern portion of the parcel. The highest dissolved VOCs in a well without free product was MW-9 (16,690 PPB). For the June 2004 event the highest dissolved VOCs were also detected in the MW-7 sample (25,525 PPB), at which free product was also present. MW-9 showed the next highest total VOC concentration (17,407 PPB). MW-9 is located in the center of the subject parcel, north of the former service station building. The dissolved phase of VOCs appears to be migrating in a northerly to northeasterly direction, a function of the northerly component of local groundwater flow.

Laboratory analysis groundwater samples collected as part of this SSI detected minimal off-site impact. Trace amounts of VOCs detected at MW-5, MW-6 and MW-13 in June 2004 met the NYSDEC Class GA standards. No VOCs were detected in samples from MW-12 or MW-14.

Table 11 identifies potential release sources, release mechanisms, and receiving media of concern for past, current, and future releases in the absence of any remedial action.

## TABLE 11
## ENVIRONMENTAL MEDIA OF CONCERN

| Media of Concern | Potential Release Mechanism | Receiving Medium |
|---|---|---|
| Contaminated Soil | Volatilization of aromatic VOCs | Vadose zone soil beneath the building |
| | Adsorption and Absorption on to soil | Subsurface soil at source areas |
| | Vertical migration | Groundwater |
| Contaminated Groundwater | Groundwater flow | Down-gradient flow of groundwater<br>Limited lateral migration of groundwater |
| | Volatilization | Vadose zone, both on-site and potential to migrate to beneath off-site buildings |
| | Extraction via pumping | Water supply systems (without treatment)<br>Surface soil<br>Surface water |

## 5.3 Human Exposure Pathways Analysis

The Human Exposure Pathway Analysis was performed as part of this investigation. Environmental assessments and information obtained included identification of chemical compounds of potential concern to various environmental media were identified. Compounds of potential concern were selected based on frequency of detection, range of concentrations, and potential for migration during the period of those investigations.

### On-Site Exposure

On-site/utility workers could be exposed during excavation or subsurface maintenance activities via dermal contact with waste materials, inhalation of vapors and airborne particulates when working in the area of wastes or near a waste treatment system (if implemented), and incidental ingestion due to soiled hands.

Groundwater in the area is not used for drinking water. All residential dwellings are reported by local agencies as being served with municipal water. The potential for direct contact with groundwater may occur if shallow well points are used within the plume for irrigation, as basement sumps or other non-potable purposes.

### Off-Site Exposure

Measurable impacts to indoor air quality in the residence at 1214/1216 East Avenue, east of the site, associated with volatilization from the groundwater plume beneath the former service station building, have been identified as a source of potential direct exposure to VOCs through inhalation.

Potential impacts to off-site residential indoor air that may be associated with the groundwater plume have been identified as a potential route for direct exposure to VOCs through inhalation. Sub-slab, basement ventilation and ambient air sample analysis have been used to determine potential risk to occupants at 1214/1216 East Main Street, immediately east of the subject parcel.

## 5.4 Identification of Exposure Pathways

The various exposure pathways, by which people could potentially come into contact with the contaminants associated with the site, either now or in the future, are summarized in Table 12. The scenarios involving exposure to off-site surface water and sediments were eliminated due to the nature and extent of contamination.

### TABLE 12
### EXPOSURE PATHWAY ANALYSIS

| Exposure Media or Route of Exposure | Exposure to On-Site Occupants | Exposure to Construction Workers/Subsurface | Exposure to Off-Site Population |
|---|---|---|---|
| Contaminated Soil | Limited: Site is surrounded by a locked fence, and is partially paved or covered fill from the building footprint | Yes; If excavation occurs to the level where impacted groundwater occurs | None at present: Contaminated soil impacted by the subject parcel does not extend off-site[6] |
| Groundwater | None: No use of groundwater | Yes: If excavation occurs to the water table | Only if groundwater is extracted. No use of groundwater identified |
| Ingestion | None at present | Yes, but only if the soil is exposed | None at present; Off-site soil is not impacted by the subject parcel |
| Direct Contact to Groundwater | None at present | Yes, if subsurface is exposed to groundwater | Possible, from use of private basement sumps |
| Inhalation of Vapors | None at present | Yes, if subsurface is exposed to groundwater | Yes:<br>VOCs detected in sub-slab samples at 1214 East Main St. |

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[6] Some off site surface soil samples (east of the site) did indicate the presence of PCB's and elevated concentration of metals. Based on on-site data, this appears to be from a different source(s) not related to the subject site.

## 6.0 IDENTIFICATION AND DEVELOPMENT OF REMEDIAL ALTERNATAIVES

### 6.1 Remedial Action Objectives

The proposed Remedial Action Objectives (RAO) for the 1200 East Main Street site are based on the generic RAO examples listed in Appendix 4A of Draft DER-10, Technical Guidance for Site Investigation and Remediation, December 2002.

The proposed RAOs are to address the following:

- Prevention of exposure to persons at or around the site.
- Allow for removal of the sources(s) of soil or groundwater contamination.
- Allow for reduction of contamination concentrations in soils and groundwater at the site.

**Ambient Air Objectives**

The outside ambient air at this site was not considered a media that was impacted by contamination at the time this SSI was conducted. The selection of an alternative that could potentially impact air quality would be the removal of VOCs from the groundwater or subsurface at the subject parcel, for introduction into the atmosphere.

Demolition of the gas station building was completed in 2003. ACM identified included window caulk/glaze, roofing sealant and wallboard glue. These materials were removed prior to demolition in accordance with applicable State and Federal requirements. The ACM no longer presents a concern for remedial actions.

**Indoor Air Remedial Action Objectives**

Appendix 4A of DER-10, “Technical Guidance for Site Investigation and Remediation”, does not include Generic RAOs specific to air media. The indoor air objectives are based on applicable NYSDOH guidance documents for aromatic VOCs and chlorinated VOCs. The decision matrices contained in the NYSDOH “Guidance for Evaluating Soil Vapor Intrusion in the State of New York” are to be followed for addressing both aromatic and chlorinated VOCs.

The remedial Action Objectives for indoor air quality for the residence immediately east (1214/1216 East Main Street) of the subject parcel would be to prevent vapor intrusion into this residence that is contaminated with BTEX compounds and other petroleum related VOCs including but not limited to MTBE, 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenze.

Proposed Indoor air objectives for individual compounds based on appropriate NYSDOH Guidance Documents (The NYSDOH Summary of Indoor and Outdoor Levels of Volatile Organic Compounds from Fuel Oil Heated Homes in NYS, 1997-2003, revised February 18, 2005). Appropriate specific values are listed in Summary Table, XIX, Soil Vapor and Basement Ventilation System Laboratory Analysis Summary Table.

The 75th percentile values for the NYSDOH data on indoor and outdoor samples are listed for reference purposes on Table XIX.

## Groundwater Remedial Action Objectives

The Groundwater RAOs are intended to allow for the public health protection and for environmental protection, and include the following objectives:

- Prevent contact with, or inhalation of volatiles from contaminated groundwater.
- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards. The subject parcel and surrounding properties are connected to municipal water supply and the local groundwater is not used as a potable water source.
- Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable. Proposed groundwater cleanup objectives are based on the NYSDEC Class GA Groundwater Standards.
- Remove the source of groundwater contamination.
- Prevent the discharge of contaminants to surface water.
- Control offsite migration of volatile constituents by recovering contaminated groundwater from the source areas.

The alternatives to be considered for remediation will be based on achieving objectives that will recover and clean up groundwater to acceptable groundwater quality standards and the level of land use required by the City of Rochester and the NYSDEC. Potential off-site migration of gasoline-derived VOCs in groundwater to the northwest and movement of free phase product and dissolved VOCs in groundwater to the southeast are the primary concern. Sampling and analysis conducted in 2004 indicated that the plume of impacted groundwater terminates at the north property line, and no extensive off-site impact to groundwater has occurred.

It is extremely difficult to quantify volumes of groundwater that can be recovered due to so many variables such as technology selection, duration of remedial effort, recharge rate of the wells, seasonal variability and definition of how groundwater will be impacted. Overall remediation time would be dependent upon agreed upon objective such as reduction of groundwater contaminant concentrations to acceptable levels and risk assessment.

## Soil Remedial Action Objectives

The surface and subsurface soil RAOs are intended to allow for the public health protection and for environmental protection, and include the following objectives:

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

Proposed surface soil remediation objectives are based on the background levels for the City of Rochester. This includes an evaluation based on the concentration of total polynuclear aromatic hydrocarbons (PAHs), total carcinogenic PAH (CPAH) concentrations and the corresponding Benzo(a)pyrene (BAP) Toxicity Equivalents.

Based on discussions between NYSDEC, NYSDOH, and MCHD, a site-specific surface soil cleanup of objective of 5 ppm total carcinogenic PAHs (cPAHs) has been recommended for the removal of on-site surface soils for this site.

The proposed subsurface soil remediation objectives would be to remove the majority of source areas (former UST pit and dispenser pump pit) contamination as well as reduce lesser concentrations of contaminants in the unsaturated zone. Cleanup objectives would be the same as listed in TAGM 4046 for subsurface soil conditions.

If excavation is to occur then the need for an area to stage soils is a consideration. Given the available area on the site there may be enough area on the site depending on volumes to be removed.

In-situ methods are more desirable when compared to unearthing native soils based on disruption, potential lower costs and eliminating the need for transport of contaminated media offsite to an approved TSDF. In-situ methods are more likely to consume a greater amount of time to execute.

### Surface Water Remedial Action Objectives

The Remedial Investigation has determined that surface waters are not directly impacted by the 1200 East Main Street site. No permanent bodies of water (standing water bodies or flowing streams) are at or adjacent to the site. The proposed RAOs for soil and groundwater include actions to control future potential impact to surface water through contaminant concentration reduction in soil and groundwater at the site.

### Sediment Remedial Action Objectives

The Remedial Investigation has determined that sediments in an aqueous environmental are not directly impacted by the 1200 East Main Street site. No permanent bodies of water (standing water bodies or flowing streams) are at or adjacent to the site. The proposed RAOs for soil and groundwater include actions to control future potential impact to sediment through contaminant concentration reduction in soil and groundwater at the site.

## 6.2 General Response Actions

### Indoor Air

The contaminants of concern consist of petroleum aromatic VOCs present in petroleum products such as gasoline.

### VOCs

The following VOCs were detected at 1214 East Main Street and at the 1200 East Main Street site in groundwater or subsurface soils site:

- Benzene
- Ethylbenzene
- Toluene
- Xylenes (o, p & m)
- MTBE
- 1,3,5-Trimethylbenzene
- 1,2,4-Trimethylbenzene

These VOCs are indicative of a gasoline release. Other VOCs were detected in varying quantities in the air samples collected and analyzed to date. However, there is no correlation that these constituents originated from the 1200 East Main Street site.

Areas of exposure are currently focused on the residence immediately east (1214/1216 East Main Street) of the subject parcel. The residence measures approximately 80-feet along its exterior, west wall – nearest to the subject parcel.

This medium is currently being addressed by the interim remedial measure (IRM) implemented in May 2004. The existing IRM has been documented as running at a rate of approximately 34 cubic feet per minute (CFM). This represents a volume of air being removed from the building's sub-slab of 48,960 cubic feet per day, assuming no interruption in service. Analytical evaluation is being conducted to determine the effectiveness of the IRM relative to this medium.

### Groundwater

The contaminants of concern consist of petroleum aromatic VOCs/SVOCs present in gasoline. Both free phase product (weathered gasoline) and a dissolved phase have been detected.

### VOC's

The following aromatic VOCs were detected most frequently in on-site groundwater samples from the 1200 East Main St. site:

- Benzene
- Ethylbenzene
- Toluene
- Xylenes (o, p&m)
- Naphthalene
- 1,3,5-Trimethylbenzene
- 1,2,4-Trimethylbenzene
- Sec-Butylbenzene
- P-Isopropyltoluene
- Isopropylbenzene
- N-Butylbenzene
- Sec-butylbenzene
- MTBE

These aromatic VOCs are indicative of a gasoline release. No halogenated VOCs were detected in the groundwater samples. The presence of free phase non-aqueous phase liquid, determined to be gasoline, combined with the type of aromatic VOCs confirms that gasoline, and a lesser amount of a heavier-weight petroleum distillate (diesel fuel) were released to the subsurface at the subject parcel.

**SVOC's**

Laboratory analysis conducted in 2000, 2003 and 2004 detected the following relatively heavy-weight petroleum-based SVOCs in groundwater samples:

- 2-Methylnaphthalene
- Naphthalene
- Fluorene
- Acetophenone (one 2003 sample)
- Phenanthrene

These polycyclic aromatic hydrocarbons are all constituents of petroleum distillates, including diesel fuel and fuel oil. A diesel fuel UST was removed in 2000 from the tank pit, and highest concentrations of these SVOCs were detected in MW-4, adjacent to the pit.

The areas of containment and treatment are based on the June 2004 sampling and monitoring events. Free phase product is estimated to cover an area totaling approximately 8,200 square feet. This estimated area extends to the north of MW-9, to the eastern property boundary, to the south along East Main Street and to the west where the backfilled tank pit resides.

Dissolved phase total VOC's in groundwater exceeding a threshold of greater than 10 PPB are estimated to extend off-site to the north prior to MW-14, off-site to the east at MW-6, off-site to the south at East Main Street and off-site to the west on the Auto Zone parcel.

Based on groundwater the June 2004 groundwater quality results the 10 PPB total VOC plume is estimated to covers the entire site and extends off-site in each direction. The approximate total square footage of this area extends 45,500 feet or slightly greater than 1 acre.

The volume of groundwater to be treated to achieve objectives has not been estimated by use of modeling at this time.

## **Surface Soil**

A limited area of surface soil impacted by SVOC contamination occurs at the subject parcel. The area of impact is limited to the central-northern portion of the parcel, and does not extend off-site. Excavation of the impacted area may provide the most immediate means of removing the entire amount of contamination. However, alternate approaches to remediation may be more cost effective while simply reducing the SVOC concentrations observed to an acceptable level.

## Petroleum-Based SVOCs

A number of SVOC were detected in samples collected in the northern section of the property where illegal dumping activities potentially occurred. These analytes are all component of petroleum distillates. They include:

- Acenaphthene
- Anthracene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(g,h,l)perylene
- Benzo(k)fluoranthene
- Carbazole
- Chrysene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Napthalene
- Phenanthrene
- Pyrene

The remedial goal for this media will be to remove impacted soil. Proposed cleanup objectives are based on City of Rochester petroleum SVOC background levels, using values obtained in 1998 from the former APCO Site (Brownfield Cleanup Program) from samples collected along Atlantic Avenue and Akron Streets in the City of Rochester. The background CPAH levels will be used for comparison purposes to determine if cleanup is required in lieu of TAGM HWR-4046 where data is available.

Based on background level criteria surface soil remediation will be required in the areas of surface sample locations SSU-2, SSU-3, SSU-4 and SSU-5. All other surface soils samples were below area background levels for total CPAHs. SU-18 and SU-19 both contained individual SVOC concentrations (other than CPAH listed SVOCs) above HWR-4046 cleanup levels.

## Metals and PCBs

Several surface samples collected during the investigation detected heavy metals above recommended cleanup objectives. The remedial goal for this media will be to remove impacted soil. Proposed cleanup objectives are based on NYSDEC Cleanup Objectives listed in TAGM HWR-4046.

The limits of excavation would be along the northern fence line from SSU-2 to eastern edge of TT-8; along the eastern fence line from SSU-22 to SSU-5; across the site from SSU-5 to SSU-19 (west-southwest direction); and from SSU-19 to the corner of the property near SSU-2. The area of impacted surface soil requiring remediation would be the top two feet in the northern section of the subject parcel. An estimated 207 cubic yards of surface soils would be removed, as described in Section 8.0.

Two off-site wells (SSU-6 and SSU-7) contained slightly elevated concentrations of heavy metals: cadmium, mercury and lead during sampling and analysis conducted in June 2003. SSU-7 also contained total PCBs at 3.01 MG/KG. Both of these sample locations are to the east of the subject parcel at 1214 East Main Street. This may be due a separate source area unrelated to the City site at 1200 East Main Street. There were two other detections of PCB’s found in subsurface soils collected from the beneath the former building foundation. These samples are identified as Foundation #2 and Foundation #3 collected during the same time as the off site samples. These samples were collected between 3.0 – 4.0 feet below grade. Not other detections of PCBs were made on the site.

The elevated metals concentrations may be attributable to the fill materials and surrounding area characteristics such as locally, elevated site background levels for metals.

## Subsurface Soil

The remedial goal for this media would be to remove the majority of source area (UST tank pit, dispenser pump pit and former lift pit beneath the building slab) contamination as well as reduce lesser concentrations of contaminants in the unsaturated zone. During UST removal activities, grossly contaminated soils were removed in 2000. Subsurface soils from the dispenser pump and immediately north of East Main Street and beneath the former lift pit within the building foundation foot print should be removed. These areas are identified as Area 2 and Area 3, respectively on Figure 24.

Evidence of free product was detected in both of these areas and confirmation from subsurface soil analysis indicates the presence of BTEX VOCs, CPAH SVOCs, the metals cadmium and lead, and low levels of PCBs in one or both of these areas.

Various VOC's and several SVOC's have been detected in subsurface soil samples collected in 2000 and 2003. These constituents are predominantly petroleum-based and include:

**VOC's**

- 1,2,4-Trimethylbenzene
- 1,2-Dichloroethane
- 1,3,5-Trimethylbenzene
- 2-Butanone
- 4-Isoprpyltolune
- Benzene
- Bromobenzene
- Ethylbenzene
- Isoprpylbenzene
- MTBE
- n-Propylbenzene
- Napthalene
- tert-Butylbenzene
- Toluene
- m,p-Xylene
- o-Xylene
- sec-Butylbenzene

### SVOC's

- 2,6-Dinitrotoluene
- 2-Methylnapthalene
- 2-Nitrophenol
- 4-Nitrophenol
- Acenaphthene
- Anthracene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(k)fluoranthene
- Benzoic Acid
- Bis(2-chloroethoxy)methane
- Chrysene
- Dibenzofuran
- Fluoranthene
- Fluorene
- Isophorone
- Napthalene
- Phenanthrene
- Pyrene

The volumes of subsurface soils that remain significantly impacted are defined as follows.

Area 2: Approximately 223 cubic yards of material will be targeted for removal. This value will be subject to adjustment based on field values. Contamination has been verified as beginning at approximately 3 feet below grade and extending to bedrock at approximately 13 below grade outlined by the sample locations of F-1, F-2 and F-3.

Area 3: Approximately 112 cubic yards of material will be targeted for removal. This value will be subject to adjustment based on field values. Contamination has been verified as beginning at approximately 8 feet below grade and extending to bedrock at approximately 13 below grade. Area 3 borders East Main Street from MW-3 to SS-8.

If a technology selection such as excavation is selected, then the majority of this volume can be successfully removed. Field screening of soils would be performed to distinguish between clean and contaminated materials. Clean fill would be staged for reuse as backfill.

## 6.3 Development of Remedial Alternatives

Alternatives outlined provide a range of response for the City to determine the next course of action. Some of the more aggressive approaches identified (if implemented) will attempt to clean up the site to allow for non restricted reuse. However, reaching cleanup objectives to this extent may not be practical and may not reach a point to solicit NYSDEC approval for end of remediation.

### Air

Protection of human health from harmful vapor intrusion is the main consideration when selecting a remedial scenario. Currently the neighboring parcel to the east of the subject parcel is fitted with a basement ventilation system consisting of three sub-slab extraction points and an exhaust fan to help mitigate the intrusion of low level petroleum related VOCs. This system will continue to operate and it effectiveness will be evaluated by the NYSDOH. Any remedial alternative considered for other media shall include this indoor air mitigation method until the indoor air concentrations no longer warrant addressing.

Alternative selection involving the production of a new point source air discharge that could potentially impact air quality is also a consideration in the development of remediation scenarios.

## Groundwater

The alternatives to be considered for remediation will be based on achieving objectives that will recover and clean up groundwater to acceptable groundwater quality standards and the level of land use required by the City of Rochester. Offsite migration is primary concern at this time.

In attempting to clean up groundwater that exists onsite, the most cost-effective technology that will expedite remediation while achieving objectives should be selected. The existing monitoring wells may provide existing points of access to continually monitor the groundwater. However, these wells may not be suitable for recovery, such as for removal of free product.

Utility requirements such as electrical power, sewer discharge point and air supply need to be taken into account. The building was demolished in 2003, and new structure may be required.

## Subsurface and Surface Soils

Making use of existing facilities/controls that are present on site is typically a prudent approach. For example, it may be possible to use the existing two inch diameter monitoring wells as points for vapor extraction, or for small-scale product recovery systems. Introduction of biodegradation agents using the existing well network may have some limited or short-term applicability, but may result in fouling or clogging of the screened interval of such a small diameter well.

If excavation is to occur then the need for an area to stage soils is a consideration. Given the available area on the site there may be enough area on the site depending on volumes to be removed.

In-situ methods are more desirable when compared to unearthing native soils based on disruption, potential lower costs and eliminating the need for transport of contaminated media offsite to an approved TSDF. In-situ methods are more likely to consume a greater amount of time to execute.

## 7.0 REMEDIAL ALTERNATIVES EVALUATION

The purpose of this evaluation is to identify and evaluate the most appropriate actions for the 1200 East Main Street site.

The remedial goal for all remedial actions is to allow for the restoration of the 1200 East Main Street site to pre-release conditions to the extent feasible and authorized by law.

The remedial remedy is intended to eliminate or mitigate all significant threats to public health and the environment presented by contaminants at the 1200 East Main St. site through the proper application of scientific and engineering principles. Where identifiable sources of contaminations exist, it will be removed or eliminated to the extent feasible.

The Remedial Action alternatives evaluated are specific to the media impacted at the 1200 East Main Street site, are to allow for protection of public health and the environment and are based on contaminant-specific applicable standards, criteria and guidance (SCGs).

Nine Remedial Alternatives have been evaluated. The alternatives include:

**Alternative 1 – No Further Action**

**Alternative 2 – Monitor Natural Attenuation**

**Alternative 3 – Passive Product Recovery**

**Alternative 4 – Source Area Soils Removal**

**Alternative 5 – Groundwater Pump & Treat**

**Alternative 6 – Groundwater Remediation via Direct Oxygen Injection**

**Alternative 7 – Groundwater Remediation via Air Sparging**

**Alternative 8 – Soil Vapor Extraction**

**Alternative 9 – Enhanced Bioremediation**

Each Remedial Alternative is described below. The various remedial alternatives are assessed individually based on evaluation of factors listed in 6NYCRR375-1.10(c). Remedial Alternatives selection should be based on meeting objectives of the cleanup program.[7] Seven characteristics are presented to evaluate each alternative. The alternatives will then be presented in a comparative ranking shown in Table 13. The alternative costs are compared in Table 14.

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[7] New York State Department of Environmental Conservation Division of Environmental Remediation, "Municipal Assistance for Environmental Restoration Projects. Procedures Handbook. 1196 Clean Water /Clean Air Bond Act Environmental Restoration Projects – Title 5, July 2004".

## 7.1 Alternative 1 - No Further Action

### 7.1.1 Description

The City of Rochester may determine that site is not worthy of remedial actions given the condition of the site and choose to leave it as inactive and not a viable parcel. If this is the case a "leave as is" approach may be adopted. The property would remain unoccupied with no further action to be scheduled.

### 7.1.2 Assessment

Potential benefits of no further action include no additional cleanup costs and no further site disruption.

Potential limitations include:
- Leaving the property as non-viable and tax deficient.
- Potential offsite exposures from migration of free phase product
- Contaminated soil vapor intrusion to neighboring residences.

- Continued operation of the BVS system at 1214 East Main Street.
- Continued presence of free phase gasoline in the bedrock aquifer.
- Continued presence of petroleum VOCs and SVOCs in the groundwater at the property perimeter.

### 7.1.3 Selection Criteria

#### 1. Overall Protection of Human Health and the Environment (HH/Env)

a) Exposure to human heath and the environment following remediation.

This alternative provides no reduction of apparent risks to human health or environment.

b) Residual public health risks following remediation.

All risks remain as they currently exist.

c) Residual environmental risks following remediation.

All risks remain the same with current site conditions.

#### 2. Compliance with Standards Criteria, and Guidance (SCGs)

This alternative does not address compliance with applicable SCGs.

#### 3. Long-Term Effectiveness and Permanence (Long Term)

a) Lifetime of remedial actions.

No remedial actions are implemented with this option.

b) Residual risks.

Risks remain as is due to lack of action.

c) Adequacy and reliability of controls.

No controls are implemented with this alternative.

## 4. Reduction of Toxicity, Mobility, or Volume with Treatment (Reduce)

a) Volume of hazardous substances reduced.

The volume of hazardous substances will remain relatively unchanged. Slight differences will likely be realized with the passage of time such as source areas replenishing migrating groundwater. Natural attenuation may slightly decrease concentrations over long periods of time.

b) Reduction in mobility of hazardous substances.

There will no reduction in mobility of substances.

c) Irreversibility in the destruction or treatment.

There is no active destruction or treatment of hazardous substances.

## 5. Short-term effectiveness (Short Term)

a) Protection of community during remedial actions.

Not applicable.

b) Environmental impacts.

Existing conditions prevail with continued environmental impact to groundwater.

c) Time to implement remedy.

There is no time consumed with no remedy implementation.

## 6. Implementability (Feasible)

a) Suitable to site conditions.

No action is feasible in terms implementing an alternative based in no action.

b) Implementability.

This alternative can be implemented.

c) Availability of services and materials.

Not applicable.

d) Cost effectiveness.

This option has no real financial cost to implement.

## 7. Cost

Estimated Costs for Alternative 1 – No Further Action are listed in Table 14. The cost for this Alternative is estimated to be $0.

## 8. Community Acceptance (Community)

Community residents and business owners would most likely perceive a lack of action as unacceptable assuming they understand potential risks to their surroundings.

## 7.2 Alternative 2 - Monitor Natural Attenuation

### 7.2.1 Description

Although Monitor Natural Attenuation (MNA) is not considered a presumptive remedy, the US EPA does recognize it as a method to be used when comparing alternatives for remedy selection[8]. This alternative leaves the site as is and anticipates that natural attenuation of the subsurface contamination will occur over time. The approach is that natural remediation and breakdown of contaminants will occur without the implementation of engineered controls. Biodegradation, dilution/dispersion and/or adsorption may occur on site to reduce VOC and SVOC concentrations so that they are within NYSDEC groundwater quality standards and TAGM #4046 soil cleanup guidelines.

A long-term monitoring program would be put into place that could include groundwater quality monitoring and soil boring analysis at specified intervals. The formulation of data trends that indicates the decrease in contaminant concentrations is one way to measure attenuation. By-products of natural attenuation may be measured as well. Deviations in the chemical makeup of the site's subsurface conditions can be monitored to determine if biodegradation of contaminants is occurring. If the analysis of data trends is inconclusive in determining whether natural attenuation is occurring, laboratory studies can used to simulate subsurface conditions and determine the effectiveness of MNA.

Groundwater monitoring should be conducted on a semi-annual basis using the existing monitoring wells on site. Subsurface boring and surface soil sampling would also be recommended on an annual basis.

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[8] Commonly Asked Questions Regarding The Use Of Natural Attenuation For Petroleum-Contaminated Sites At Federal Facilities, USEPA, Air Force, Army, Navy and Coast Guard Partnership, http://www.denix.osd.mil/denix/Public/Library/Attenuation/attenuation.html

### 7.2.2 Assessment

Potential benefits include:

- Reduced generation of potentially hazardous wastes.
- Minimized site disruption.
- Minimal field activities with limited labor.
- Less costs in terms of achieving overall remedial objectives.

Potential limitations include:

- Lengthy clean up period.
- Continued plume migration if attenuation is not at an adequate rate.
- Free product in the bedrock fractures presents the potential for off-site migration to the south-southeast.
- Long-term monitoring costs.
- Impacted surface and subsurface soil beneath the former building footprint left unaddressed.

### 7.2.3 Selection Criteria

**1. Overall Protection of Human Health and the Environment (HH/Env)**

e) Exposure to human heath and the environment following remediation.

This alternative provides no reduction of apparent risks to human health or environment. It does provide more information on what conditions are following monitoring events.

f) Residual public health risks following remediation.

All risks remain the same due to the lack of mitigation.

g) Residual environmental risks following remediation.

All risks remain the same with current conditions as they are. A better understanding of risks may be provided with updated monitoring data.

**2. Compliance with Standards Criteria, and Guidance (SCGs)**

This alternative does not address compliance with applicable SCGs.

**3. Long-Term Effectiveness and Permanence (Long Term)**

a) Lifetime of remedial actions.

No remedial actions are implemented with this option.

b) Residual risks.

Risks remain as is due to lack of action.

c) Adequacy and reliability of controls.

No controls are implemented with this alternative.

4. **Reduction of Toxicity, Mobility or Volume with Treatment (Reduce)**

a) Volume of hazardous substances reduced.

The volume of hazardous substances will remain relatively unchanged. Slight differences will likely be realized with the passage of time such as source areas replenishing migrating groundwater. Natural attenuation may slightly decrease concentrations over long periods of time.

b) Reduction in mobility of hazardous substances.

There will no reduction in mobility of substances although conditions will be updated with each monitoring event.

c) Irreversibility in the destruction or treatment.

There is no active destruction or treatment of hazardous substances.

5. **Short-Term Effectiveness (Short Term)**

a) Protection of community during remedial actions.

No added protection to the community with this alternative although there will be current information regarding existing conditions that could be used to share with the public.

b) Environmental impacts.

Existing conditions prevail with continued environmental impact to groundwater.

c) Time to implement remedy.

Minimal time would be required to coordinate monitoring events, receive analytical data and provide status reports. Standard turnaround time for laboratory results is 15 working days. Report preparation would take five business days to complete.

6. **Implementability (Feasible)**

a) Suitable to site conditions.

The site is equipped with on-site and off-site monitoring wells to effectively monitor site conditions.

b) Implementability.

This alternative can be implemented easily by using existing monitoring wells that exist on and adjacent to the site. MNA sampling could be performed at a reduced number of approximately seven perimeter wells. Groundwater would be analyzed for VOCs as well as field measures such as Do, conductivity, etc.

c) Availability of services and materials.

The City has staff available to perform sampling activities. Analytical laboratory options are available in the city of Rochester.

d) Cost effectiveness.

Assuming semi-annual sampling and analysis for seven wells, laboratory costs would be on the order of $2,500 annually. Additional cost would be incurred for field instrumentation rental depending upon the agreed upon field parameters to be measured. If the City assumes the responsibility of sampling activities, no additional cost would be incurred for labor to perform such field work.

### 7. Cost

Estimated Costs for Alternative 2 - Monitor Natural Attenuation are listed in Table 14. The cost for this Alternative is estimated to be $2,500 on an annual basis, based on City staff performing semi-annual sampling.

### 8. Community Acceptance (Community)

Historically, community residents and business owners have not provided opinions of concern. However, if the community were to be better educated regarding risks, this option may not be viewed favorably. More aggressive action may be required.

## 7.3 Alternative 3 - Passive Product Recovery via Skimming

### 7.3.1 Description

The presence of free phase product at the subject parcel, determined to be weathered gasoline, occurring primarily in the bedrock aquifer. Limited free product exists in the thin overburden water table aquifer. Free phase product has been occasionally detected at MW-9, at which a seasonal overburden water table above bedrock has been detected during periods of relatively high water table. The June 2004 sampling event indicated that free product covered an area of approximately 8,200 square feet. Removal of free product can be accomplished by physical recovery employing a variety of passive product skimming methods. A passive-type oil skimmer could be used to collect free product. Depending on the type of system, electrical service and conveyance lines may or may not be required.

Several examples of different choices that could be implemented include:

- Enviroproducts manufactures a 1 ¾ - inch PetroTrap which act as a collection device for free phase products without collecting groundwater. This unit can be installed into existing two inch wells. Once lowered into a well, the unit would require periodic intervention for removal and recovery of the product. Collected product could be poured off into a 55-gallon drum. Once emptied, the PetroTrap is placed back into the well to continue its passive recovery.

- New Pig Corporation manufactures a monitoring well Skimming Sock that can be lowered into existing 2-inch wells. These socks absorb up to 17 ounces of product per unit. This product is similar to the PetroTrap in that it requires periodic intervention. Once removed, the sock and its contents are placed in an open head 55 gallon drum for later offsite disposal.

- Clean Earth Technology, Inc. produces either electrically operated or solar powered Spill Buster free product removal applications. This type of alternative has various options to choose from. The unit can be established to recover product directly from two-inch wells into a 55 gallon drum. Remote options are available as well to notify O&M operator of system status. Automatic shutoffs can be applied to the collection drum to prevent overfilling.

Four monitoring wells, MW-3, MW-4, MW-7 and MW-9 have contained various amounts of free phase product, ranging from 0.01 foot to 1.46 feet in thickness. The occurrence of free product was discussed in Section 4.4.1. If this alternative is selected, at least two skimming systems should be implemented that could be rotated between the four wells to remove measurable product.

### 7.3.2 Assessment

Potential benefits of passive product recovery via skimming include:

- Quick implementation without a lot of time and resources spent engineering a more formal remedial program.
- Minimal site disruption.
- Immediate recovery of free phase product from the bedrock aquifer.
- Can utilize existing monitoring wells; however, four-inch wells may allow for greater removal rates.
- May not require electrical service.
- Eliminates need for groundwater recovery, sewer discharge or pre-treatment.
- Less up-front costs in terms of achieving overall remedial objectives.

Potential limitations include:

- Migration of the dissolved petroleum VOCs in groundwater and migration of the free phase product would not be addressed.
- Source removal alone will not achieve stated remediation goals.
- Rate of recovery can be tedious especially with the Skimming Sock and PetroTrap.
- Radius of influence at each product skimming well may be limited.
- Does not address impacted surface and subsurface soil contamination.
- May require a relatively long remedial time.
- A more robust system may require electrical services and product conveyance lines.
- Long-term monitoring costs to demonstrate effectiveness.
- Requires O & M including labor for product recovery and storage.
- Long-term site security issues.

### 7.3.3 Selection Criteria

### 1. Overall Protection of Human Health and the Environment (HH/Env)

a) Exposure to human heath and the environment following remediation.

The removal of product will provide some level of risk reduction. This alternative provides reduction of apparent risks to human health and environment by removing portions of the known free phase product (weathered gasoline). The overall impact of the system will require evaluation to quantify risk reduction. Varying levels of free product have been detected. Variables such as mobilization of the product and recovery rates are unknown at this time.

b) Residual public health risks following remediation.

Removal of free product will reduce the exposure risks to area residents by reducing further migration to off-site areas. Dissolved phase VOC's in groundwater and heavily contaminated soils remain.

c) Residual environmental risks following remediation.

This alternative will provide removal of some, but not necessarily all of the weathered gasoline detected at the site. Residual product is most likely to remain, albeit lesser quantities.

### 2. Compliance with Standards, Criteria and Guidance (SCGs)

This alternative does not address compliance with applicable SCGs specific to soil and dissolved VOCs in groundwater. It could be considered as an IRM if extended time periods exist in implementing remedial measures. Discovery of free phase product should initiate prompt mitigation. Removal of the product by passive means is a method that would show diligence in addressing this known issue. A secondary benefit is that concentrations of VOCs detected in soil vapor may be subsequently reduced with the removal of free product.

## 3. Long-Term Effectiveness and Permanence (Long Term)

a) Lifetime of remedial actions.

This alternative as a stand-alone treatment would not be a permanent resolution, but could be part of a long-term option. Skimming techniques could be implemented for a duration long enough to remove accessible free product in any of the monitoring wells already installed. This alternative provides a diligent short term response to address this issue.

b) Residual risks.

Dissolved phase VOCs in groundwater would remain unaddressed following implementation of this alternative. Source area soils would be unaffected.

c) Adequacy and reliability of controls.

This type of control is reliable in that it distinguishes between free product and groundwater. Only product will be recovered. Adequacy is based on the mobility of the product and accessibility of the existing monitoring well network.

## 4. Reduction of Toxicity, Mobility or Volume with Treatment (Reduce)

a) Volume of hazardous substances reduced.

Dependent on recharge and static water levels. No cone of depression to increase flow to the well will be established.

b) Reduction in mobility of hazardous substances.

Skimming generally results in minimal impact to groundwater conditions and flow directions. Depressed water tables are not typically achieved with skimming. Therefore the localized groundwater flow conditions would continue.

c) Irreversibility in the destruction or treatment.

Recovered product would be displaced into 55 gallon drums with each unit. Recovered product would be sent for off-site disposal.

## 5. Short-Term Effectiveness (Sort Term)

a) Protection of community during remedial actions.

This alternative provides some immediate protection to the community be decreasing the amount of product present. The USTs and pump dispenser have been removed and provide no further impacts of replenishing the amount of free phase product present. Source areas soils may be responsible for replenishing the amount of free product in the subsurface.

b) Environmental Impacts.

Free product removal provides immediate benefit to the environment by reducing the overall amounts of weathered gasoline that exists in the subsurface.

c) Time to implement remedy.

Lead time for procurement of the standard Spill Buster units is typically 1-2 days. Solar powered units have a lead time of 3-4 weeks. Installation would take 1-2 days assuming a power drop is supplied prior to installation.

## 6. Implementability (Feasible)

a) Suitable to site conditions.

The site is equipped with the necessary monitoring wells to accommodate the Spill Buster units. Measures would need to be implemented to secure the equipment from vandalism or theft. If electrically powered units were decided on, there are available utilities that could be tapped into.

b) Implementability.

This alternative can be implemented easily with the procurement of two units, installation and estimated weekly site visits for O&M activities.

c) Availability of services and materials.

The City has staff available to perform periodic field work. Either the City or an external firm could be procured to install the units.

d) Cost effectiveness.

If the City assumes the responsibility on installation and O&M, the primary costs for these options will be the purchase price of the two Spill Busters and disposal/recycle costs for the product collected. Standard units begin at approximately $7,000. Units can also be rented. But if skimming were to take place for longer than eight months, this option would not be as cost effective as purchase. 55-gallon drums of product would need to be arranged for off site. Typical per drum disposal would be approximately $350. Additional costs will be incurred if an external firm is used to install the units and provide periodic O&M.

## 7. Cost

Estimated Costs for Alternative 3 - Passive Product Recovery via Skimming are listed in Table 14. The cost for this Alternative is estimated to be $16,000 initial cost and for one year of operation, based on two units and four drums of product recovered during the first year of operation.

### 8. Community Acceptance (Community)

Historically, community residents and business owners have not provided opinions of concern. However, if the community were to be better educated regarding risks, this option may be viewed as a positive step the City is taking to reduce potential risks in the area.

## 7.4 Alternative 4 - Source Area Soils Removal

### 7.4.1 Description

The predominant source area for the impacted groundwater and occurrence of free phase product (weathered gasoline) has been determined to be the location of the former dispenser pump island and the UST pit. These areas are where the petroleum contamination originated. During the UST removal and soil removal performed in 2000 approximately 413 tons of contaminated soils were removed from the site. However, based on analytical data collected during the investigation, additional contaminated subsurface soil that could be removed currently exist.

This area is along East Main Street and typically exists from 8-feet to 13-feet (top of rock) below grade surface. Additional soils closer to the surface may be identified moving back towards the north near 2000 sample locations: PP-9 and PP-10. It appears that contamination from the pump dispenser in this location migrated vertically down to towards the top of bedrock where it has confirmed by test trenching, sampling & analysis, and field documentation.

Within the building footprint, an additional subsurface area of soil has been identified containing elevated levels of petroleum related VOCs and SVOCs associated with the former lift pit location. Soils have been identified that are grossly contaminated extending from about 3-feet to 13-feet (top of rock) below grade level.

These subsurface areas could be remediated for off site disposal to remove significant petroleum contamination sources that act to feed groundwater. There is also an area of SVOC/heavy metals surface soil contamination (northern most section of the subject parcel) that could be recovered by performing site excavation activities and then restoring the areas back to grade level. Excavation is an alternative that may provide immediate source area removal and address the impacts on groundwater as well as soil. Excavation could aide in preventing the further contamination of localized groundwater by eliminating surface soils and unsaturated subsurface soils that are leaching contaminants to the groundwater table during precipitation events.

Contaminated soils would be unearthed by using excavation equipment and field screening data to create two piles of soil. Clean soils could be used to backfill the excavations once contaminated soil removal has been completed. Additional backfill would need to be acquired to bring excavations back up to grade level unless the treatment of the contaminated soils were to be performed on site by either land farming or steaming of soils within a controlled environment such as Baker Tanks. The latter of these options will be disregarded for consideration at this time due to cost, timing and security issues of treating the contaminated soils on site.

Contaminated soils could be transported off site using roll off containers and sent for disposal to an approved TSDF such as Mill Seat Landfill in Riga, New York. Additional sampling and laboratory analysis would be useful to verify that the source areas identified on Figure 24 have been adequately removed.

### 7.4.2 Assessment

Potential benefits of excavation include:

- Immediate removal of grossly contaminated soils.
- Limited on-going operations & maintenance (O&M) support required.
- Relatively short duration of soil remedial time in effectively reducing further risk for offsite contamination offsite.

Potential limitations include:

- The volume of soil waste soil generated will result in moderate off-site disposal and transportation costs. Assuming approximately 667 cubic yards of surface and subsurface soil will be removed for off-site disposal, at a nominal weight of 1.50 tons per cubic yard, a total of approximately 1,000 tons of soils would be removed.
- Migration of impacted groundwater remains uncontrolled.
- Free product in bedrock not addressed.
- Does not address existing dissolved VOCs in the groundwater.
- Would require extensive site excavation and soil management plan to remove all impacted soil.

### 7.4.3 Selection Criteria

### 1. Overall Protection of Human Health and the Environment (HH/Env)

a) Exposure to human health and the environment following remediation.

This alternative provides reduction of apparent risks to human health and environment by removing portions of the most impacted soils on the site (heavy weight petroleum products and weathered gasoline). Removal of exposed surface soils greatly reduces risk of someone coming in contact with these areas of concern. Note that the site is secured on its perimeter with a locked fence. However, there have been occasions when the site has entered. Removal of subsurface source areas reduces the primary mechanisms of continually feeding the groundwater aquifer with petroleum related constituents known to be harmful to human health and the environment.

b) Residual public health risks following remediation.

Removal of free product will reduce the exposure risks to area residents by reducing further migration to off-site areas. Dissolved phase VOC's in groundwater and free product remain.

c) Residual environmental risks following remediation.

Risks pertaining to the contaminated groundwater and subsurface soils coming in contact with the free product detected at the site remain. Groundwater concentrations of VOCs may tend to decrease over time with the elimination of the source area soils.

## 2. Compliance with Standards, Criteria and Guidance (SCGs)

This alternative does not address compliance with all applicable SCGs. Soil removal activities would most likely reduce soils to an acceptable level TAGM 4046. Groundwater quality standards would still not be met implementing this option as a stand alone remedial strategy.

## 3. Long-Term Effectiveness and Permanence (Long Term)

a) Lifetime of remedial actions.

This alternative would be effective in removing source area soils heavily impacted by past spill events. Backfilled materials would consist of soils removed from the site and imported materials. Groundwater in the area could impact the remediated areas under certain scenarios. These areas would be the subsurface potions most likely to come in contact with groundwater near the bedrock interface. Unsaturated soils would most likely remain free of further contamination.

b) Residual risks.

Dissolved phase VOCs in groundwater would remain unaddressed following implementation of this alternative. Areas of free product would also remain in bedrock.

c) Adequacy and reliability of controls.

Following soils removal, areas will be backfilled with a combination of native material and imported fill - clean bank run material. No engineering controls area associated with this type of remedy following excavation and backfill.

## 4. Reduction of Toxicity, Mobility or Volume with Treatment (Reduce)

a) Volume of hazardous substances reduced.

Area 1: 207 cubic yards of surface soil.

Area 2: 223 cubic yards of sub-surface soil.

Area 3: 237 cubic yards of sub-surface soil.

Total volume: Approximately 667 cubic yards. Based on an approximate equivalent weight of 3,000 pounds per cubic yard, approximately 1,000 tons would require excavation, transportation and disposal.

b) Reduction in mobility of hazardous substances.

Removal of remaining grossly contaminated soils should help to reduce impacts to groundwater by eliminating a mechanism that continues to allow VOCs sorbed (absorption and adsorption) onto soil particulate to mobilize once contacted by the groundwater.

c) Irreversibility in the destruction or treatment.

Backfill materials should remain "clean" unless contacted by rising water table that contains elevated concentrations of VOCs.

## 5. Short-term effectiveness (Short Term)

a) Protection of community during remedial actions.

Excavations are inherent with manageable risks (falling, source area disturbance). Any excavation on the site would require and Environmental Management Plan to address ambient air monitoring and site security to provide adequate measures around excavation perimeters.

b) Environmental impacts.

Grossly contaminated soils removal aids in the cleanup of the site.

c) Time to implement remedy.

Lead time for contactor procurement is estimated at two weeks depending on time of year the work were to occur. Areas 1 and 2 could be completed in approximately five days of actual site work. Area 3 would require seven days of site work.

## 6. Implementability (Feasible)

a) Suitable to site conditions.

Site conditions are suitable for excavation and source removal. Existing structures have been demolished, the site is vacant and surrounded by a chain link fence, and the site is readily accessible for construction equipment. Space is available for staging construction equipment and excavated soil. Limitations would include possible shoring requirements adjacent to property lines and along East Main Street.

b) Implementability.

This alternative can be implemented relatively easily by employing local contractors.

c) Availability of services and materials.

Local contractors are readily available for excavation, trucking and disposal. Several local landfills in Monroe County and Western New York accept petroleum contamination soil.

d) Cost effectiveness.

Excavation and disposal of non-hazardous petroleum contaminated soil can result in high initial costs. Approximately 1,000 tons of soil would require excavation, transportation and disposal.

Soil excavation, loading and staging costs: Estimated at $1,000 per day, estimate 12 working days.

Cost for excavation, staging and loading: $12,000.00

Current local market unit pricing is approximately $18.00 per ton disposal (tipping fee) at appropriate landfill (without any mark-up or tax).

Landfill disposal cost estimate: $18,000.00

Local market unit transportation costs are approximately $12.00 per ton (including a liner).

Transportation cost estimate: $12,000.00

The site would require regarding by using existing soils remaining on site and placement of offsite soils to bring up to suitable grade. Assuming that a non NYSDOT run of bank gravel is acceptable, the cost for new soil placement is estimated at 350 cubic yards totaling $4,200.

Additional costs would be incurred for on site air monitoring, soil screening, characterization of removed soils by sampling and analysis and pit sampling.

Additional cost estimate: $9,000

Total Estimated Cost: $55,200.00

## 7. Cost

Estimated Costs for Alternative 4 - Source Area Soils Removal are listed in Table 14. The cost for this Alternative is estimated to be $55,000, with no long term costs.

## 8. Community Acceptance (Community)

Historically, community residents and business owners have not provided opinions of concern. However, if the community were to be better educated regarding risks, this option may be viewed as a positive step by the City to reduce potential risks in the area.

## 7.5 Alternative 5 – Groundwater Pump & Treat

### 7.5.1 Description

Migration control of the groundwater moving off site should be considered. Recovery of free product would be enhanced with the removal of groundwater to establish an area of hydraulic containment, with the free product collecting in a depressed water table surface (cone of depression). This alternative would require removal of groundwater for treatment and discharge and removal of free product (pump and treat technology).

A containment and recovery system could be implemented to recover groundwater from the site using a series of recovery wells and a treatment system to treat recovered groundwater prior to discharge.

If migration control were to be implemented, new wells will need to be installed for points of recovery. The existing two-inch diameter monitoring wells have very limited ability to accommodate groundwater recovery mechanisms. Lager diameter wells (nominal four-inch) would need to be installed to effectively recover contaminated groundwater. Recovery wells could also be placed at existing monitoring well locations or in new locations that would meet the objectives for hydraulic containment. The goal would be to implement recovery to prevent further migration of dissolved phase VOC contamination and light non-aqueous phase liquids from the site towards off-site locations.

Groundwater elevations were well within the bedrock at time of investigation. The existing monitoring wells were screened across the overburden-bedrock interface and into the first portion of the bedrock where the groundwater table exists. Seasonal variations could possibly raise the groundwater table closer to the interface. However, all existing wells are screened above historic water table high elevations. Dedicated recovery wells could be constructed of a larger diameter and greater depths to impact a larger portion of the bedrock and to allow for sumps to accommodate submersible pumps while maximizing water table depression

Direct discharge to the public sewer system would likely not be permissible, given the level of VOC contaminants known to exist in groundwater associated with the site. A treatment system would need to be constructed on site to treat recovered groundwater prior to sanitary sewer discharge. A small, low profile air stripper or equivalent could be implemented to handle flow from recovery pumps. A means of conveying recovered groundwater to the treatment system would also need to be established along with increased site security to allow this type of remediation to be conducted while minimizing the threat of vandalism. Discharge of treated groundwater may also require connection to the local sewer system, subject to the facility's permitting and discharge requirements.

### 7.5.2 Assessment

Potential benefits of groundwater migration control (pump and treat-type system) include:

- Direct access to aquifer.
- Hydraulic containment of impacted groundwater.
- Removal of dissolved contaminants in groundwater.
- Greater rates of free product recovery.

Potential limitations include:

- O&M intensive, with long-term monitoring costs to demonstrate effectiveness.
- May require a relatively long remedial time.
- Will require construction of a treatment system enclosure.
- Electrical service requirements.
- Treated groundwater will require discharge to the local sewer system.
- Sizable investment to create treatment system and permitting of discharges.
- Does not address impacted surface soil or impacted subsurface soil above the water table (area beneath the demolished building footprint).

### 7.5.3 Selection Criteria

### 1. Overall Protection of Human Health and the Environment (HH/Env)

a) Exposure to human health and the environment following remediation.

The removal of both impacted groundwater and free product will provide for risk reduction in the subsurface environment. This alternative provides reduction of apparent risks to human health and environment by removing portions of the known free phase product (weathered gasoline), and also removing VOCs from the groundwater. The overall impact of the system will require evaluation to quantify risk reduction. Varying levels of free product have been detected. Variables such as product recovery and recovery rates are unknown at this time.

b) Residual public health risks following remediation.

Removal of free product and treating impacted groundwater will reduce the exposure risks to area residents by reducing further migration to off-site areas.

c) Residual environmental risks following remediation.

This alternative will provide removal of a greater amount of free product by establishing a containment zone and cone of depression. A sufficient containment zone will contain the free product from further migration. VOCs will also be removed from the aquifer beyond the occurrence of free phase product.

## 2. Compliance with Standards Criteria and Guidance (SCGs)

This alternative will allow for eventual compliance with compliance with applicable SCGs for groundwater conditions, but will require a long-term commitment to remove free product and recover and treat impacted groundwater. Since contaminated surface and subsurface soils above groundwater will remain this alternative does not allow for achieving applicable SCGs for surface and subsurface soils.

## 3. Long-Term Effectiveness and Permanence (Long Term)

a) Lifetime of remedial actions

This alternative as a stand-alone treatment may result in a permanent resolution for treating impacted groundwater and for free product recovery. Adjustments to recovery rates, the system radius of influence and the number and locations of recovery wells may be required to impact the entire site and to meet compliance with groundwater SCGs. This alternative would require a long-term commitment in terms of equipment, utilities (electrical and sewer discharge) and periodic labor for maintenance, inspection and periodic sampling.

b) Residual risks.

The system will need to be in active operation to continuously remove impacted groundwater to maintain an adequate groundwater containment area.

c) Adequacy and reliability of controls.

This alternative can achieve a system radius of influence that will contain the free product, retard continued migration of impacted groundwater and can eventually treat groundwater to meet compliance with groundwater SCGs. Leaching of VOCs from impacted soil above the groundwater may retard the effectiveness of the groundwater treatment system, resulting in longer time requirements. Further controls will be necessary to address impacted surface soil and subsurface soil.

## 4. Reduction of Toxicity, Mobility or Volume with Treatment (Reduce)

a) Volume of hazardous substances reduced.

Free product will be contained and eventually recovered. Impacted groundwater will also be recovered and treated, resulting in gradual reductions in the volume of contaminated groundwater.

b) Reduction in mobility of hazardous substances.

Establishment of an adequate cone of depression will contain free product from further migration. Establishment of an adequate groundwater containment area through pumping will also retard further migration of VOCs in the groundwater.

c) Irreversibility in the destruction or treatment.

Recovered product could be discharged into appropriate containers, i.e. drums or a containment tank, based on recovery rates. Recovered product would be sent for off-site disposal. Treated groundwater will be discharged through the Monroe County publicly owned treatment works (POTW) for eventual return to the environment.

## 5. Short-Term Effectiveness (Short Term)

a) Protection of community during remedial actions.

This alternative provides a level of protection to the community by developing migration control of the dissolved phase plume. This type of remedial action will bring contaminated groundwater to or near the ground level surface. Operating equipment has the potential to off gas providing an exposure risk. Product separation and storage is also a consideration with this type of technology.

The community would not be protected from exposure to contaminated surface soil.

b) Environmental Impacts.

Free product removal provides immediate benefit to the environment by reducing the overall amounts of contaminated groundwater that exists in the subsurface.

c) Time to implement remedy.

This alternative would entail a considerable lead time to perform the following:

- System design
- Monroe County Discharge Permit Application
- Recovery Well Installation
- Pump and treatment system procurement
- System installation and debugging

The above tasks would take no less than 12 weeks to implement.

## 6. Implementability (Feasible)

a) Suitable to site conditions.

The site can be used to incorporate additional well installation that would be used as groundwater recovery locations. The site (including offsite) has 14 monitoring wells associated with it. Since the site is vacant and equipped with a perimeter, security fence. A treatment shed could be placed at various positions on the site.

b) Implementability.

This alternative can be implemented but there are the inherent time constraints associated with this option regarding coordination and timing.

c) Availability of services and materials.

All services and materials necessary to install a pump and treat system are available at differing lead times.

d) Cost effectiveness.

If the City assumes the responsibility regarding O&M once the system in installed, the primary costs for these options will be the purchase price of the submersible recovery pumps, treatment system options, well installation and the connection of the recovery wells to the treatment system. A discharge to the sanitary sewer would also need to be established. Potential additional costs could an air discharge permit, air discharge monitoring, collection and disposal of free product and additional security measures.

Assume the pump and treat system to include:

- Four recovery wells
- Four submersible Grundfos® pumps
- 4-inch SCH80 conveyance piping
- Treatment skid including a holding tank, transfer pump, low profile air stripper and discharge pump
- Shed enclosure

Cost for design, procurement and installation would be approximately $80,000 making this option not very cost effective.

## 7. <u>Cost</u>

Estimated Costs for Alternative 5 – Groundwater Pump & Treat are listed in Table 14. The cost for this Alternative is estimated to be $80,000 for initial cost for installation of four groundwater recovery wells and associated equipment and services. Annual operating costs, monitoring costs and analytical costs would be additional.

## 8. <u>Community Acceptance (Community)</u>

Historically, community residents and business owners have not provided opinions of concern. However, if the community were to be better educated regarding risks, this option may be viewed as a positive step the City is taking to reduce potential risks in the area.

## 7.6 Alternative 6 – Direct Oxygen Injection

### 7.6.1 Description

Direct injection of oxygen into saturated subsurface area is a method that will address dissolved phase VOCs in groundwater. Injection of oxygen is a potentially effective means of treating petroleum hydrocarbons because it promotes two significant removal mechanisms – biodegradation and volatilization. Oxygen injection is intended to remediate groundwater by enhancing the biodegradation of aerobically degradable contaminants by increasing the growth and metabolic activity of naturally occurring aerobic bacteria that is able to digest petroleum-based contaminants. Remediation via increased volatilization of compounds from groundwater to the vadose zone also occurs, but at a lesser degree than with an air sparging system.

This approach is efficient in that increasing oxygen concentrations in the saturated zone will enhance aerobic bioremediation. In addition, oxygen injection can also remove contaminants through volatilization, either directly, by "evaporating" the adsorbed phase, or indirectly, by stripping contaminated groundwater[9].

An oxygen injection system will result in subsurface remediation via two methods:

1. The biodegradable VOCs in groundwater and the vadose zone will be reduced though enhanced bioremediation, which will be accelerated by increasing the oxygen content in the groundwater to greater than background levels. This will increase the metabolic rate of naturally occurring aerobic bacteria able to digest VOCs. This may also increase bacteria concentrations (measured in colony forming units per area or CFU), if also impacted though introduction of nutrients, proper pH, control of toxic levels of free product and concentrations of heavy metals and Iron.

2. Dissolved VOCs in groundwater will be volatilized and induced into the air stream of the vadose zone.

Properly designed injection wells can be used as oxygen injection or air sparging points (See Alternative No. 7) and as points. The same network of connecting piping can also be utilized. Elements of the injection system, such as connecting manifold, air dryer and possibly an air compressor can be common to both systems.

An Oxygen injection system operates at lower flow rates, and can be limited by the capacity of the oxygen generator, which can burn out or result in an oxygen concentration in the influent less than 100%.

In practice, some degree of both volatilization and enhanced bioremediation occurs when either oxygen injection or injection of atmospheric air is used. When volatile constituents are present, both physical removal through volatilization and enhanced bioremediation occurs with air sparging using dried ambient air. A vapor extraction component creates negative pressures in the vadose zone through a series of extraction points that control the vapor plume migration.

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[9] Handbook of Bioremediation, Treatment of Petroleum Hydrocarbons, page 65. Lewis Publishers, 1994.

When relatively high concentrations of gasoline VOCs are present, the initial removal mechanism is volatilization. When concentrations have been reduced to a point where remaining VOCs remain adsorbed onto soil particles and can longer be volatilized, enhanced bioremediation by increasing available oxygen can be effective.

An example of such a system is a Matrix Environmental Technologies Oxygen Injection System. This system may consist of an 80 standard cubic foot per hour (SCFH) pressure-swing adsorption oxygen generator, 7.5 Hp rotary screw compressor and oxygen delivery system with rotometers, solenoid timers, and pressure gauges for 28 injection points. The 28 injection points would be spaced at approximately 30-foot intervals and at an approximate depth of 20-feet below grade surface to provide site coverage for in-situ groundwater treatment.

Each point would require approximately 13 feet of installation by conventional well installation methods such as auguring. At top of rock the drilling method would become conventional roller bit drilling. Each injection point would be fitted with SCH 40 PVC injection consisting of ¾-inch diameter risers with screened intervals to affect the water bearing zone. Each point would contain one foot of screen and receive oxygen at an approximate flow rate of 30 SCFH, generally regulated to 7 pounds per square inch (PSI) or less. The oxygen is delivered in intervals for a predetermined amount of time, and delivery is controlled by timers and solenoid valves.

Generation of the oxygen would be accomplished using a Matrix mobile system that would consist of a compressor, air dryer, holding tank, air separator, holding tank, distribution system and timers. These components would be fitted into a mobile trailer for positioning on site. A delivery system to convey oxygen to the injection points would need to be installed. This typically consists of a subsurface network of SCH 40 PVC piping installed below ground (less than 2-feet below grade) in backfilled trenches.

Field measurements for oxygen delivery flow rates and pressure (PSI) would be collected immediately prior to system activation. Initial injection well values for dissolved oxygen and temperature will also be collected prior to system activation. Baseline and monthly dissolved oxygen concentrations (DO), groundwater temperature, solubility of DO and the percentage of maximum solubility of DO measured at the existing monitoring wells would be tracked on a periodic basis to evaluate oxygen delivery and effectiveness.

The maximum solubility of oxygen in water is dependent on the salinity and temperature. At a temperature of 16 degrees centigrade and a chloride concentration of 0 mg/L, the solubility of dissolved oxygen would be 10.0 mg/L.[10] This is based on dry air containing 20.9 percent oxygen at a barometric pressure of 760 mm of mercury. A dissolved oxygen concentration of 5.0 mg/L at the same temperature, salinity and barometric pressure would indicate oxygen present at 50% maximum solubility.

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[10] "Solubility of Oxygen in Sea Water", by G.C. Whipple and M.C. Whipple, Journal of the American Chemical Society, 33: 362, 1911.

### 7.6.2 Assessment

Potential benefits of direct oxygen injection include:

- In-situ, enhanced natural aerobic activity.
- No active removal of groundwater and subsequent discharges.
- Aggressive system that treats dissolved phase VOCs in groundwater.
- Portability of technology.
- May result in a relatively accelerated cleanup schedule.

Potential limitations include:

- Relatively low existing oxygen concentrations in groundwater to enhance radius of influence and a smaller per-point radius of influence than with an air sparging system.
- Long-term monitoring costs to demonstrate effectiveness.
- Potential increased volatilization of contaminants migrating towards 1214 East Main Street.
- Long-term O&M related costs for equipment function and injection point cleaning.
- Would require electrical service to operate system.
- System security.
- Elevated installation cost and purchase of system.
- No immediate impacts to source areas.

### 7.6.3 Selection Criteria

### 1. Overall Protection of Human Health and the Environment (HH/Env)

a) Exposure to human health and the environment following remediation.

This alternative provides reduction of apparent risks to human health and environment by increasing the growth and metabolic activity of naturally occurring aerobic bacteria that is able to digest petroleum-based contaminants, and also by increasing the volatilization of the relatively light-weight aromatic hydrocarbon constituents present (Benzene, Toluene, Ethylbenzene and Xylenes). The overall impact of the system will require evaluation to quantify risk reduction. Varying levels of free product have been detected. Alternatives to control/recover free product will still be required. Contaminated soil is also not directly addressed in this alternative.

In some cases, direct oxygen injection can create subsurface conditions during in which VOC's are entrained from the groundwater to the subsurface vapor allowing them to migrate more freely and potentially towards neighboring residences.

b) Residual public health risks following remediation.

Public health risks will gradually decrease as the volume of VOCs in the impacted groundwater are reduced through enhanced bio-remediation accelerated through the oxygen injection. Additional controls will still be required during the initial phase to address free product and surface soil contamination.

c) Residual environmental risks following remediation

Environmental risks will gradually decrease as the volume of VOCs in the impacted groundwater are reduced. Additional controls will still be required during the initial phase to address free product and surface soil contamination.

## 2. Compliance with Standards, Criteria and Guidance (SCGs)

This alternative will allow for eventual compliance with applicable SCGs for groundwater conditions, but will require a long-term commitment to remove free product and recover and treat impacted groundwater. Since contaminated surface and subsurface soils above groundwater will remain this alternative does not allow for achieving applicable SCGs for surface and subsurface soils.

## 3. Long-Term Effectiveness and Permanence (Long Term)

a) Lifetime of remedial actions

This alternative as a stand-alone treatment may result in a permanent resolution for treating impacted groundwater, if combined with alternatives or engineering controls for free product recovery. Adjustments to oxygen injection rates, the system radius of influence and the number and locations of injection points may be required to impact the entire site and to meet compliance with groundwater SCGs. This alternative would require a long-term commitment (1-3 years) in terms of equipment (i.e. oxygen generator, compressor and lines), suitable electrical supply and periodic labor for maintenance, inspection and periodic sampling.

b) Residual risks.

Source area surface soils would be unaffected. Areas of free phase product would remain.

c) Adequacy and reliability of controls.

This alternative can achieve a system radius of influence that will impact the dissolved VOCs in groundwater. Engineering controls will be required to contain the free product to meet compliance with groundwater SCGs. Further controls will be necessary to address impacted surface soil.

## 4. Reduction of Toxicity, Mobility or Volume with Treatment (Reduce)

a) Volume of hazardous substances reduced.

This alternative will achieve gradual reduction in the volume of hazardous substances as accelerated metabolic activity of the naturally occurring bacteria converts VOCs in groundwater and subsurface into non-toxic decay products. Unsaturated zones would be relatively unaffected.

b) Reduction in mobility of hazardous substances.

This alternative does not directly impact the mobility of hazardous substances. No impact to localized groundwater flow is achieved. Additional engineering controls may be required.

c) Irreversibility in the destruction or treatment.

Use of oxygen injection to accelerate in-situ bioremediation is an irreversible process. The benefits include permanent destruction of the VOCs in groundwater to non-toxic biotic decay products.

## 5. Short-term effectiveness (Short Term)

a) Protection of community during remedial actions.

This alternative does not allow for an immediate, short effect. Encouraging the aerobic break-down of the VOCs in groundwater will require time for the accelerated growth and metabolic activity of aerobic bacteria. Also, the occurrence of free product will need to be addressed, since free product is likely toxic to the naturally occurring aerobic bacteria population. This alternative will provide for eventual protection to the community by decreasing the VOCs in the groundwater. Breakdown of VOCs could result in significant volatilization creating larger concentrations of harmful compounds in the soil gas that could be more prone to migration.

The community would not be protected from exposure to contaminated surface soil.

b) Environmental Impacts.

This alternative has a positive environmental impact, in that the removal of the VOCs from the groundwater occurs in an accelerated, naturally occurring process that breaks the petroleum compounds down into non-toxic decay products. This reduces the need to transport or dispose of contaminants, reduces the need for electrical services for a treatment system, and eliminates the need to pump, treat and discharge impacted groundwater.

c) Time to implement remedy.

Direct injection of oxygen requires up-front costs and effort to implement. Such an approach requires installation of a system of oxygen injection points, trenching and installation of piping, placement of a small enclosure to contain an oxygen generator, compressor and related control equipment.

Installation of a network of oxygen injection points, trenching and connection piping would require several weeks to complete. Lead time to obtain system equipment would require several weeks, depending on the system size.

Direct injection of oxygen is a long-term remedy that would require commitment of equipment and personnel.

### 6. Implementability (Feasible)

a) Suitable to site conditions.

The site is suitable for application of oxygen injection. Since groundwater occurs primarily in the bedrock, a network of bedrock oxygen injection points will be required.

b) Implementability.

The City has staff available to perform periodic field work. Either the City or an external firm could be procured to install the treatment system and to provide routine O & M, sampling and laboratory analysis.

c) Availability of services and materials.

This alternative can be implemented by employing local contractors who are experienced with oxygen injection systems.

d) Cost effectiveness.

If the City assumes the responsibility the ongoing O&M, the primary costs for these options will be the purchase price of trailer mounted injection system from Matrix, installation of the injection points, connection of the points to the system with semi rigid air delivery tubing and system effectiveness evaluation.

Additional costs will be incurred to provide periodic O&M, sampling and laboratory analysis.

The cost of this alternative would be on the order of $90,000.

### 7. Cost

Estimated Costs for Alternative 6 – Direct Oxygen Injection are listed in Table 14. The cost for this Alternative is estimated to be $90,000 for initial cost for installation of recovery wells and associated equipment and services. Annual operating costs, monitoring costs and analytical costs would be additional.

## 8. Community Acceptance (Community)

Historically, community residents and business owners have not provided opinions of concern. However, if the community were to be better educated regarding risks, this option may be viewed as a positive step the City is taking to reduce potential risks in the area.

## 7.7 Alternative 7 – Air Sparging

### 7.7.1 Description

Air sparging involves injection of ambient air directly into the saturated subsurface area to address dissolved phase VOCs in groundwater. Air sparging is a potentially effective means of treating petroleum hydrocarbons because it promotes two significant removal mechanisms – biodegradation and volatilization. Air sparging can remove contaminants through volatilization, either directly, by "evaporating" the adsorbed phase, or indirectly, by stripping contaminated groundwater[11]. In addition, this approach is efficient in that increasing oxygen concentrations in the saturated zone will enhance aerobic bioremediation and can impact a greater area on a per-point basis than direct oxygen injection, but not to the same concentrations.

An air sparging system will result in subsurface remediation via two methods:

1. Dissolved VOCs in groundwater will be volatilized and induced into the air stream of the vadose zone. An air sparging system can operate at higher pressures than a Direct Oxygen Injection system (see Alternative No. 6) and can impact a greater area on a per-point basis.

2. The biodegradable VOCs in groundwater and the vadose zone will be reduced though enhanced bioremediation, which will be accelerated by increasing the oxygen content in the groundwater to greater than background levels. Injecting atmospheric air with an oxygen concentration of approximately 21% will increase available oxygen to the groundwater. This will increase the metabolic rate of naturally occurring aerobic bacteria able to digest VOCs. This may also increase bacteria concentrations and metabolic activity, depending on availability of nutrients, proper pH, control of toxic levels of free product and concentrations of heavy metals and Iron. Use of atmospheric air does not increase available oxygen to the same levels as a Direct Oxygen Injection system.

Properly designed injection wells can be used as both air sparging points and as oxygen injection points. The same network of connecting piping can also be utilized. Elements of the injection system, such as connecting manifold, air dryer and possibly an air compressor can be common to both systems.

Air sparging is intended to operate at greater pressures than oxygen injection. As a result air sparging points can impact a greater radius than oxygen injection points. An oxygen injection

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[11] Handbook of Bioremediation, Treatment of Petroleum Hydrocarbons, page 65. Lewis Publishers, 1994.

system operates at lower flow rates, and can be limited by the capacity of the oxygen generator, which can burn out or result in an oxygen concentration in the influent less than 100%.

In practice, some degree of both volatilization and enhanced bioremediation occurs when an air sparging system using atmospheric air is used. When volatile constituents are present, both physical removal through volatilization and enhanced bioremediation occurs with air sparging using dried ambient air. A vapor extraction component may be required to create negative pressures in the vadose zone through a series of extraction points that control the vapor plume migration. When relatively high concentrations of gasoline VOCs are present, the initial removal mechanism is volatilization. When concentrations have been reduced to a point where remaining VOCs remain adsorbed onto soil particles and can longer be volatilized, enhanced bioremediation may occur.

An air sparging system would consist of a compressor able go generate air flow greater than 80 standard cubic foot per hour (SCFH), air dryer, holding tank, manifold and timers. These components would be fitted into a mobile trailer for positioning on site. A delivery system to convey pressurized atmospheric air to the injection points would need to be installed. This typically consists of a subsurface network of high pressure conveyance lines with rotometers, solenoid timers, and pressure gauges for injection points installed below ground (less than 2-feet below grade) in backfilled trenches.

The injection points would be spaced at approximately 30-foot intervals and at an approximate depth of 20-feet below grade surface to provide site coverage for in-situ groundwater treatment.

Each point would require approximately 13 feet of installation by conventional well installation methods such as auguring. At top of rock the drilling method would become conventional roller bit drilling. Each injection point would be fitted with SCH 40 PVC injection consisting of ¾-inch diameter risers with screened intervals to affect the water bearing zone. Each point would contain one foot of screen and receive dried atmospheric air at a greater pressure and flow rate than direct oxygen injection. Air is delivered in calculated intervals for a predetermined amount of time, and delivery is controlled by timers and solenoid valves.

Field measurements for oxygen delivery flow rates and pressure (PSI) would be collected immediately prior to system activation. Initial injection well values for dissolved oxygen and temperature will also be collected prior to system activation. Baseline and monthly dissolved oxygen concentrations (DO), groundwater temperature, solubility of DO and the percentage of maximum solubility of DO measured at the existing monitoring wells would be tracked on a periodic basis to evaluate air flow, delivery and effectiveness.

### 7.7.2 Assessment

Potential benefits of air sparging include:

- Aggressive system that treats dissolved phase VOCs in groundwater.
- In-situ, enhanced volatilization and enhanced aerobic activity both occur.
- No active removal of groundwater and subsequent discharges.

- Portability of technology.
- May result in a relatively accelerated cleanup schedule.

Potential limitations include:

- Relatively low initial oxygen concentrations in groundwater to enhance radius of influence. Does not increase oxygen concentrations to the same level as Direct Oxygen Injection.
- Long-term monitoring costs to demonstrate effectiveness.
- Potential increased volatilization of contaminants migrating towards 1214 East Main Street.
- Long-term O&M related costs for equipment function and injection point cleaning.
- Would require electrical service to operate system.
- System security.
- Initial installation cost and purchase of system.
- No immediate impacts to source areas.

### 7.7.3 Selection Criteria

### 1. Overall Protection of Human Health and the Environment (HH/Env)

a) Exposure to human health and the environment following remediation.

This alternative provides reduction of apparent risks to human health and environment by increasing the growth and metabolic activity of naturally occurring aerobic bacteria that is able to digest petroleum-based contaminants, and also by increasing the volatilization of the relatively light-weight aromatic hydrocarbon constituents present (Benzene, Toluene, Ethylbenzene and Xylenes). The overall impact of the system will require evaluation to quantify risk reduction. Varying levels of free product have been detected. Alternatives to control/recover free product will still be required. Contaminated soil is also not directly addressed in this alternative.

In some cases, air sparging can create subsurface conditions during in which VOC's are entrained from the groundwater to the subsurface vapor allowing them to migrate more freely and potentially towards off-site areas.

b) Residual public health risks following remediation.

Public health risks will gradually decrease as the volume of VOCs in the impacted groundwater are reduced through enhanced bio-remediation accelerated through air sparging. Additional controls will still be required during the initial phase to address free product and surface soil contamination.

c) Residual environmental risks following remediation

Environmental risks will gradually decrease as the volume of VOCs in the impacted groundwater are reduced. Additional controls will still be required during the initial phase to address free product and surface soil contamination.

## 2. Compliance with Standards, Criteria and Guidance (SCGs)

This alternative will allow for eventual compliance with applicable SCGs for groundwater conditions, but will require a long-term commitment to remove free product and recover and treat impacted groundwater. Since contaminated surface and subsurface soils above groundwater will remain this alternative does not allow for achieving applicable SCGs for surface and subsurface soils.

## 3. Long-Term Effectiveness and Permanence (Long Term)

a) Lifetime of remedial actions

This alternative as a stand-alone treatment may result in a permanent resolution for treating impacted groundwater, if combined with alternatives or engineering controls for free product recovery. Adjustments to air induction rates, the system radius of influence and the number and locations of sparge points may be required to impact the entire site and to meet compliance with groundwater SCGs. This alternative would require a long-term commitment (1-3 years) in terms of equipment (i.e. compressor and lines), suitable electrical supply and periodic labor for maintenance, inspection and periodic sampling.

b) Residual risks.

Source area surface soils would be unaffected. Areas of free phase product would remain.

c) Adequacy and reliability of controls.

This alternative can achieve a system radius of influence that will impact the dissolved VOCs in groundwater. Engineering controls will be required to contain the free product to meet compliance with groundwater SCGs. Further controls will be necessary to address impacted surface soil.

## 4. Reduction of Toxicity, Mobility or Volume with Treatment (Reduce)

a) Volume of hazardous substances reduced.

This alternative will achieve gradual reduction in the volume of hazardous substances as accelerated metabolic activity of the naturally occurring bacteria converts VOCs in groundwater and subsurface into non-toxic decay products. Unsaturated zones would be relatively unaffected.

b) Reduction in mobility of hazardous substances.

This alternative does not directly impact the mobility of hazardous substances. No impact to localized groundwater flow is achieved. Additional engineering controls may be required.

c) Irreversibility in the destruction or treatment.

Use of air sparging to accelerate in-situ bioremediation is an irreversible process. The benefits include permanent destruction of the VOCs in groundwater to non-toxic biotic decay products.

## 5. Short-Term Effectiveness (Short Term)

a) Protection of community during remedial actions.

This alternative does not allow for an immediate, short effect. Encouraging the aerobic break-down of the VOCs in groundwater will require time for the accelerated growth and metabolic activity of aerobic bacteria. Also, the occurrence of free product will need to be addressed, since free product is likely toxic to the naturally occurring aerobic bacteria population. This alternative will provide for eventual protection to the community by decreasing the VOCs in the groundwater. Breakdown of VOCs could result in significant volatilization creating larger concentrations of harmful compounds in the soil gas that could be more prone to migration.

The community would not be protected from exposure to contaminated surface soil.

b) Environmental Impacts.

This alternative has a positive environmental impact, in that the removal of the VOCs from the groundwater and subsurface soil occurs in an accelerated, naturally occurring process that breaks the petroleum compounds down into non-toxic decay products. This reduces the need to transport or dispose of contaminants, reduces the need for electrical services for a treatment system, and eliminates the need to pump, treat and discharge impacted groundwater.

c) Time to implement remedy.

Air sparging requires up-front costs and effort to implement. Such an approach requires installation of a system of sparge points, trenching and installation of piping, placement of a small enclosure to contain a compressor and related control equipment.

Installation of a network of sparge points, trenching and connection piping would require several weeks to complete. Lead time to obtain system equipment would require several weeks, depending on the system size.

Air sparging is a long-term remedy that would require commitment of equipment and personnel.

## 6. Implementability (Feasible)

a) Suitable to site conditions.

The site is suitable for application of air sparging. Since groundwater occurs primarily in the bedrock, a network of bedrock sparge points will be required.

b) Implementability.

The City has staff available to perform periodic field work. Either the City or an external firm could be procured to install the treatment system and to provide routine O & M, sampling and laboratory analysis.

c) Availability of services and materials.

This alternative can be implemented by employing local contractors who are experienced with air sparging technology.

d) Cost effectiveness.

If the City assumes the responsibility the ongoing O&M, the primary costs for these options will be the purchase price of trailer mounted sparge system from a reputable contractor, installation of the injection points, connection of the points to the system with semi rigid air delivery tubing and system effectiveness evaluation.

Additional costs will be incurred to provide periodic O&M, sampling and laboratory analysis.

The cost of this alternative would be on the order of $60,000.

## 7. Cost

Estimated Costs for Alternative 7 – Air Sparging are listed in Table 14. The cost for this Alternative is estimated to be $60,000 for initial cost for installation of injection wells and associated equipment and services. Annual operating costs, sampling costs and analytical costs would be additional.

## 8. Community Acceptance (Community)

Historically, community residents and business owners have not provided opinions of concern. However, if the community were to be better educated regarding risks, this option may be viewed as a positive step the City is taking to reduce potential risks in the area.

## 7.8 Alternative 8 – Soil Vapor Extraction

### 7.8.1 Description

Soil Vapor Extraction (SVE) is a remedial technology that employs a blower system operating at differing ranges depending on the type of equipment selected. A typical blower unit would be capable of producing a vacuum of 20 inches Hg. Anticipated ranges of air flow with a 2 HP blower would be in the 75 – 150 CFM range. SVE systems are used to treat unsaturated subsurface zones and as a way to mitigate soil vapor intrusion to nearby, occupied structures. In addition, in-situ stripping of the saturated zone may further reduce VOCs in the subsurface.

A vacuum is applied to a series of extraction points or a horizontal lateral targeted in the unsaturated zone where contaminants are sorbed onto soil particulate and where soil vapor contains significant concentrations of VOCs. Extraction points or subsurface trenches would need to be installed, typically by techniques such as Geoprobe® and trenching.

Two-inch or four-inch diameter SCH 40 PVC would be installed as conveyance laterals and extraction points where vacuum could be delivered to target areas for recovery of contaminated soil vapor as well as stripping VOCs from soil media. The blower system would be a small skid mounted unit installed in a protective covering or fiberglass shed. The unit would also include a moisture separator, holding tank, particulate filter and an exhaust point. The exhaust would consist of a PVC riser extending to a level determined to be of minimal impact to the adjacent community.

Based on significant concentrations of VOCs it is likely that pre-treatment prior of the vapor would be required. Activated carbon containers could be installed on the discharge side of the blower to strip VOCs for suitable discharge to the environment.

This alternative could be enhanced by implementing an air sparging system. Air sparging is an insitu technology used to treat VOCs found in petroleum products that are adsorbed to soils and dissolved in groundwater by injecting air produced by a generator into the saturated zone. This promotes the volatilization of contaminants from the groundwater into a vapor phase.

The combination of the two technologies is affective in decreasing groundwater concentrations and controlling the migration of subsurface soil gas.

### 7.8.2 Assessment

Potential benefits of SVE include:

- Serves a multiple objectives: addresses unsaturated source area, provides mitigation for indoor air quality concerns and enhances the transfer of VOCs from dissolved to vapor phase.
- Low to moderate cost in installing, marinating and monitoring system effectiveness.
- Small skid mounted system.
- Increased impact on dissolved phase contamination with use of air sparging techniques.

Potential limitations include:

- System security.
- Mid to long term timeframe to reach remedial objectives.
- Would require electrical service to operate system.
- No impact to contaminated groundwater.
- May require treatment of waste stream resulting in elevated treatment costs for carbon.
- Would require a discharge permit.
- Noise.

### 7.8.3 Selection Criteria

### 1. Overall Protection of Human Health and the Environment (HH/Env)

a) Exposure to human health and the environment following remediation.

This alternative provides reduction of apparent risks to human health and environment by increasing the volatilization of the relatively light-weight aromatic hydrocarbon constituents present (Benzene, Toluene, Ethylbenzene and Xylenes). The overall impact of the system will require evaluation to quantify risk reduction. Varying levels of free product have been detected. Alternatives to control/recover free product will still be required. Contaminated soil is also not directly addressed in this alternative.

b) Residual public health risks following remediation.

Public health risks will decrease as the volume of VOCs in the impacted groundwater are reduced through volatilization. Additional controls will be required during initial phase to address free product/surface soil contamination.

c) Residual environmental risks following remediation

Environmental risks will gradually decrease as the volume of VOCs in the impacted groundwater is reduced. Additional controls will still be required during the initial phase to address free product and surface soil contamination.

### 2. Compliance with Standards, Criteria and Guidance (SCGs)

This alternative may result in eventual compliance with applicable groundwater SCGs. However, this alternative does not address surface soil or the occurrence of free product.

### 3. Long-Term Effectiveness and Permanence (Long Term)

a) Lifetime of remedial actions.

Likely to be long-term, i.e. greater than one year to several years to meet.

b) Residual risks.

Will result in eventual reduced residual risks. However, surface soil will continue as a risk as well as areas of free product.

c) Adequacy and reliability of controls.

This alternative can achieve a system radius of influence that will impact the presence of VOCs in the subsurface through volatilization and stripping, and will have some impact on dissolved VOCs in the subsurface soil and will also have some impact on contaminated groundwater by encouraging volatilization. Engineering controls will be required to contain the free product to meet compliance with groundwater SCGs. Further controls will be necessary to address impacted surface soil.

### 4. Reduction of Toxicity, Mobility, or Volume with Treatment (Reduce)

a) Volume of hazardous substances reduced.

The volume of hazardous substances will eventually decrease through accelerated volatilization of the petroleum-based VOCs.

b) Reduction in mobility of hazardous substances.

There will be gradual reduction in mobility of substances.

c) Irreversibility in the destruction or treatment.

Enhanced volatilization of petroleum constituents is an irreversible process. VOCs in the subsurface soils are removed, and can be recovered through carbon absorption or discharged to the atmosphere.

### 5. Short-Term Effectiveness (Short Term)

a) Protection of community during remedial actions.

This alternative does result in an immediate reduction of VOCs in the unsaturated subsurface. This can positively impact adjacent residences by decreasing the migration of VOCs, and can also reduce the potential for migration of VOCs into nearby utility conduits and sewers. Impacting VOCs in groundwater will not be immediate not allow for an immediate, short effect; encouraging volatilization of VOCs in groundwater will require time. Also, the occurrence of free product will need to be addressed, since free product is likely toxic to the naturally occurring aerobic bacteria population. This alternative will provide for eventual protection to the community by decreasing the VOCs in the groundwater.

The community would not be protected from exposure to contaminated surface soil.

b) Environmental Impacts.

This alternative has a positive environmental impact, in that the removal of the VOCs from the groundwater and subsurface soil occurs in an accelerated process. This reduces the need to transport or dispose of contaminants, reduces the need for electrical services for a treatment system, and eliminates the need to pump, treat and discharge impacted groundwater.

c) Time to implement remedy.

Vapor extraction up-front costs and effort to implement. Such an approach requires installation of a system of extraction wells, trenching and installation of piping, placement of a small enclosure to contain vacuum system and control equipment.

Vapor extraction a long-term remedy that would require commitment of equipment and personnel.

## 6. Implementability (Feasible)

a) Suitable to site conditions.

The site is suitable for application of vapor extraction as well as air sparging. The contaminated subsurface soils are impacted with petroleum VOCs that are suitable for removal by vapor extraction.

b) Implementability.

The City has staff available to perform periodic field work. An engineering firm would need to prepare a design for implementation. Either the City or an external firm could be procured to install the treatment system and to provide routine O & M, sampling and laboratory analysis.

c) Availability of services and materials.

This alternative can be implemented by employing local contractors who are experienced with vapor extraction systems.

d) Cost effectiveness.

An SVE system would share many of the same costs as the pump and treat alternative: extraction point installation/connection, remediation skid, shed enclosure and discharge point. One significant cost advantage would be to install a horizontal extraction header instead of individual extraction points. Typically, an SVE system will require less routine intervention than a pump and treat system with fewer mechanical components. The cost to install extraction points, conveyance piping and implement an SVE system would be on the order of magnitude of $39,000.

Additional costs will be incurred to provide periodic O&M, sampling and laboratory analysis.

### 7. Cost

Estimated Costs for Alternative 8 – Soil Vapor Extraction are listed in Table 14. The cost for this Alternative is estimated to be $39,000 for initial cost for installation of SVE extraction wells and associated equipment and services. Annual operating costs, sampling costs and analytical costs would be additional.

### 8. Community Acceptance (Community)

Historically, community residents and business owners have not provided opinions of concern. However, if the community were to be better educated regarding risks, this option may be viewed favorably.

## 7.9 Alternative 9 – Enhanced Bioremediation

### 7.9.1 Description

Enhanced bioremediation is a widely used method to treat subsurface gasoline contamination in an in-situ manner. This technology uses microorganisms to recycle organic materials in an aerobic process to reduce groundwater concentrations of VOCs and SVOCs.

An aerobic bioremediation product could be introduced into the subsurface using dedicated injection points or "wells" to introduce product containing socks. Existing monitoring well use as injection points should not be considered due to potential fouling at the screened interval and loss of reduction of valid monitoring points for site assessment purposes. Periodic monitoring would be required to assess the effectiveness of the application. Although there are studies showing bioremediation as the primary remedial tool, it may be more effective as a secondary device to reach objectives.

Oxygen Release Compound® (ORC) is a product designed specifically for the in-situ treatment of petroleum based hydrocarbon contamination or any aerobically degradable substance in the groundwater environment. ORC is a fine powder that is typically mixed with water and pressure injected into the subsurface. Once hydrated it releases molecular oxygen which is then utilized by indigenous microbial populations to naturally degrade or break down the contaminant into harmless end products. ORC is also available in "filter sock" form is designed for use in available placement points where they can be installed, removed and replaced upon exhaustion of their oxygen supply.[12]

A number of dedicated application points will have to be installed through overburden and into the bedrock to deliver the ORC and affect the groundwater interface zone. Installation of points would be performed by conventional drilling methods of auguring and roller bit well drilling for

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[12] Regenesis webpage: http://www.regenesis.com/products/

casing placement. 4-inch diameter SCH 40 PVC risers screened at the groundwater interface would be installed with locking caps accessible at or near grade level.

Additionally, ORC could be placed into open excavations following removal of grossly contaminated soils to treat saturated zones and dissolved phase VOCs in groundwater. Based on calculations for soil removal and extent of saturated zones above bedrock at the subject parcel an estimated amount of 900 pounds could be added to the open excavations to enhance bioremediation of petroleum based contaminants. These areas require contact with the groundwater table to make the product effective in degrading organic contaminants. Technical representatives at Regenesis were used to determine the amount of ORC needed for remedial measures.

### 7.9.2 Assessment

Potential benefits of enhanced bioremediation include:

- In-situ, enhanced natural aerobic activity.
- Passive, time released approach.
- Addresses both saturated soil and groundwater contamination.
- Minimal O&M following application.
- Relatively cost effective.
- Would not require treatment system or electrical service (based on direct placement or injection).
- Additional applications could be provided to dedicated application points.

Potential limitations include:

- Lack of groundwater in the unsaturated zone to make the product effective on a continual basis to impact subsurface soil.
- Long-term monitoring costs to demonstrate effectiveness.
- May not be effective in areas of elevated VOC/SVOC concentration or areas of free phase product.
- Does not address impacted surface soil.
- Cost to install dedicated application points.

### 7.9.3 Selection Criteria

### 1. Overall Protection of Human Health and the Environment (HH/Env)

a) Exposure to human health and the environment following remediation.

This alternative provides reduction of apparent risks to human health and environment by increasing the growth and metabolic activity of naturally occurring aerobic bacteria that is able to digest petroleum-based contaminants.

The overall impact of the system will require evaluation to quantify risk reduction. Varying levels of free product have been detected. Alternatives to control/recover free product will still be required. Contaminated soil is also not directly addressed in this alternative.

b) Residual public health risks following remediation.

Public health risks will gradually decrease as the volume of VOCs in the impacted groundwater are reduced through enhanced bio-remediation accelerated through the gradual release of oxygen from the ORC compounds. Additional controls will still be required during the initial phase to address free product and surface soil contamination.

c) Residual environmental risks following remediation

Environmental risks will gradually decrease as the volume of VOCs in the impacted groundwater are reduced. Additional controls will still be required during the initial phase to address free product and surface soil contamination.

## 2. Compliance with Standards, Criteria and Guidance (SCGs)

This alternative will allow for eventual compliance with compliance with applicable SCGs for groundwater conditions, but will require a long-term commitment to remove free product and recover and treat impacted groundwater. Since contaminated surface and subsurface soils above groundwater will remain this alternative does not allow for achieving applicable SCGs for surface and subsurface soils.

## 3. Long-Term Effectiveness and Permanence (Long Term)

a) Lifetime of remedial actions

This alternative as a stand-alone treatment may result in a permanent resolution for treating impacted groundwater, if combined with alternatives or engineering controls for free product recovery. This alternative does not require a long-term commitment in terms of equipment (no need for electricity, oxygen generator, compressor or lines) but will require maintenance and accessibility to wells to regular introduction of ORC ® compounds and periodic sampling.

b) Residual risks.

Source area surface soils would not be affected.

c) Adequacy and reliability of controls.

This alternative can achieve a system radius of influence that will impact the dissolved VOCs in groundwater. Engineering controls will be required to contain the free product to meet compliance with groundwater SCGs. Further controls will be necessary to address impacted surface soil.

## 4. Reduction of Toxicity, Mobility or Volume with Treatment (Reduce)

a) Volume of hazardous substances reduced.

This alternative will achieve gradual reduction in the volume of hazardous substances as accelerated metabolic activity of the naturally occurring bacteria converts VOCs in groundwater and subsurface into non-toxic decay products.

b) Reduction in mobility of hazardous substances.

This alternative does not directly impact the mobility of hazardous substances. No impact to localized groundwater flow is achieved. Additional engineering controls may be required.

c) Irreversibility in the destruction or treatment.

Use of ORC ® compounds to accelerate in-situ bioremediation is an irreversible process. The benefits include permanent destruction of the VOCs in groundwater to non-toxic biotic decay products.

## 5. Short-Term Effectiveness (Short Term)

a) Protection of community during remedial actions.

This alternative does not allow for an immediate, short effect. Encouraging the aerobic break-down of the VOCs in groundwater will require time for the accelerated growth and metabolic activity of aerobic bacteria. Also, the occurrence of free product will need to be addressed, since free product is likely toxic to the naturally occurring aerobic bacteria population. This alternative will provide for eventual protection to the community by decreasing the VOCs in the groundwater.

The community would not be protected from exposure to contaminated surface soil.

b) Environmental Impacts.

This alternative has a positive environmental impact, in that the removal of the VOCs from the groundwater and subsurface soil occurs in an accelerated, naturally occurring process that breaks the petroleum compounds down into non-toxic decay products. This reduces the need to transport or dispose of contaminants, reduces the need for electrical services for a treatment system, and eliminates the need to pump, treat and discharge impacted groundwater.

c) Time to implement remedy.

Injection of ORC ® compounds has less up-front costs and efforts when compared to an Oxygen Injection approach. Installation of a network of placement wells is required, but such a system does not need electrical services, trenching or connection piping.

Installation of injection wells would require approximately two weeks for completion. The initial application of ORC compounds would require about a week to complete. Future applications would depend on increased aerobic activity, rates of oxygen release and biotic consumption rates of the released oxygen.

## 6. Implementability (Feasible)

a) Suitable to site conditions.

The site is suitable for application of ORC ® application.

b) Implementability.

Injection point installation is feasible with conventional drilling methods. Product application can be performed by a firm experienced in this technology.

c) Availability of services and materials.

This alternative can be implemented relatively easily by employing local contractors who are experienced with ORC ® applications. The product would have to be procured from Regenesis. Subsequent product injections are subject to cost and availability at the time when they would be required.

d) Cost effectiveness.

The cost for ORC to address concentrations of VOC within the bedrock is approximately $24,000. ORC slurry to treat overburden areas by direct push methods is estimated at $9,000. ORC powder used to treat open exactions is estimated at a cost of $8,000. 28 six inch sock wells are estimated at 30-feet spacing would require approximately $55,000 for installation. 28 four inch slurry wells would be approximately $45,000.

Additional costs will be incurred to provide additional applications, site monitoring and laboratory analysis.

## 7. Cost

Estimated Costs for Alternative 9 – Enhanced Bioremediation are listed in Table 14. The cost for this Alternative is estimated to be $105,000 for initial application. Annual sampling and analytical costs would be additional.

## 8. Community Acceptance (Community)

Historically, community residents and business owners have not provided opinions of concern. However, if the community were to be better educated regarding risks, this option may be viewed favorably.

## 7.10 Comparative Analysis

Alternative 1 – No Further Action
The identification of subsurface contamination and probability of offsite migration of contaminants would make leaving the site as is, an option only if The City of Rochester, the NYSDEC and the NYSDOH feel that potential off site contamination is a non-issue and poses no risk to human health. Overall, this alternative does not appear to be a viable option.

Alternative 2 – Monitor Natural Attenuation
Monitoring Natural Attenuation offers nothing more to Alternative 1 then simply updating existing conditions. This alternative does appear to be viable at this time.

Alternative 3 – Passive Product Recovery
Free product skimming in a good alternative to begin removing weathered gasoline confirmed in four monitoring wells of the site. This alternative does not address the remaining media of concern that may require clean up actions. This alternative as a stand alone option does not appear to be a viable option to meeting cleanup objectives.

Alternative 4 – Source Area Soils Removal
Since the bulk of contamination is located well below grade level, there is a potential that source area soils removal may be a candidate for recommended remedial approach. Performing some type of removal of the grossly contaminated areas would include both surface and subsurface excavation. During subsurface excavation activities, some limited areas of free product may be accessible for recovery depending on groundwater table elevations.

Repeated contact of the backfilled areas with the contaminated groundwater may be the determining factor in making a viable case for this alternative. The occurrence of free-product in bedrock fractures would not be directly addressed in this alternative, and could adversely impact off-site areas.

This alternative could be a viable option, but not as a stand alone remedy.

Alternative 5 – Groundwater Pump & Treat
Groundwater pump and treat is a long term approach to controlling migration of and removing contaminated groundwater. There is significant cost in installing a system and more than likely, this system would require resource expenditure to maintain operability. This alternative does provide benefit in creating a cone of depression to minimize further migration of contaminated groundwater off site.

This alternative is a good choice for groundwater considerations, especially for containment. However it is not considered a stand alone option in meeting objectives.

Alternative 6 – Direct Oxygen Injection
Oxygen injection is an effective technology for treating petroleum related VOC's in groundwater through encouraging enhanced aerobic bioremediation and increased volatilization of compounds from groundwater. However, there are significant up front costs related to this

alternative, which will not provide an approach that addresses all remedial objectives. Increased mobilization of contaminants in entrained vapor is a detriment that may require increased monitoring and mitigation. This alternative does not address all remedial objectives for this site.

Alternative 7 – Air Sparging

Air sparging is an effective technology for treating groundwater impacted with volatile contaminants. This alternative focuses primarily on volatilization, with a complimentary effect at increasing aerobic degradation. There are significant up front costs related to this alternative but these are less than Direct Oxygen Injection since an oxygen generator is not needed. This alternative may not be as effective in enhancing aerobic biodegradation to the same degree as Direct Oxygen Injection. Increased mobilization of contaminants in entrained vapor is a detriment that could require increased monitoring and mitigation. This alternative does not address all remedial objectives for this site.

Alternative 8 – Soil Vapor Extraction

An SVE system could be very effective in attempting to meet several objectives for site cleanup including impacting unsaturated subsurface soils, dissolved phase VOCs and collection of subsurface vapor contaminants. Of all the alternatives presented, this one addresses the most remedial objectives for this site at moderate cost.

Alternative 9 – Enhanced Bioremediation

The use of enhanced bioremediation may or may not be effective in the unconsolidated sediments above bedrock, due to the limited extent of perched overburden groundwater. This alternative has less impact on areas containing free product and additional applications of ORC will most likely be required to areas which may be impacted. This alternative is not a stand alone option.

**TABLE 13**
**REMEDIAL ALTERNATIVES RANKING COMPARISON**

| Alternative No. | HH/Env | SCGs | Long Term | Reduce | Short Term | Feasible | Community | Total |
|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 |
| 2 | 0 | 0 | 0 | 0 | 0 | 6 | 2 | 8 |
| 3 | 2 | 0 | 0 | 2 | 4 | 4 | 2 | 14 |
| 4 | 2 | 2 | 2 | 4 | 4 | 4 | 2 | 20 |
| 5 | 2 | 2 | 2 | 4 | 2 | 2 | 2 | 16 |
| 6 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 16 |
| 7 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 16 |
| 8 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 16 |
| 9 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 14 |

**Score based on 0-6 ranking system where 6 = objective met, 4 = objective mostly met, 2 = objective met in part, and 0 = objective not met.**

# TABLE 14
# REMEDIAL ALTERNATIVES COST COMPARISON

| No. | Alternative | Description | Estimated Cost |
|---|---|---|---|
| 1 | No Further Action | Leave site in an “as is” condition. | **$0** |
| 2 | Monitor Natural Attenuation | Leave site in an “as is condition.<br>Implement long tern monitoring program at seven monitoring wells to evaluate constituent breakdown. | **$2,500 annually** based on City staff performing semi-annual sampling and no equipment rental. |
| 3 | Passive Recovery Skimming | Install two Spill Buster skimming units and rotate them between the four monitoring wells that have contained free phase product. Product contained in 55 gallon drums sent off site for disposal. | **$16,000 initial cost and one year of operation** based on purchase of two units, four drums of product recovered and City staff providing O&M. |
| 4 | Source Area Soils Removal | Remove and dispose of surface and subsurface soils totaling 667 cubic yards (1,000 tons) from the northern property boundary, pump dispenser and building foundation areas. | **$55,000 one time cost** based on cubic yard weighing 1.5 tons, 12 days to remove soils, no shoring required and 350 cubic yards run of bank backfill. |
| 5 | Groundwater Pump & Treat | Install four groundwater recovery wells and pumps. Connect each to a centralized treatment location including a power drop. Treat water with a portable AST and discharge to the sanitary sewer. | **$79,000 initial cost** based on buried conveyance line, air stripper treatment skid, shed enclosure and City staff providing routine O&M. |
| 6 | Direct Oxygen Injection | Procure a portable Matrix Environmental trailer mounted system. Install 28 injection points across site. Connect points to oxygen generation source with SCH 40 PVC piping 18-inches below ground surface. | **$90,000 installation cost** based on system installation and City staff providing routine O&M. |
| 7 | Air Sparging | Install 28 injection points across the site. The points would be the same as for Direct Oxygen Injection. Procure a portable trailer with an air compressor, manifold and related components. Conveyance lines intended to operate at a higher pressure than direct oxygen injection. | **$60,000 installation cost for the sparging system** and City staff providing routine O&M. |
| 8 | Soil Vapor Extraction | Installation of a subsurface, horizontal distribution lateral bisecting the site and connected to a SVE blower skid enclosed in weather-proof shed. | **$39,000 installation cost** based on system installation and City staff providing routine O&M. |
| 9 | Enhanced Bioremediation | This option entails treating various media with doses of Regenesis® Oxygen Release Compound including bedrock, overburden and exposed excavated areas. | **$105,000 initial application cost** based on various modes of ORC application and City. |

It appears that a combination of technologies may the best approach to address and meet the remedial objectives for this site, which include:

- Minimize future potential for offsite migration of contaminants via flow of impacted groundwater and soil vapor.
- Remove source area contamination in subsurface soils.
- Reduce VOC and SVOC concentrations in subsurface soils.
- Remove surface contamination from north section of the parcel.

If areas of free product and grossly contaminated soils are addressed first, then the likelihood of the groundwater regime being further affected by VOCs bound in soil or dissolving from the weathered gasoline should be greatly reduced.

A suitable, system that treats various contaminant phases should be pursued. The type of combined approach would be two fold by addressing source areas and then providing a remedial measure which addresses residual concentrations in soil, strips VOC's from groundwater remaining on site and provides an additional measure in preventing subsurface soil vapor from migrating to off site locations.

## 8.0 CONCLUSIONS

Based on review of the results of investigative work completed as part of the Site Investigations at the 1200 East Main Street former gasoline station property, anticipates that the following actions be completed upon approval of the NYSDEC and the NYSDOH. Appendix 14 provides a Remedial Alternatives Flowchart showing the sequence of Remedial Alternatives.

The following summarizes the ordering of recommended remedial tasks. This order is the recommended sequence in which the tasks are to be accomplished.

- Removal of free phase product. Non-aqueous free phase product, determined to be gasoline, has been confirmed in the bedrock at the southern portion of the property. Removal of free phase product is recommended as the first remedial task to be accomplished. As of June 2004 free product occurred over an area of approximately 8,200 square feet at the south and south-eastern portion of the subject parcel, in the vicinity of monitoring wells MW-3, MW-4, MW-7 and MW-9. No free product or detectable dissolved phase was detected in a monitoring well located on the south side of Main Street (MW-12).

  A program to contain and remove the free phase product should be implemented to prevent further migration. Various techniques could be employed for an effective free-product recovery system.

  Establishing a hydraulic depression through de-watering could create a cone of depression that would retard movement of free product and allow for effective recovery. A de-watering approach could include a groundwater pump and treat system, or periodic use of a vacuum tanker truck to pump directly from monitoring wells. A vacuum tanker truck could be mobilized to the site to vacuum extract product and groundwater from monitoring wells MW-3, MW-4, MW-7 and MW-9.

  Prior to and following rounds of vacuum extraction, groundwater data should be recorded on a periodic basis to determine the recharge rate of free product (weathered gasoline) in each well. Additional rounds of vacuum extraction and data collection may be necessary to accurately assess the impact of the removal on the source of the free product.

  Factors to be used in determining if a pump and treat system vs. periodic use of a vacuum tanker will include an evaluation of site-specific aquifer characteristics (rate of recharge, mobility and accumulation of free product, hydraulic conductivity, estimated radius of influence of extraction wells) cost and accessibility of a vacuum tanker truck, on-site utilities (electrical service and availability to discharge to a sanitary sewer) and the cost to construct a groundwater pump-and-treatment system.

  At present no electrical service or direct sanitary sewer connections are available at the 1200 East Main Street site. No buildings are present to house equipment necessary to treat recovered groundwater prior to discharge. Hand-bailing conducted in 2002-2004 indicated that free phase product can be recovered but that the migration of the product is slow. The City of Rochester does have existing contracts with qualified environmental remediation contractors with available vacuum tanker trucks.

- Excavation and physical removal of remaining grossly contaminated surface and subsurface soils. Removal of residual grossly contaminated surface and subsurface soil is recommended as the next sequence of remedial activities, following or during the vacuum extraction event(s), and data analysis, excavation and removal of grossly contaminated soils to the top of bedrock should be performed. These areas are designated Area 1 (surface soil, north property line), Area 2 (former building foundation area) and Area 3 (south property line). The goal of this task is to remove the majority of grossly impacted soil, and to address residual soil with subsequent actions.

  At all three designated areas the impacted subsurface soil should be excavated for off-site disposal or treatment. Confirmatory sampling and analysis of surface and subsurface soil will be performed to verify that remediation goals have been achieved subsequent to excavation, source removal and off-site disposal these areas are shown on the Proposed Remedial Action Plan, Figure 24.

  Area 1 comprises approximately 207 cubic yards of impacted surface and near-surface soil near the north property line. At Area 1, an area covering approximately 2,794.5 square feet (155.25 square yards) is impacted from grade to a depth of approximately 2 feet below ground surface. This area encompasses the majority of the northern, unpaved portion of the site, extending to within a few feet of the fence line. This area was determined from results from the 2000 and 2003 test boring projects. The Approximate 207 cubic yards of surface soil in Area 1 is impacted with petroleum VOCs and SVOCs.

  Cleanup for VOCs are proposed to be levels listed in NYSDEC HWR 4046. For cleanup of SVOCs, the Rochester background levels for carcinogenic PAHs (total cPAH of 5 ppm).

  Area 2 encompasses an area at the eastern former building footprint, covering an area of approximately 601.22 square feet (33.4 square yards). Based on test boring GEO 1001 excavated in 2000 and Foundation Test Trench F-2 excavated in 2003, an area impacted from 3 feet to 13 feet (top of bedrock) below ground surface has been defined**.** The surface area of 601.22 square feet is based on the interior building footprint in this area. Area 2 comprises an approximate total of 223 cubic yards of subsurface soil contaminated with petroleum products, PCBs and metals Mercury and Cadmium above NYSDEC recommended cleanup objectives. Cleanup for VOCs and metals are proposed to be levels listed in NYSDEC HWR 4046. For cleanup of SVOCs, the Rochester background levels for carcinogenic PAHs (total cPAH of 5 ppm).

  Area 3 is located immediately south the former dispenser pump island near the south property line and contains approximately 237 cubic yards of contaminated soil. Based on field observations from test borings installed in 2000 and 2003, a subsurface zone of contamination extends from 8 feet to 13 feet below ground surface, defining a zone five feet thick; soils from grade to 8 feet below grade is assumed meet NYSDEC Cleanup objectives listed in TAGM 4046. Area 3 covers an area of approximately 1,280.36

square feet (71.13 square yards) and corresponds to the area south of the former dispenser pump, and extends from the MW-3/eastern property line west to an area due of MW-4. Confirmatory sampling and analysis of the excavation limits will be performed to verify that remediation goals have been achieved subsequent to excavation, source removal and off-site disposal. Contaminants of concern in this area consist of gasoline VOCs listed in NYSDEC HWR TAGM 4046. Based on the property line to the east and underground utilities and the property line to the south, not all of the impacted soil in this area may be recoverable.

During the source removal, one or more of the monitoring wells in the area may be destroyed. If, based on the results of the vacuum extraction task, it is anticipated that a significant amount of free product still exist in the groundwater, one or more 4-inch diameter monitoring/ recovery wells could be installed into the fractured bedrock of the excavated area. The wells will be included in a temporary groundwater/ product recovery system designed to capture residual petroleum contaminants from groundwater. If free product concentrations appear to be sufficiently depleted after the vacuum extraction events, 2-inch monitoring wells can be reinstalled to replace the damaged wells.

Treatment of dissolved phase VOCs. Following the completion of the a source removal and free product recovery program and completion of a groundwater sampling and analysis monitoring program, site conditions should be re-evaluated to determine the effects of these actions on the original contaminant plume limits. Based on these findings, the most appropriate selection, design and installation for a groundwater remedial alternative technology will be made.

The treatment of dissolved phase VOCs is recommended to be accomplished after the removal of free-phase product and the removal of grossly impacted subsurface soil and surface soils have been accomplished.

VOCs indicative of gasoline have been detected across the 1200 East Main Street site. The VOCs appear to terminate at or near the property line to the north. The VOCs may be present off-site in a westerly direction, and appear to terminate at or beneath the residence at 1214/1216 East Main Street. A program to contain further off-site migration of the dissolved phase of impacted groundwater should be implemented and should be included as part of the treatment of the dissolved phase of VOCs.

The occurrence of free-phase product (weathered gasoline) present in groundwater in the upper portion of the fractured bedrock presents various impediments to the remedial alternatives under consideration for the site. Installation of an air sparging or direct oxygen injection system has the potential for off-site vapor or liquid migration, and the limited bioremediation response rates for contaminants in high concentrations in groundwater may limit the effectiveness of a direct oxygen injection system.

- No periodic air sampling on the effluent from the sub-slab ventilation system at 1214 East Main Street will be performed prior to implementation of remedial measures. Periodic visits will be conducted to ensure that the system is running and to obtain readings of sub-slab communication points to demonstrate that the system is creating negative pressure. Confirmatory sub-slab and indoor air samples will be collected at a later date when system shut-down is contemplated

- Development and implementation of a Site Management plan (SMP). It is possible that the proposed remedy will result in contamination remaining above unrestricted levels at the site. As such, implementation of a SMP may be warranted.

- A program of regular groundwater monitoring, sampling and testing during the operation of the system installed to remediate dissolved phase groundwater contaminants, will be necessary to demonstrate adequacy of treatment systems, track rates of remediation and to guide re-use of the property. The program should include regular groundwater monitoring, sampling and laboratory analysis. Future monitoring should include regular gauging of water table elevations to track water table surface and flow pattern to identify any seasonal variations, and also to track efficiency of any remedial system in establishing a radius of influence and groundwater containment area.

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9/29/2005

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# ANALYTICAL SUMMARY TABLES

# ANALYTICAL SUMMARY TABLE I
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 ASBESTOS SAMPLES LABORATORY ANALYTICAL RESULTS

| Sample ID | Figure 3 Reference | Date Sampled | Sample Description | | % Non Fibrous Material | % Fibrous | PLM Results NOB (%) | PLM Results Point Count | TEM Results % Asbestos |
|---|---|---|---|---|---|---|---|---|---|
| | | | Type | Color | | | | | |
| 054-01 | **1** | 30-Jun-00 | Caulk | Black | 100.0 | NA | NA | NA | <1% Chrysotile |
| 054-02 | **2** | 30-Jun-00 | Glazing | White | 97.0 | NA | Inconclusive <1 | NA | **3.0 % Chrysotile** |
| 054-03 | **3** | 30-Jun-00 | Glazing | Gray | 94.7 | NA | Inconclusive-NAD | NA | **5.3 % Anthophyllite** |
| 054-04 | **4** | 30-Jun-00 | Floor Tile | White | 100.0 | NA | Inconclusive-NAD | NA | <1% Chrysotile |
| 054-04 | **4** | 30-Jun-00 | Mastic | Tan | 100.0 | NA | Inconclusive-NAD | NA | ND |
| 054-04 | **4** | 30-Jun-00 | Floor Leveler | White | 100.0 | NA | Inconclusive-NAD | NA | ND |
| 054-05 | **5** | 30-Jun-00 | Ceiling Tiles | Gray | 55.0 | 45.0 | NA | ND | NA |
| 054-06 | **6** | 30-Jun-00 | Formica Wall | Blue/Brown | 30.0 | 70.0 | **2.7% Chrysotile** | ND | NA |
| 054-07 | **7** | 30-Jun-00 | Wall Board | Gray | 100.0 | <1 | NA | ND | NA |
| 054-07 | **7** | 30-Jun-00 | | Tan | 5.0 | 5.0 | NA | ND | NA |
| 054-08 | **8** | 30-Jun-00 | Ceiling Board | Gray | 95.0 | 95.0 | NA | ND | NA |
| 054-08 | **8** | 30-Jun-00 | | Tan | 5.0 | NA | NA | ND | NA |
| 054-09 | **9** | 30-Jun-00 | Roof | Black | 100.0 | NA | Inconclusive-NAD | NA | <1% Chrysotile |
| 054-10 | **10** | 30-Jun-00 | Roof Tar | Black | 88 | NA | **12 % Chrysotile** | NA | NA |
| 054-11 | **11** | 30-Jun-00 | Roof Tar | Black | 89 | NA | **11% Chrysotile** | NA | NA |

Notes: 1) NA - Not Applicable
2) ND - Below Detection Limit
3) NAD - No Asbestos Detected
2) Analytical Results >1 % Asbestos shown in **Bold Text**

# ANALYTICAL SUMMARY TABLE II
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS

## Volatile Organic Compounds By 8260
## UG/KG

| Sample Depth<br>**Parameter** | NYSDEC Recommended Cleanup Objective | **TP-1** | **TP-2 *** | **TP-3** | **TP-4** | **TP-5** | **TP-6** | **TP-7** | **TP-8** | **PP-9** | **PP-9 (FD)** | **PP-10** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 9.0' | 9.0' | 9.0' | 9.0' | 9.0' | 9.0' | 9.0' | 9.0' | 3.0' | 3.0' | 3.0' |
| | | 06/28/00 | 06/29/00 | 06/28/00 | 06/29/00 | 06/28/00 | 06/29/00 | 06/28/00 | 06/29/00 | 06/30/00 | 06/30/00 | 06/30/00 |
| 1,1,1,2-Tetrachloroethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 800 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 600 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethane | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 400 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,3-Trichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,3-Trichloropropane | 400 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 3,400 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trimethylbenzene | NA | ND | 13,000 | 4 J | ND | ND | 290 | 33,000 | 10,000 | 24,000 | 15,000 | 23 |
| 1,2-Dibromo-3-chloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 7,900 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethene, Total | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3,5-Trimethylbenzene | NA | ND | 6,600 | 4 J | ND | ND | 380 | 8,300 | 3,800 | 12,000 | 9,600 | 19 |
| 1,3-Dichlorobenzene | 1,600 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Dichloropropane | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 8,500 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,2-Dichloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone | 300 | ND | **1,100** | ND | ND | ND | ND | ND | **960** | ND | ND | ND |
| 2-Chloroethyl vinyl ether | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Chlorotoluene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Hexanone | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Chlorotoluene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Isopropyltoluene | NA | ND | 3,700 | ND | ND | ND | 100 | ND | 470 | 2,400 | 3,000 | ND |
| 4-Methyl-2-pentanone | 1,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acetone | 200 | ND | ND | 11 BJ | ND | ND | ND | ND | ND | ND | ND | ND |
| Acrolein | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from NYSDEC HWR TAGM 4046
NA = Not Applicable, No TAGM Cleanup Objective
or not included with the analysis

# ANALYTICAL SUMMARY TABLE II
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS

**Volatile Organic Compounds By 8260**
**UG/KG**

| **Parameter** | NYSDEC Recommended Cleanup Objective | **TP-1** | **TP-2** | **TP-3** | **TP-4** | **TP-5** | **TP-6** | **TP-7** | **TP-8** | **PP-9** | **PP-9 (FD)** | **PP-10** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 06/28/00 | 06/29/00 | 06/28/00 | 06/29/00 | 06/28/00 | 06/29/00 | 06/28/00 | 06/29/00 | 06/30/00 | 06/30/00 | 06/30/00 |
| Benzene | 6 | ND | 440 | ND | ND | ND | ND | ND | ND | ND | 1,600 | ND |
| Bromobenzene | NA | ND | ND | ND | ND | ND | ND | 7,900 | ND | ND | ND | ND |
| Bromochloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromoform | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon disulfide | 2,700 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon tetrachloride | 600 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | 1,700 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | 1,900 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibromochloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibromomethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dichlorodifluoromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Diethyl Ether | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | 5,500 | ND | ND | 3 J | ND | ND | ND | **9,700** | 1,200 | **7,600** | **7,900** | ND |
| Hexachlorobutadiene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Iodomethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Isopropylbenzene | 500 | ND | 850 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| m,p-Xylene | 1,200 | ND | **4,100** | ND | ND | ND | ND | **30,000** | ND | **34,000** | **33,000** | ND |
| Methyl tert-butyl ether | 120 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene chloride | 100 | ND | ND | 6 BJ | ND | ND | ND | ND | ND | ND | ND | ND |
| n-Butylbenzene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| n-Propylbenzene | NA | ND | 2,100 | ND | ND | ND | ND | ND | 840 | 3,000 | 1,700 | ND |
| Naphthalene | 13,000 | ND | 3,900 | ND | ND | ND | 210 | ND | 2,000 | 3,800 | 2,100 | 7.6 |
| o-Xylene | 1,200 | ND | **1,800** | ND | ND | ND | ND | **7,900** | **4,000** | **9,900** | **12,000** | ND |
| sec-Butylbenzene | NA | ND | 2,700 | ND | ND | ND | 67 | ND | 390 | ND | ND | ND |
| Styrene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from NYSDEC HWR TAGM 4046
NA = Not Applicable, No TAGM Cleanup Objective
or not included with the analysis

## ANALYTICAL SUMMARY TABLE II
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS

**Volatile Organic Compounds By 8260**
**UG/KG**

| Parameter | NYSDEC Recommended Cleanup Objective | TP-1 06/28/00 | TP-2 06/29/00 | TP-3 06/28/00 | TP-4 06/29/00 | TP-5 06/28/00 | TP-6 06/29/00 | TP-7 06/28/00 | TP-8 06/29/00 | PP-9 06/30/00 | PP-9 (FD) 06/30/00 | PP-10 06/30/00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| tert-Butylbenzene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 1,400 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrahydrofuran | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | 1,500 | ND | 670 | ND | ND | ND | ND | 8,500 | 1,300 | ND | ND | ND |
| trans-1,2-Dichloroethene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 700 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichlorofluoromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Vinyl acetate | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Vinyl chloride | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Total Xylenes | 1,200 | NA | NA | 3 | NA | NA | NA | NA | NA | NA | NA | NA |
| **Total VOC's** | | **0** | **40,960** | **14** | **0** | **0** | **1,047** | **105,300** | **24,960** | **96,700** | **85,900** | **49.6** |

ND = Not Detected
Cleanup Objectives from NYSDEC HWR TAGM 4046
NA = Not Applicable, No TAGM Cleanup Objective
or not included with the analysis

# ANALYTICAL SUMMARY TABLE II
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS

## Volatile Organic Compounds By 8260
## UG/KG

| Parameter | NYSDEC Recommended Cleanup Objective | **GEO-101** | **SS-1** | **SS-2** | **SS-7** | **SS-9** | **SS-10** | **SS-12** | **SS-14** | **SS-16** | **SS-17** | **SS-18** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8.0' | 14' | 12' | 8-12' | 4-8' | 4-8' | 0-4' | 4-8' | 8-12' | 12-13.5' | 4-8' |
| | | 07/18/00 | 07/06/00 | 07/07/00 | 07/05/00 | 07/05/00 | 07/05/00 | 07/05/00 | 07/06/00 | 07/06/00 | 07/06/00 | 07/06/00 |
| 1,1,1,2-Tetrachloroethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 800 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 600 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethane | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 400 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloropropene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,3-Trichlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,3-Trichloropropane | 400 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 3,400 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trimethylbenzene | NA | ND | ND | ND | 1,500 | ND | 140,000 | ND | ND | 37 | ND | ND |
| 1,2-Dibromo-3-chloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 7,900 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethene, Total | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3,5-Trimethylbenzene | NA | ND | ND | ND | 580 | ND | 67,000 | ND | ND | 31 | ND | ND |
| 1,3-Dichlorobenzene | 1,600 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Dichloropropane | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 8,500 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,2-Dichloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone | 300 | ND | ND | ND | ND | 4 J | ND | ND | ND | 28 | ND | ND |
| 2-Chloroethyl vinyl ether | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Chlorotoluene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Hexanone | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Chlorotoluene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Isopropyltoluene | NA | ND | ND | ND | ND | ND | ND | ND | ND | 160 | ND | ND |
| 4-Methyl-2-pentanone | 1,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acetone | 200 | ND | 18 | 7 BJ | ND | 14 | ND | 43 | 10 J | 96 | ND | ND |
| Acrolein | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from NYSDEC HWR TAGM 4046
NA = Not Applicable, No TAGM Cleanup Objective
or not included with the analysis

## ANALYTICAL SUMMARY TABLE II
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS

### Volatile Organic Compounds By 8260
### UG/KG

| **Parameter** | NYSDEC Recommended Cleanup Objective | **GEO-101** 07/18/00 | **SS-1** 07/06/00 | **SS-2** 07/07/00 | **SS-7** 07/05/00 | **SS-9** 07/05/00 | **SS-10** 07/05/00 | **SS-12** 07/05/00 | **SS-14** 07/06/00 | **SS-16** 07/06/00 | **SS-17** 07/06/00 | **SS-18** 07/06/00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 6 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromobenzene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromochloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromoform | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon disulfide | 2,700 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon tetrachloride | 600 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | 1,700 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | 1,900 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibromochloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibromomethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dichlorodifluoromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Diethyl Ether | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | 5,500 | ND | ND | ND | ND | ND | **37,000** | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Iodomethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Isopropylbenzene | 500 | ND | ND | ND | ND | ND | **7,000** | ND | ND | ND | ND | ND |
| m,p-Xylene | 1,200 | ND | ND | ND | 740 | ND | ND | ND | ND | ND | ND | ND |
| Methyl tert-butyl ether | 120 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene chloride | 100 | ND | ND | 3 BJ | ND | ND | ND | ND | ND | ND | ND | ND |
| n-Butylbenzene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| n-Propylbenzene | NA | ND | ND | ND | ND | ND | 4,900 | ND | ND | 14 | ND | ND |
| Naphthalene | 13,000 | ND | ND | ND | ND | ND | **30,000** | ND | ND | 12 | ND | ND |
| o-Xylene | 1,200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| sec-Butylbenzene | NA | ND | ND | ND | ND | ND | 3,400 | ND | ND | ND | ND | ND |
| Styrene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from NYSDEC HWR TAGM 4046
NA = Not Applicable, No TAGM Cleanup Objective
or not included with the analysis

## ANALYTICAL SUMMARY TABLE II
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS

### Volatile Organic Compounds By 8260
### UG/KG

| Parameter | NYSDEC Recommended Cleanup Objective | **GEO-101** 07/18/00 | **SS-1** 07/06/00 | **SS-2** 07/07/00 | **SS-7** 07/05/00 | **SS-9** 07/05/00 | **SS-10** 07/05/00 | **SS-12** 07/05/00 | **SS-14** 07/06/00 | **SS-16** 07/06/00 | **SS-17** 07/06/00 | **SS-18** 07/06/00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| tert-Butylbenzene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 1,400 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrahydrofuran | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | 1,500 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 700 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichlorofluoromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Vinyl acetate | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Vinyl chloride | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Total Xylenes | 1,200 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Total VOC's** | | **0** | **0** | **0** | **2,820** | **18** | **289,300** | **43** | **10** | **378** | **0** | **0** |

ND = Not Detected
Cleanup Objectives from NYSDEC HWR TAGM 4046
NA = Not Applicable, No TAGM Cleanup Objective
or not included with the analysis

## ANALYTICAL SUMMARY TABLE II
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS

**Volatile Organic Compounds By 8260**
**UG/KG**

| Parameter | NYSDEC Recommended Cleanup Objective | **SS-19** 4-8' 07/06/2000 | **SS-20** 8-12' 07/06/2000 | **SS-21** 8-12' 07/06/2000 | **SU-17** surface 07/07/2000 | **SU-18** surface 07/07/2000 | **SU-19** surface 07/07/2000 |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | NA | ND | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 800 | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 600 | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | NA | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethane | 200 | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 400 | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloropropene | ND | ND | ND | ND | ND | ND | ND |
| 1,2,3-Trichlorobenzene | ND | ND | ND | ND | ND | ND | ND |
| 1,2,3-Trichloropropane | 400 | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 3,400 | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trimethylbenzene | NA | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromo-3-chloropropane | NA | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane | NA | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 7,900 | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 100 | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethene, Total | 300 | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloropropane | NA | ND | ND | ND | ND | ND | ND |
| 1,3,5-Trimethylbenzene | NA | ND | ND | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | 1,600 | ND | ND | ND | ND | ND | ND |
| 1,3-Dichloropropane | 300 | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 8,500 | ND | ND | ND | ND | ND | ND |
| 2,2-Dichloropropane | NA | ND | ND | ND | ND | ND | ND |
| 2-Butanone | 300 | ND | ND | ND | ND | ND | ND |
| 2-Chloroethyl vinyl ether | NA | ND | ND | ND | ND | ND | ND |
| 2-Chlorotoluene | NA | ND | ND | ND | ND | ND | ND |
| 2-Hexanone | NA | ND | ND | ND | ND | ND | ND |
| 4-Chlorotoluene | NA | ND | ND | ND | ND | ND | ND |
| 4-Isopropyltoluene | NA | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | 1,000 | ND | ND | ND | ND | ND | ND |
| Acetone | 200 | ND | 39 | 13 | ND | ND | 5 J |
| Acrolein | NA | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from NYSDEC HWR TAGM 4046
NA = Not Applicable, No TAGM Cleanup Objective
or not included with the analysis

# ANALYTICAL SUMMARY TABLE II
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS

**Volatile Organic Compounds By 8260**
**UG/KG**

| **Parameter** | NYSDEC Recommended Cleanup Objective | **SS-19** 07/06/00 | **SS-20** 07/06/00 | **SS-21** 07/06/00 | **SU-17** 07/07/00 | **SU-18** 07/07/00 | **SU-19** 07/07/00 |
|---|---|---|---|---|---|---|---|
| Benzene | 6 | ND | ND | ND | ND | ND | ND |
| Bromobenzene | NA | ND | ND | ND | ND | ND | ND |
| Bromochloromethane | NA | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | NA | ND | ND | ND | ND | ND | ND |
| Bromoform | NA | ND | ND | ND | ND | ND | ND |
| Bromomethane | NA | ND | ND | ND | ND | ND | ND |
| Carbon disulfide | 2,700 | ND | ND | ND | ND | ND | ND |
| Carbon tetrachloride | 600 | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | 1,700 | ND | ND | ND | ND | ND | ND |
| Chloroethane | 1,900 | ND | ND | ND | ND | ND | ND |
| Chloroform | 300 | ND | ND | ND | ND | ND | ND |
| Chloromethane | NA | ND | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 300 | ND | ND | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND |
| Dibromochloromethane | NA | ND | ND | ND | ND | ND | ND |
| Dibromomethane | NA | ND | ND | ND | ND | ND | ND |
| Dichlorodifluoromethane | NA | ND | ND | ND | ND | ND | ND |
| Diethyl Ether | NA | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | 5,500 | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | NA | ND | ND | ND | ND | ND | ND |
| Iodomethane | NA | ND | ND | ND | ND | ND | ND |
| Isopropylbenzene | 500 | ND | 6.3 | ND | ND | ND | ND |
| m,p-Xylene | 1,200 | ND | ND | ND | ND | ND | ND |
| Methyl tert-butyl ether | 120 | ND | ND | ND | ND | ND | ND |
| Methylene chloride | 100 | ND | ND | ND | ND | ND | ND |
| n-Butylbenzene | NA | ND | ND | ND | ND | ND | ND |
| n-Propylbenzene | NA | ND | ND | ND | ND | ND | ND |
| Naphthalene | 13,000 | ND | ND | ND | ND | ND | ND |
| o-Xylene | 1,200 | ND | ND | ND | ND | ND | ND |
| sec-Butylbenzene | NA | ND | ND | ND | ND | ND | ND |
| Styrene | NA | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from NYSDEC HWR TAGM 4046
NA = Not Applicable, No TAGM Cleanup Objective
or not included with the analysis

# ANALYTICAL SUMMARY TABLE II
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS

## Volatile Organic Compounds By 8260
## UG/KG

| Parameter | NYSDEC Recommended Cleanup Objective | **SS-19** 07/06/00 | **SS-20** 07/06/00 | **SS-21** 07/06/00 | **SU-17** 07/07/00 | **SU-18** 07/07/00 | **SU-19** 07/07/00 |
|---|---|---|---|---|---|---|---|
| tert-Butylbenzene | NA | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 1,400 | ND | ND | ND | ND | ND | ND |
| Tetrahydrofuran | NA | ND | ND | ND | ND | ND | ND |
| Toluene | 1,500 | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | NA | ND | ND | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 700 | ND | ND | ND | ND | ND | ND |
| Trichlorofluoromethane | NA | ND | ND | ND | ND | ND | ND |
| Vinyl acetate | NA | ND | ND | ND | ND | ND | ND |
| Vinyl chloride | 200 | ND | ND | ND | ND | ND | ND |
| Total Xylenes | 1,200 | NA | NA | NA | NA | NA | NA |
| **Total VOC's** |  | **0** | **45.3** | **13** | **0** | **0** | **5** |

Notes: 1) J - Estimated Value
2) BJ - Estimate Value also found in associated blank.
3) NA- Not analyzed
4) ND- Below Detection Limit
5) ASP Analysis: TP-3, SS-2, SS-9, SS-14, SU-19
6) TP-2 is the MS/MSD location

ND = Not Detected
Cleanup Objectives from NYSDEC HWR TAGM 4046
NA = Not Applicable, No TAGM Cleanup Objective
or not included with the analysis

# ANALYTICAL SUMMARY TABLE III
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

**Semi-Volatile Organic Compounds by 8270**
**UG/KG**

| | NYSDEC | **TP-1** | **TP-2 *** | **TP-3** | **TP-4** | **TP-5** | **TP-6** | **TP-7** | **TP-8** | **PP-9** | **PP-9 (FD)** | **PP-10** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Depth | Recommended | 9.0' | 9.0' | 9.0' | 9.0' | 9.0' | 9.0' | 9.0' | 9.0' | 3.0' | 3.0' | 3.0' |
| | Cleanup Objective | 06/28/00 | 06/29/00 | 06/28/00 | 06/29/00 | 06/28/00 | 06/29/00 | 06/28/00 | 06/29/00 | 06/30/00 | 06/30/00 | 06/30/00 |
| **Parameter** | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4,6-Trichlorophenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dichlorophenol | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dimethylphenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrophenol | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrotoluene | 50,000* | ND | ND | ND | ND | ND | ND | ND | 50 J | ND | ND | ND |
| 2,6-Dichlorophenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,6-Dinitrotoluene | 1000 | ND | 600 J | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Chloronaphthane | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Chlorophenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Methylnapthalene | 354 | ND | 5,100 | ND | ND | ND | 910 | 4,000 J | 1,400 | 430 | 570 | ND |
| 2-Methylphenol | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Nitroaniline | 430 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Nitrophenol | 330 | ND | ND | ND | ND | ND | 80 J | ND | 70 J | ND | ND | ND |
| 3,3'-Dichlorobenzidine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 3-Nitroaniline | 500 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4,6-Dinitro-2-methylphenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Bromophenyl phenyl ether | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Chloro-3-methylphenol | 240 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Chloroaniline | 220 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Chlorophenyl phenyl ether | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methlphenol | 900 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Nitroaniline | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from HWR TAGM 4046
* Per TAGM 4046 individual SVOCs
may not exceed 50,000 PPB
NA = Not Analyzed

## ANALYTICAL SUMMARY TABLE III
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

**Semi-Volatile Organic Compounds by 8270**
**UG/KG**

| **Parameter** | NYSDEC Recommended Cleanup Objective | **TP-1** 06/28/00 | **TP-2** 06/29/00 | **TP-3** 06/28/00 | **TP-4** 06/29/00 | **TP-5** 06/28/00 | **TP-6** 06/29/00 | **TP-7** 06/28/00 | **TP-8** 06/29/00 | **PP-9** 06/30/00 | **PP-9 (FD)** 06/30/00 | **PP-10** 06/30/00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-Nitrophenol | 100 | ND | 300 J | 64 J | ND | ND | ND | 700 J | ND | ND | ND | ND |
| Acenaphthene | 50,000 | ND | ND | 250 J | ND | ND | ND | ND | ND | ND | ND | ND |
| Acenaphthylene | 41,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Aniline | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Anthracene | 50,000* | ND | ND | 43 J | ND | ND | ND | 400 J | ND | ND | ND | ND |
| Benzo(a)anthracene | 224 | ND | ND | 66 J | ND | ND | ND | 800 J | ND | ND | ND | ND |
| Benzidine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(a)pryene | 61 | ND | ND | 70 J | ND | ND | ND | 600 J | ND | ND | ND | ND |
| Benzo(b)fluoranthene | 1,100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(g,h,I)perylene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(k)fluoranthene | 1,100 | ND | ND | 46 J | ND | ND | ND | 500 J | ND | ND | ND | ND |
| Benzoic acid | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzyl alcholol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethoxy)methane | 59,000* | ND | ND | ND | ND | ND | ND | ND | 100 J | ND | ND | ND |
| Bis(2-chloroethyl)ether | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroisopropyl)ether | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-ethylhexyl)phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Butyl benzyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbazole | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chrysene | 400 | ND | ND | 83 J | ND | ND | ND | 900 J | ND | ND | ND | ND |
| Di-n-butyl phthalate | 8,100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Di-n-octyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibenz(a,h)anthracene | 14 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibenzofuran | 6,200 | ND | ND | 72 J | ND | ND | ND | ND | 40 J | ND | ND | ND |
| Diethyl phthalate | 710 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dimethyl phthalate | 2,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Fluoranthene | 50,000* | ND | ND | 180 J | ND | ND | ND | 1,000 J | 40 J | ND | ND | 1800 |
| Fluorene | 50,000* | ND | ND | 93 J | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobenzene | 410 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from HWR TAGM 4046
* Per TAGM 4046 individual SVOCs
may not exceed 50,000 PPB
NA = Not Analyzed

# ANALYTICAL SUMMARY TABLE III
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

**Semi-Volatile Organic Compounds by 8270**
**UG/KG**

| **Parameter** | NYSDEC Recommended Cleanup Objective | **TP-1** 06/28/00 | **TP-2** 06/29/00 | **TP-3** 06/28/00 | **TP-4** 06/29/00 | **TP-5** 06/28/00 | **TP-6** 06/29/00 | **TP-7** 06/28/00 | **TP-8** 06/29/00 | **PP-9** 06/30/00 | **PP-9 (FD)** 06/30/00 | **PP-10** 06/30/00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorocyclopentadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachloroethane | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 3,200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Isophorone | 4,400 | ND | 600 J | ND | ND | ND | 100 J | 600 J | 200 J | ND | ND | ND |
| N-Nitrosodi-n-propylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-Nitrosodimethylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-Nitrosodiphenylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Napthalene | 13,000 | ND | 1,000 J | ND | ND | ND | 200 J | 3,000 J | 500 | 770 | 950 | ND |
| Nitrobenzene | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Pentachlorophenol | 1,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Phenanthrene | 50,000* | ND | ND | 230 J | ND | ND | ND | 1,000 J | ND | ND | ND | ND |
| Phenol | 30 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Pyrene | 50,000* | ND | ND | 170 J | ND | ND | ND | 1,000 J | 40 J | ND | ND | ND |
| **Total SVOC's** | | **0** | **7,600** | **1,367** | **0** | **0** | **1,290** | **14,500** | **2,440** | **1,200** | **1,520** | **1,800** |
| | | | | | | | | | | | | |
| Total Organic Carbon (MG/KG) | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

ND = Not Detected
Cleanup Objectives from HWR TAGM 4046
* Per TAGM 4046 individual SVOCs
may not exceed 50,000 PPB
NA = Not Analyzed

## ANALYTICAL SUMMARY TABLE III
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

**Semi-Volatile Organic Compounds by 8270**
**UG/KG**

| Parameter | NYSDEC Recommended Cleanup Objective | **GEO-101** | **SS-1** | **SS-2** | **SS-7** | **SS-9** | **SS-10** | **SS-12** | **SS-14** | **SS-16** | **SS-17** | **SS-18** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 8.0' | 14' | 12' | 8-12' | 4-8' | 4-8' | 0-4' | 4-8' | 8-12' | 12-13.5' | 4-8' |
| | | 07/18/00 | 07/06/00 | 07/07/00 | 07/05/00 | 07/05/00 | 07/05/00 | 07/05/00 | 07/06/00 | 07/06/00 | 07/06/00 | 07/06/00 |
| 1,2,4-Trichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4,6-Trichlorophenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dichlorophenol | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dimethylphenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrophenol | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrotoluene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,6-Dichlorophenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,6-Dinitrotoluene | 1000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Chloronaphthane | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Chlorophenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Methylnapthalene | 354 | ND | ND | ND | ND | ND | 3,200 | ND | ND | ND | ND | ND |
| 2-Methylphenol | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Nitroaniline | 430 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Nitrophenol | 330 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 3,3'-Dichlorobenzidine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 3-Nitroaniline | 500 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4,6-Dinitro-2-methylphenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Bromophenyl phenyl ether | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Chloro-3-methylphenol | 240 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Chloroaniline | 220 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Chlorophenyl phenyl ether | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methlphenol | 900 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Nitroaniline | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from HWR TAGM 4046
* Per TAGM 4046 individual SVOCs
may not exceed 50,000 PPB
NA = Not Analyzed

# ANALYTICAL SUMMARY TABLE III
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

**Semi-Volatile Organic Compounds by 8270**
**UG/KG**

| Parameter | NYSDEC Recommended Cleanup Objective | GEO-101 07/18/00 | SS-1 07/06/00 | SS-2 07/07/00 | SS-7 07/05/00 | SS-9 07/05/00 | SS-10 07/05/00 | SS-12 07/05/00 | SS-14 07/06/00 | SS-16 07/06/00 | SS-17 07/06/00 | SS-18 07/06/00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-Nitrophenol | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acenaphthene | 50,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Acenaphthylene | 41,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Aniline | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Anthracene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(a)anthracene | 224 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzidine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(a)pryene | 61 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(b)fluoranthene | 1,100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(g,h,I)perylene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(k)fluoranthene | 1,100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzoic acid | 50,000* | ND | ND | ND | ND | ND | 2,400 | ND | ND | 410 | ND | ND |
| Benzyl alcholol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethoxy)methane | 59,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethyl)ether | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroisopropyl)ether | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-ethylhexyl)phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Butyl benzyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbazole | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chrysene | 400 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Di-n-butyl phthalate | 8,100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Di-n-octyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibenz(a,h)anthracene | 14 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibenzofuran | 6,200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Diethyl phthalate | 710 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dimethyl phthalate | 2,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Fluoranthene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Fluorene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobenzene | 410 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from HWR TAGM 4046
* Per TAGM 4046 individual SVOCs
may not exceed 50,000 PPB
NA = Not Analyzed

# ANALYTICAL SUMMARY TABLE III
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

## Semi-Volatile Organic Compounds by 8270
## UG/KG

| Parameter | NYSDEC Recommended Cleanup Objective | **GEO-101** 07/18/00 | **SS-1** 07/06/00 | **SS-2** 07/07/00 | **SS-7** 07/05/00 | **SS-9** 07/05/00 | **SS-10** 07/05/00 | **SS-12** 07/05/00 | **SS-14** 07/06/00 | **SS-16** 07/06/00 | **SS-17** 07/06/00 | **SS-18** 07/06/00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorocyclopentadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachloroethane | 50,000* | ND | ND | ND | ND | ND | 5,100 | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 3,200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Isophorone | 4,400 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-Nitrosodi-n-propylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-Nitrosodimethylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| N-Nitrosodiphenylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Napthalene | 13,000 | ND | ND | ND | ND | ND | 2,900 | ND | ND | ND | ND | ND |
| Nitrobenzene | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Pentachlorophenol | 1,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Phenanthrene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Phenol | 30 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Pyrene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Total SVOC's** | | **0** | **0** | **36714** | **36712** | **36712** | **13,600** | **36712** | **36713** | **37123** | **36713** | **36713** |
| | | | | | | | | | | | | |
| Total Organic Carbon (MG/KG) | | NA | 2,500 | NA | NA | NA | NA | NA | 3,400 | NA | NA | NA |

ND = Not Detected
Cleanup Objectives from HWR TAGM 4046
* Per TAGM 4046 individual SVOCs
may not exceed 50,000 PPB
NA = Not Analyzed

## ANALYTICAL SUMMARY TABLE III
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

**Semi-Volatile Organic Compounds by 8270**
**UG/KG**

| Parameter | NYSDEC Recommended Cleanup Objective | **SS-19** 4'-8' 07/06/00 | **SS-20** 8-12' 07/06/00 | **SS-21** 8-12' 07/06/00 | **SU-17** surface 07/07/00 | **SU-18** surface 07/07/00 | **SU-19** surface 07/07/00 |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 50,000* | ND | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 100 | ND | ND | ND | ND | ND | ND |
| 2,4,6-Trichlorophenol | 50,000* | ND | ND | ND | ND | ND | ND |
| 2,4-Dichlorophenol | 200 | ND | ND | ND | ND | ND | ND |
| 2,4-Dimethylphenol | 50,000* | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrophenol | 200 | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrotoluene | 50,000* | ND | ND | ND | ND | ND | ND |
| 2,6-Dichlorophenol | 50,000* | ND | ND | ND | ND | ND | ND |
| 2,6-Dinitrotoluene | 1000 | ND | ND | ND | ND | ND | ND |
| 2-Chloronaphthane | 50,000* | ND | ND | ND | ND | ND | ND |
| 2-Chlorophenol | 50,000* | ND | ND | ND | ND | ND | ND |
| 2-Methylnapthalene | 354 | ND | ND | ND | ND | ND | ND |
| 2-Methylphenol | 100 | ND | ND | ND | ND | ND | ND |
| 2-Nitroaniline | 430 | ND | ND | ND | ND | ND | ND |
| 2-Nitrophenol | 330 | ND | ND | ND | ND | ND | ND |
| 3,3'-Dichlorobenzidine | 50,000* | ND | ND | ND | ND | ND | ND |
| 3-Nitroaniline | 500 | ND | ND | ND | ND | ND | ND |
| 4,6-Dinitro-2-methylphenol | 50,000* | ND | ND | ND | ND | ND | ND |
| 4-Bromophenyl phenyl ether | 50,000* | ND | ND | ND | ND | ND | ND |
| 4-Chloro-3-methylphenol | 240 | ND | ND | ND | ND | ND | ND |
| 4-Chloroaniline | 220 | ND | ND | ND | ND | ND | ND |
| 4-Chlorophenyl phenyl ether | 50,000* | ND | ND | ND | ND | ND | ND |
| 4-Methlphenol | 900 | ND | ND | ND | ND | ND | ND |
| 4-Nitroaniline | 50,000* | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from HWR TAGM 4046
* Per TAGM 4046 individual SVOCs
may not exceed 50,000 PPB
NA = Not Analyzed

# ANALYTICAL SUMMARY TABLE III
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

## Semi-Volatile Organic Compounds by 8270
## UG/KG

| Parameter | NYSDEC Recommended Cleanup Objective | **SS-19** 07/06/00 | **SS-20** 07/06/00 | **SS-21** 07/06/00 | **SU-17** 07/07/00 | **SU-18** 07/07/00 | **SU-19** 07/07/00 |
|---|---|---|---|---|---|---|---|
| 4-Nitrophenol | 100 | ND | ND | ND | ND | ND | ND |
| Acenaphthene | 50,000 | ND | ND | ND | ND | ND | 260 J |
| Acenaphthylene | 41,000 | ND | ND | ND | ND | ND | ND |
| Aniline | 100 | ND | ND | ND | ND | ND | ND |
| Anthracene | 50,000* | ND | ND | ND | ND | ND | 670 J |
| Benzo(a)anthracene | 224 | ND | ND | ND | ND | ND | 1,800 |
| Benzidine | 50,000* | ND | ND | ND | ND | ND | ND |
| Benzo(a)pryene | 61 | ND | ND | ND | ND | ND | 2,000 |
| Benzo(b)fluoranthene | 1,100 | ND | ND | ND | ND | ND | ND |
| Benzo(g,h,I)perylene | 50,000* | ND | ND | ND | ND | ND | 1,800 |
| Benzo(k)fluoranthene | 1,100 | ND | ND | ND | ND | ND | 400 J |
| Benzoic acid | 50,000* | ND | ND | ND | ND | ND | ND |
| Benzyl alcholol | 50,000* | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethoxy)methane | 59,000* | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethyl)ether | 50,000* | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroisopropyl)ether | 50,000* | ND | ND | ND | ND | ND | ND |
| Bis(2-ethylhexyl)phthalate | 50,000* | ND | ND | ND | ND | ND | 240 J |
| Butyl benzyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND |
| Carbazole | 50,000* | ND | ND | ND | ND | ND | 460 J |
| Chrysene | 400 | ND | ND | ND | ND | ND | 2,100 |
| Di-n-butyl phthalate | 8,100 | ND | ND | ND | ND | ND | ND |
| Di-n-octyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND |
| Dibenz(a,h)anthracene | 14 | ND | ND | ND | ND | ND | ND |
| Dibenzofuran | 6,200 | ND | ND | ND | ND | ND | ND |
| Diethyl phthalate | 710 | ND | ND | ND | ND | ND | ND |
| Dimethyl phthalate | 2,000 | ND | ND | ND | ND | ND | ND |
| Fluoranthene | 50,000* | ND | ND | ND | 4,300 | 4,800 | 3,800 |
| Fluorene | 50,000* | ND | ND | ND | ND | ND | 220 J |
| Hexachlorobenzene | 410 | ND | ND | ND | ND | ND | ND |

ND = Not Detected
Cleanup Objectives from HWR TAGM 4046
* Per TAGM 4046 individual SVOCs
may not exceed 50,000 PPB
NA = Not Analyzed

# ANALYTICAL SUMMARY TABLE III
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

**Semi-Volatile Organic Compounds by 8270**
**UG/KG**

| **Parameter** | NYSDEC Recommended Cleanup Objective | **SS-19** 07/06/00 | **SS-20** 07/06/00 | **SS-21** 07/06/00 | **SU-17** 07/07/00 | **SU-18** 07/07/00 | **SU-19** 07/07/00 |
|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | 50,000* | ND | ND | ND | ND | ND | ND |
| Hexachlorocyclopentadiene | 50,000* | ND | ND | ND | ND | ND | ND |
| Hexachloroethane | 50,000* | ND | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 3,200 | ND | ND | ND | ND | ND | 1,500 J |
| Isophorone | 4,400 | ND | ND | ND | ND | ND | ND |
| N-Nitrosodi-n-propylamine | 50,000* | ND | ND | ND | ND | ND | ND |
| N-Nitrosodimethylamine | 50,000* | ND | ND | ND | ND | ND | ND |
| N-Nitrosodiphenylamine | 50,000* | ND | ND | ND | ND | ND | ND |
| Napthalene | 13,000 | ND | ND | ND | ND | ND | 210 J |
| Nitrobenzene | 200 | ND | ND | ND | ND | ND | ND |
| Pentachlorophenol | 1,000 | ND | ND | ND | ND | ND | ND |
| Phenanthrene | 50,000* | ND | ND | ND | ND | 3,900 | 2,800 |
| Phenol | 30 | ND | ND | ND | ND | ND | ND |
| Pyrene | 50,000* | ND | ND | ND | 4,300 | 4,500 | 3,700 |
| **Total SVOC's** | | **36713** | **36713** | **36713** | **8,600** | **13,200** | **21,960** |
| | | | | | | | |
| Total Organic Carbon (MG/KG) | | NA | NA | NA | NA | NA | NA |

J - Estimated Value
BJ - Estimate Value also found in associated blank.
ASP Analysis: TP-3, SS-2, SS-9, SS-14, SU-19
TP-2 is the MS/MSD location

ND = Not Detected
Cleanup Objectives from HWR TAGM 4046
* Per TAGM 4046 individual SVOCs
may not exceed 50,000 PPB
NA = Not Analyzed

# ANALYTICAL SUMMARY TABLE IV
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, METALS AND PCBS

## RCRA 8 Metals
## MG/KG

| **Parameter** | Recommended NYSDEC Cleanup Objective, PPM | **TP-1** | **TP-2*** | **TP-3** | **TP-4** | **TP-5** | **TP-6** | **TP-7** | **TP-8** | **PP-9** | **PP-9 (FD)** | **PP-10** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Depth | | 9.0' | 9.0' | 9.0' | 9.0' | 9.0' | 9.0' | 9.0' | 9.0 + ' | 3.0' | 3.0' | 3.0' |
| | | 6/28/2000 | 6/29/2000 | 6/28/2000 | 6/29/2000 | 6/28/2000 | 6/29/2000 | 6/28/2000 | 6/29/2000 | 6/30/2000 | 6/30/2000 | 6/30/2000 |
| Arsenic | 7.5 or SB | ND | ND | 4.4 | ND | ND | ND | ND | ND | **7.8** | 5.7 | 6.5 |
| Barium | 300 or SB | 15 | 26 | 45.5 E | 17 | 21 | 16 | 65 | 28 | 53 | 38 | 31 |
| Cadmium | 1.0 or SB | ND | ND | 0.17 N | ND | ND | ND | **1.2** | ND | **1.1** | 0.74 | 0.85 |
| Chromium | 10 or SB | 3.1 | 6.3 | 7.9 E | 4.2 | 4.6 | 4.1 | **11** | 5.3 | 14 | 9.5 | 9.9 |
| Lead | SB | 6.4 | 5.2 | 96.4 E | 3.4 | 9.2 | ND | 350 | 12 | 15 | 24 | 36 |
| Selenium | 0.1 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Silver | 2.0 or SB | ND | ND | ND | ND | ND | ND | **45** | ND | ND | ND | ND |
| Mercury | 0.1 | ND | ND | 0.1 | ND | ND | ND | ND | ND | 0.097 | ND | ND |
| | | | | | | | | | | | | |
| Percent Solids | | NA | NA | 82.3 | NA | NA | NA | NA | NA | NA | NA | NA |

## PCB'S
## UG/KG

| **Parameter** | Recommended NYSDEC Cleanup Objective | **TP-1** | **TP-2**** | **TP-3** | **TP-4** | **TP-5** | **TP-6** | **TP-7** | **TP-8** | **PP-9** | **PP-9 (FD)** | **PP-10** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 6/28/2000 | 6/29/2000 | 6/28/2000 | 6/29/2000 | 6/28/2000 | 6/29/2000 | 6/28/2000 | 6/29/2000 | 6/30/2000 | 6/30/2000 | 6/30/2000 |
| Aroclor 1016 | 10,000 PPB * | ND | ND | NA | ND | ND | ND | ND | ND | NA | NA | NA |
| Aroclor 1221 | 10,000 PPB * | ND | ND | NA | ND | ND | ND | ND | ND | NA | NA | NA |
| Aroclor 1232 | 10,000 PPB * | ND | ND | NA | ND | ND | ND | ND | ND | NA | NA | NA |
| Aroclor 1242 | 10,000 PPB* | ND | ND | NA | ND | ND | ND | ND | ND | NA | NA | NA |
| Aroclor 1248 | 10,000 PPB* | ND | ND | NA | ND | ND | ND | ND | ND | NA | NA | NA |
| Aroclor 1254 | 10,000 PPB* | ND | ND | NA | ND | ND | ND | ND | ND | NA | NA | NA |
| Aroclor 1260 | 10,000 PPB* | ND | ND | NA | ND | ND | ND | ND | ND | NA | NA | NA |

**Legend**

SB = Site Background Cleanup Objectives from NYSDEC HWR TAGM 4046

ND = Not Detected

* recommended PCB Cleanup Objective 1,000 PPB for surface soil, 10,000 PPB for subsurface soil

**Bold Values =** Above Cleanup Objectives from NYSDEC HWR TAGM 4046

## ANALYTICAL SUMMARY TABLE IV
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, METALS AND PCBS

### RCRA 8 Metals
### MG/KG

| **Parameter** | Recommended NYSDEC Cleanup Objective, PPM | **GEO-101**<br>8.0'<br>7/18/2000 | **SS-1**<br>14'<br>7/6/2000 | **SS-2**<br>12'<br>7/7/2000 | **SS-7**<br>8-12'<br>7/5/2000 | **SS-9**<br>4-8'<br>7/5/2000 | **SS-10**<br>4-8'<br>7/5/2000 | **SS-12**<br>0-4'<br>7/5/2000 | **SS-14**<br>4-8'<br>7/6/2000 | **SS-16**<br>8-12'<br>7/6/2000 | **SS-17**<br>12-13.5'<br>7/6/2000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 7.5 or SB | ND | ND | 1.1 | ND | 2 | ND | 12 | ND | 6 | ND |
| Barium | 300 or SB | 22 | 15 | 19.2 E | 18 | 84.2 E | 22 | 110 | 31 | 22 | 12 |
| Cadmium | 1.0 or SB | 0.64 | ND | 0.04 N | ND | 0.04 N | 0.66 | **1.2** | 0.67 | 0.71 | ND |
| Chromium | 10 or SB | 4.7 | 3 | 5.0 E | 3.9 | 10.0 E | 4.9 | **17** | 7.2 | 8.5 | 3.9 |
| Lead | SB | 6.0 | ND | 2.3 E | ND | 9.7 E | 7.3 | 11 | 26 | 11 | ND |
| Selenium | 0.1 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Silver | 2.0 or SB | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Mercury | 0.1 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| | | | | | | | | | | | |
| Percent Solids | | NA | NA | 88 | NA | NA | NA | NA | 90 | NA | NA |
| Ethylene Glycol | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

### PCB'S
### UG/KG

| **Parameter** | Recommended NYSDEC Cleanup Objective | **GEO-101**<br>7/18/2000 | **SS-1**<br>7/6/2000 | **SS-2**<br>7/7/2000 | **SS-7**<br>7/5/2000 | **SS-9**<br>7/5/2000 | **SS-10**<br>7/5/2000 | **SS-12**<br>7/5/2000 | **SS-14**<br>7/6/2000 | **SS-16**<br>7/6/2000 | **SS-17**<br>7/6/2000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | 10,000 PPB* | ND | NA | NA | NA | NA | NA | NA | ND | NA | ND |
| Aroclor 1221 | 10,000 PPB* | ND | NA | NA | NA | NA | NA | NA | ND | NA | ND |
| Aroclor 1232 | 10,000 PPB* | ND | NA | NA | NA | NA | NA | NA | ND | NA | ND |
| Aroclor 1242 | 10,000 PPB* | ND | NA | NA | NA | NA | NA | NA | ND | NA | ND |
| Aroclor 1248 | 10,000 PPB* | ND | NA | NA | NA | NA | NA | NA | ND | NA | ND |
| Aroclor 1254 | 10,000 PPB* | ND | NA | NA | NA | NA | NA | NA | ND | NA | ND |
| Aroclor 1260 | 10,000 PPB* | ND | NA | NA | NA | NA | NA | NA | ND | NA | ND |

**Legend**

SB = Site Background        Cleanup Objectives from NYSDEC HWR TAGM 4046
ND = Not Detected
* recommended PCB Cleanup Objective 1,000 PPB for surface soil, 10,000 PPB for subsurface soil
**Bold Values =** Above Cleanup Objectives from NYSDEC HWR TAGM 4046

# ANALYTICAL SUMMARY TABLE IV
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2000 TEST PIT, PUMP PIT AND SUBSURFACE SOIL RESULTS, METALS AND PCBS

## RCRA 8 Metals
## MG/KG

| **Parameter** | Recommended NYSDEC Cleanup Objective, PPM | **SS-18**<br>4-8'<br>7/6/2000 | **SS-19**<br>4-8'<br>7/6/2000 | **SS-20**<br>8-12'<br>7/6/2000 | **SS-21**<br>8-12'<br>7/6/2000 | **SU-17**<br>surface<br>7/7/2000 | **SU-18**<br>surface<br>7/7/2000 | **SU-19**<br>surface<br>7/7/2000 |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7.5 or SB | 6.5 | **12** | ND | ND | 8.3 | ND | NA |
| Barium | 300 or SB | 43 | 61 | 19 | 21 | 46 | 34 | NA |
| Cadmium | 1.0 or SB | 0.78 | ND | ND | ND | 4.9 | ND | NA |
| Chromium | 10 or SB | 9.5 | **14** | 5.8 | 3.3 | 10 | 8 | NA |
| Lead | SB | 6.4 | 17 | 12 | 4.9 | 190 | 89 | NA |
| Selenium | 0.1 | ND | ND | ND | ND | ND | ND | NA |
| Silver | 2.0 or SB | ND | ND | ND | ND | ND | ND | NA |
| Mercury | 0.1 | ND | ND | ND | ND | 0.1 | ND | NA |
| | | | | | | | | |
| Percent Solids | | 86.5 | 84 | NA | NA | NA | NA | NA |
| Ethylene Glycol | | ND | ND | NA | NA | NA | NA | NA |

## PCBs
## UG/KG

| **Parameter** | Recommended NYSDEC Cleanup Objective | **SS-18**<br>7/6/2000 | **SS-19**<br>7/6/2000 | **SS-20**<br>7/6/2000 | **SS-21**<br>7/6/2000 | **SU-17**<br>7/7/2000 | **SU-18**<br>7/7/2000 | **SU-19**<br>7/7/2000 |
|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | 10,000 PPB* | NA | ND | NA | NA | ND | ND | ND |
| Aroclor 1221 | 10,000 PPB* | NA | ND | NA | NA | ND | ND | ND |
| Aroclor 1232 | 10,000 PPB* | NA | ND | NA | NA | ND | ND | ND |
| Aroclor 1242 | 10,000 PPB* | NA | ND | NA | NA | ND | ND | ND |
| Aroclor 1248 | 10,000 PPB* | NA | ND | NA | NA | ND | ND | ND |
| Aroclor 1254 | 10,000 PPB* | NA | ND | NA | NA | ND | ND | ND |
| Aroclor 1260 | 10,000 PPB* | NA | ND | NA | NA | ND | ND | ND |

**Legend**
Cleanup Objectives from NYSDEC HWR TAGM 4046
N - Spike sample recovery not within control limits
SB = Site Background
ND = Not Detected
B - Found is associated blank as well
E - Concentration exceeds calibration range
ASP Analysis: TP-3, SS-2, SS-9, SS-14, SS-19
**TP-2 is the MS/MSD location.
* recommended PCB Cleanup Objective 1,000 PPB for surface soil, 10,000 PPB for subsurface soil
**Bold Values =** Above Cleanup Objectives from NYSDEC HWR TAGM 4046

# ANALYTICAL SUMMARY TABLE V
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2003 TEST PIT AND SURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS

Test Trench (TT) or Surface Soil (SSU), location ID, collection Interval (ft below grade) & sample date

| ***8260B TAL<br>UG/KG (PPB)<br>VOC Compound*** | NYSDEC Recommended Cleanup Objective | TT-1<br>1.0-2.0<br>6/18/2003 | TT-2<br>1.7-2.8'<br>6/17/2003 | TT-3<br>0.0-3.0<br>6/17/2003 | TT-3 Dup<br>0.0-3.0<br>6/17/2003 | TT-4<br>5.0-5.5<br>6/20/2003 | TT-4A<br>Sidewall 5.0<br>6/20/2003 | TT-4B<br>8.0-9.0<br>6/20/2003 | TT-5<br>1.0-1.7<br>6/17/2003 | TT-6<br>0.0-2.0<br>6/17/2003 |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 200 | ND | 100 | ND | ND | ND | ND | ND | ND | ND |
| Benzene | 6 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromoform | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (MEK) | 300 | ND | 24 | ND | ND | ND | ND | ND | ND | ND |
| Methyl tert butyl ether | 120 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon Disulfide | 2,700 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon Tetrachloride | 600 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | 1,700 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | 1,900 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromo-3-chloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Cyclohexane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibromochloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | 1,600 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 8,500 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 7,900 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dichlorodifluoromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethane | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 400 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND=Not Detected
J=Estimated Value
D=Dilution NA = Not Applicable-No Cleanup Objective TAGM 4046
**Bold** = Above Cleanup Objectives from NYSDEC HWR TAGM 4046

**ANALYTICAL SUMMARY TABLE V**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 TEST PIT AND SURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS**

Test Trench (TT) or Surface Soil (SSU), location ID, collection Interval (ft below grade) & sample date

| ***8260B TAL*** | NYSDEC | TT-1 | TT-2 | TT-3 | TT-3 Dup | TT-4 | TT-4A | TT-4B | TT-5 | TT-6 |
|---|---|---|---|---|---|---|---|---|---|---|
| ***UG/KG (PPB)*** | Recommended | 1.0-2.0 | 1.7-2.8' | 0.0-3.0 | 0.0-3.0 | 5.0-5.5 | Sidewall 5.0 | 8.0-9.0 | 1.0-1.7 | 0.0-2.0 |
| ***VOC Compound*** | Cleanup Objective | 6/18/2003 | 6/17/2003 | 6/17/2003 | 6/17/2003 | 6/20/2003 | 6/20/2003 | 6/20/2003 | 6/17/2003 | 6/17/2003 |
| 1,2-Dichloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | 5,500 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Hexanone | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Isopropylbenzene | 500 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methyl acetate | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylcyclohexane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene Chloride | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone (MIBK) | 1,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Styrene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 600 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 1,400 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | 1,500 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 3,400 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 800 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 700 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichlorofluoromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloro-1,2,2-trifluor | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Vinyl chloride | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| o-Xylene | 1,200 total | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| m+p-Xylene | | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Total Detected VOCs | NA | ND | 124 | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND=Not Detected
J=Estimated Value
D=Dilution NA = Not Applicable-No Cleanup Objective TAGM 4046
**Bold** = Above Cleanup Objectives from NYSDEC HWR TAGM 4046

**ANALYTICAL SUMMARY TABLE V**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 TEST PIT AND SURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS**

Test Trench (TT) or Surface Soil (SSU), location ID, collection Interval (ft below grade) & sample date

| ***8260B TAL***<br>***UG/KG (PPB)***<br>***VOC Compound*** | NYSDEC Recommended Cleanup Objective | TT-7<br>2.5-3.0<br>6/17/2003 | TT-8<br>0.0-3.0<br>6/16/2003 | TT-8 Dup<br>0.0-3.0<br>6/16/2003 | TT-9<br>1.0-3.4<br>6/16/2003 | TT-10<br>0.0-3.5<br>6/16/2003 | TT-11<br>3.0-4.5<br>6/16/2003 | TT-12<br>1.0-2.4<br>6/17/2003 | TT-12A<br>14-14.2<br>6/17/2003 | TT-13<br>~5.0<br>6/18/2003 |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 200 | ND | ND | ND | ND | ND | ND | **300 D** | ND | ND |
| Benzene | 6 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromoform | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (MEK) | 300 | ND | ND | ND | ND | ND | ND | 47 | ND | ND |
| Methyl tert butyl ether | 120 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon Disulfide | 2,700 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon Tetrachloride | 600 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | 1,700 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | 1,900 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromo-3-chloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Cyclohexane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibromochloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | 1,600 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 8,500 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 7,900 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Dichlorodifluoromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethane | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 400 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND=Not Detected
J=Estimated Value
D=Dilution NA = Not Applicable-No Cleanup Objective TAGM 4046
**Bold** = Above Cleanup Objectives from NYSDEC HWR TAGM 4046

**ANALYTICAL SUMMARY TABLE V**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 TEST PIT AND SURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS**

Test Trench (TT) or Surface Soil (SSU), location ID, collection Interval (ft below grade) & sample date

| ***8260B TAL*** | NYSDEC | TT-7 | TT-8 | TT-8 Dup | TT-9 | TT-10 | TT-11 | TT-12 | TT-12A | TT-13 |
|---|---|---|---|---|---|---|---|---|---|---|
| ***UG/KG (PPB)*** | Recommended | 2.5-3.0 | 0.0-3.0 | 0.0-3.0 | 1.0-3.4 | 0.0-3.5 | 3.0-4.5 | 1.0-2.4 | 14-14.2 | ~5.0 |
| ***VOC Compound*** | Cleanup Objective | 6/17/2003 | 6/16/2003 | 6/16/2003 | 6/16/2003 | 6/16/2003 | 6/16/2003 | 6/17/2003 | 6/17/2003 | 6/18/2003 |
| 1,2-Dichloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | 5,500 | ND | ND | ND | ND | ND | ND | ND | 19 | ND |
| 2-Hexanone | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Isopropylbenzene | 500 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methyl acetate | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylcyclohexane | NA | ND | ND | ND | ND | ND | ND | ND | 21 | ND |
| Methylene Chloride | 100 | ND | ND | ND | ND | ND | ND | ND | 6.2 | ND |
| 4-Methyl-2-pentanone (MIBK) | 1,000 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Styrene | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 600 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 1,400 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | 1,500 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 3,400 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 800 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 700 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichlorofluoromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloro-1,2,2-trifluor | NA | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Vinyl chloride | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| o-Xylene | 1,200 total | ND | ND | ND | ND | ND | ND | ND | 18 | ND |
| m+p-Xylene |  | ND | ND | ND | ND | ND | ND | ND | 48 | ND |
| Total Detected VOCs | NA | ND | ND | ND | ND | ND | ND | 347 | 112.2 | ND |

**Legend**

ND=Not Detected
J=Estimated Value
D=Dilution NA = Not Applicable-No Cleanup Objective TAGM 4046
**Bold** = Above Cleanup Objectives from NYSDEC HWR TAGM 4046

**ANALYTICAL SUMMARY TABLE V**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 TEST PIT AND SURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS**

Test Trench (TT) or Surface Soil (SSU), location ID, collection Interval (ft below grade) & sample date

| ***8260B TAL UG/KG (PPB) VOC Compound*** | NYSDEC Recommended Cleanup Objective | TT-13A ~8.0 6/18/2003 | Foundation #1 ~3.5 6/18/2003 | Foundation #2 ~3.0 6/18/2003 | Foundation #3 ~4.0 6/18/2003 | SSU-2 6/20/2003 | SSU-6 6/20/2003 | SSU-7 6/20/2003 | Trip Blank 6/17/2003 |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 200 | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzene | 6 | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromoform | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (MEK) | 300 | ND | ND | ND | ND | ND | ND | ND | ND |
| Methyl tert butyl ether | 120 | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon Disulfide | 2,700 | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon Tetrachloride | 600 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | 1,700 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | 1,900 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 300 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromo-3-chloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| Cyclohexane | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibromochloromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | 1,600 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 8,500 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 7,900 | ND | ND | ND | ND | ND | ND | ND | ND |
| Dichlorodifluoromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethane | 200 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 300 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 400 | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 300 | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | 300 | ND | ND | ND | ND | ND | ND | ND | ND |

**Legend**
ND=Not Detected
J=Estimated Value
D=Dilution NA = Not Applicable-No Cleanup Objective TAGM 4046
**Bold** = Above Cleanup Objectives from NYSDEC HWR TAGM 4046

**ANALYTICAL SUMMARY TABLE V**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 TEST PIT AND SURFACE SOIL RESULTS, VOLATILE ORGANIC COMPOUNDS**

Test Trench (TT) or Surface Soil (SSU), location ID, collection Interval (ft below grade) & sample date

| ***8260B TAL***<br>***UG/KG (PPB)***<br>***VOC Compound*** | NYSDEC<br>Recommended<br>Cleanup Objective | TT-13A<br>~8.0<br>6/18/2003 | Foundation #1<br>~3.5<br>6/18/2003 | Foundation #2<br>~3.0<br>6/18/2003 | Foundation #3<br>~4.0<br>6/18/2003 | SSU-2<br>6/20/2003 | SSU-6<br>6/20/2003 | SSU-7<br>6/20/2003 | Trip Blank<br>6/17/2003 |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloropropane | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | 5,500 | **12,000** | ND | **5,300 D** | ND | ND | ND | ND | ND |
| 2-Hexanone | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| Isopropylbenzene | 500 | **2400 J** | ND | ND | ND | ND | ND | ND | ND |
| Methyl acetate | NA | ND | ND | ND | ND | 4 J | 4 J | ND | ND |
| Methylcyclohexane | NA | 6,000 | ND | 14,000 D | ND | ND | ND | ND | ND |
| Methylene Chloride | 100 | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone (MIBK) | 1,000 | ND | ND | ND | ND | ND | ND | ND | ND |
| Styrene | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 600 | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethene | 1,400 | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | 1,500 | 990 J | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 3,400 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 800 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 700 | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichlorofluoromethane | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloro-1,2,2-trifluor | NA | ND | ND | ND | ND | ND | ND | ND | ND |
| Vinyl chloride | 200 | ND | ND | ND | ND | ND | ND | ND | ND |
| o-Xylene | 1,200 total | **14,000** | ND | **6,100 D** | ND | ND | ND | ND | ND |
| m+p-Xylene | | **52,000** | ND | **21,000 D** | ND | ND | ND | ND | ND |
| Total Detected VOCs | NA | 87,390 J | ND | 46,400 | 0 | 4 J | 4J | ND | ND |

**Legend**
ND=Not Detected
J=Estimated Value
D=Dilution NA = Not Applicable-No Cleanup Objective TAGM 4046
**Bold** = Above Cleanup Objectives from NYSDEC HWR TAGM 4046

# ANALYTICAL SUMMARY TABLE VI
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date

| ***8270C***<br>***UG/KG (PPB)***<br>***SVOC Compound*** | NYSDEC Recommended Cleanup Objective | TT-1<br>1.0-2.0'<br>6/18/2003 | TT-2<br>1.7-2.8'<br>6/17/2003 | TT-3<br>0.0-3.0<br>6/17/2003 | TT-3 DUP<br>0.0-3.0<br>6/17/2003 | TT-4<br>5.0-5.5<br>6/20/2003 | TT-4A<br>Sidewall 5.0<br>6/20/2003 | TT-4B<br>8.0-9.0<br>6/20/2003 |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Acenaphthylene | 41,000 | ND | ND | ND | ND | ND | ND | ND |
| Acetophenone | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Anthracene | 50,000 * | ND | ND | ND | ND | 490 J | ND | ND |
| Atrazine | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Benzaldehyde | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Benzo(a)anthracene | 224 or MDL | ND | **2,700** | ND | ND | **1,500 J** | ND | ND |
| Benzo(a)pyrene | 61 or MDL | ND | **2,400** | ND | ND | **1,300 J** | ND | ND |
| Benzo(b)fluoranthene | 1,000 or MDL | ND | **2,000** | ND | ND | **1,400 J** | ND | ND |
| Benzo(g,h,i)perylene | 50,000 * | ND | 1,700 | ND | ND | 710 J | ND | ND |
| Benzo(k)fluoranthene | 1,100 or MDL | ND | **2,000** | ND | ND | 940 J | ND | ND |
| Biphenyl | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Butyl benzyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Di-n-butyl phthalate | 8,100 | ND | ND | 83 J | 40 JB | ND | ND | ND |
| Caprolactam | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Carbazole | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 3,200 | ND | 1,600 | ND | ND | 1,100 J | ND | ND |
| 4-Chloroaniline | 220 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethoxyl)methane | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethyl)ether | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| 2-Chloronaphthalene | 50,000 * | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND=Not Detected

* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.

J=Estimated

**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

# ANALYTICAL SUMMARY TABLE VI
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date

| ***8270C***<br>***UG/KG (PPB)***<br>***SVOC Compound*** | NYSDEC<br>Recommended<br>Cleanup Objective | TT-1<br>1.0-2.0'<br>6/18/2003 | TT-2<br>1.7-2.8'<br>6/17/2003 | TT-3<br>0.0-3.0<br>6/17/2003 | TT-3 DUP<br>0.0-3.0<br>6/17/2003 | TT-4<br>5.0-5.5<br>6/20/2003 | TT-4A<br>Sidewall 5.0<br>6/20/2003 | TT-4B<br>8.0-9.0<br>6/20/2003 |
|---|---|---|---|---|---|---|---|---|
| 2-Chlorophenol | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| 2,2-oxybis(1-Chloropropane) | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Chrysene | 400 | ND | **2,600** | ND | ND | **1,500 J** | ND | ND |
| Dibenz(a,h)anthracene | 14 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Dibenzofuran | 6,200 | ND | ND | ND | ND | ND | ND | ND |
| 3,3'-Dichlorobenzidine | N/A | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dichlorophenol | 400 | ND | ND | ND | ND | ND | ND | ND |
| Diethylphthalate | 7,100 | ND | ND | ND | ND | ND | ND | ND |
| Dimethyl phthalate | 2,000 | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dimethylphenol | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrophenol | 200 | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrotoluene | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 2,6-Dinitrotoluene | 1,000 | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-ethylhexyl)phthalate | 50,000* | ND | ND | 110 JB | ND | ND | ND | ND |
| Fluoranthene | 50,000 * | ND | 5,500 | 42 J | ND | 3,700 J | ND | ND |
| Fluorene | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobenzene | 410 | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorocyclopentadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Hexachloroethane | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Isophorone | 4,400 | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND=Not Detected

* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.

J=Estimated

**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

## ANALYTICAL SUMMARY TABLE VI
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date

| ***8270C*** ***UG/KG (PPB)*** ***SVOC Compound*** | NYSDEC Recommended Cleanup Objective | TT-1 1.0-2.0' 6/18/2003 | TT-2 1.7-2.8' 6/17/2003 | TT-3 0.0-3.0 6/17/2003 | TT-3 DUP 0.0-3.0 6/17/2003 | TT-4 5.0-5.5 6/20/2003 | TT-4A Sidewall 5.0 6/20/2003 | TT-4B 8.0-9.0 6/20/2003 |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnapthalene | 36,400 | ND | ND | ND | ND | ND | ND | ND |
| 4,6-Dinitro-2-methylphenol | 50,000 | ND | ND | ND | ND | ND | ND | ND |
| 4-Chloro-3-methylphenol | 240 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 2-Methylphenol | 100 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Methylphenol | 900 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Napthalene | 13,000 | ND | ND | ND | ND | ND | ND | ND |
| 2-Nitroaniline | 430 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 3-Nitroaniline | 500 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Nitroaniline | 50,000 | ND | ND | ND | ND | ND | ND | ND |
| Nitrobenzene | 200 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 2-Nitrophenol | 330 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Nitrophenol | 100 or MDL | ND | ND | ND | ND | ND | ND | ND |
| N-Nitrosodiphenylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Di-n-octyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Pentachlorophenol | 1,000 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Phenanthrene | 50,000 * | ND | 2,100 | ND | ND | 2,200 J | ND | ND |
| Phenol | 30 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Bromophenyl phenylether | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 4-Chlorophenyl-phenylether | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| N-Nitroso-Di-n-propylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Pyrene | 50,000 * | ND | 4,000 | ND | ND | 2,700 J | ND | ND |
| 2,4,6-Trichlorophenol | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 100 | ND | ND | ND | ND | ND | ND | ND |
| Total SVOC's | 500,000 | ND | 26,600 | 235 JB | 40 JB | 17,540 J | ND | ND |

**Legend**

ND=Not Detected

* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.

J=Estimated

**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

**ANALYTICAL SUMMARY TABLE VI**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**

| | | Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ***8270C<br>UG/KG (PPB)<br>SVOC Compound*** | NYSDEC Recommended Cleanup Objective | TT-5<br>1.0-1.7<br>6/17/2003 | TT-6<br>0.0-2.0<br>6/17/2003 | TT-7<br>2.5-3.0<br>6/17/2003 | TT-8<br>0.0-3.0<br>6/16/2003 | TT-8 Dup<br>0.0-3.0<br>6/16/2003 | TT-9<br>1.0-3.4<br>6/16/2003 | TT-10<br>0.0-3.5<br>6/16/2003 |
| Acenaphthene | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Acenaphthylene | 41,000 | ND | ND | ND | ND | ND | ND | ND |
| Acetophenone | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Anthracene | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Atrazine | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Benzaldehyde | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Benzo(a)anthracene | 224 or MDL | 55 J | ND | ND | ND | ND | ND | ND |
| Benzo(a)pyrene | 61 or MDL | 60 J | ND | ND | ND | ND | ND | ND |
| Benzo(b)fluoranthene | 1,000 or MDL | 45 J | ND | ND | ND | ND | ND | ND |
| Benzo(g,h,i)perylene | 50,000 * | 55 J | ND | ND | ND | ND | ND | ND |
| Benzo(k)fluoranthene | 1,100 or MDL | 59 J | ND | ND | ND | ND | ND | ND |
| Biphenyl | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Butyl benzyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Di-n-butyl phthalate | 8,100 | 48 J | ND | ND | ND | ND | ND | ND |
| Caprolactam | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Carbazole | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 3,200 | 44 J | ND | ND | ND | ND | ND | ND |
| 4-Chloroaniline | 220 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethoxyl)methane | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethyl)ether | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| 2-Chloronaphthalene | 50,000 * | ND | ND | ND | ND | ND | ND | ND |

**Legend**
ND=Not Detected
* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.
J=Estimated
**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

**ANALYTICAL SUMMARY TABLE VI**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**

Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date

| ***8270C*** <br> ***UG/KG (PPB)*** <br> ***SVOC Compound*** | NYSDEC Recommended Cleanup Objective | TT-5 <br> 1.0-1.7 <br> 6/17/2003 | TT-6 <br> 0.0-2.0 <br> 6/17/2003 | TT-7 <br> 2.5-3.0 <br> 6/17/2003 | TT-8 <br> 0.0-3.0 <br> 6/16/2003 | TT-8 Dup <br> 0.0-3.0 <br> 6/16/2003 | TT-9 <br> 1.0-3.4 <br> 6/16/2003 | TT-10 <br> 0.0-3.5 <br> 6/16/2003 |
|---|---|---|---|---|---|---|---|---|
| 2-Chlorophenol | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| 2,2-oxybis(1-Chloropropane) | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Chrysene | 400 | 55 J | ND | ND | ND | ND | ND | ND |
| Dibenz(a,h)anthracene | 14 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Dibenzofuran | 6,200 | ND | ND | ND | ND | ND | ND | ND |
| 3,3'-Dichlorobenzidine | N/A | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dichlorophenol | 400 | ND | ND | ND | ND | ND | ND | ND |
| Diethylphthalate | 7,100 | ND | ND | ND | ND | ND | ND | ND |
| Dimethyl phthalate | 2,000 | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dimethylphenol | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrophenol | 200 | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrotoluene | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 2,6-Dinitrotoluene | 1,000 | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-ethylhexyl)phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Fluoranthene | 50,000 * | 94 J | 560 | 1,400 | ND | ND | ND | 610 |
| Fluorene | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobenzene | 410 | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorocyclopentadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Hexachloroethane | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Isophorone | 4,400 | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND=Not Detected
* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.
J=Estimated
**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

**ANALYTICAL SUMMARY TABLE VI**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**

Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date

| ***8270C*** ***UG/KG (PPB)*** ***SVOC Compound*** | NYSDEC Recommended Cleanup Objective | TT-5 1.0-1.7 6/17/2003 | TT-6 0.0-2.0 6/17/2003 | TT-7 2.5-3.0 6/17/2003 | TT-8 0.0-3.0 6/16/2003 | TT-8 Dup 0.0-3.0 6/16/2003 | TT-9 1.0-3.4 6/16/2003 | TT-10 0.0-3.5 6/16/2003 |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnapthalene | 36,400 | ND | ND | ND | ND | ND | ND | ND |
| 4,6-Dinitro-2-methylphenol | 50,000 | ND | ND | ND | ND | ND | ND | ND |
| 4-Chloro-3-methylphenol | 240 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 2-Methylphenol | 100 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Methylphenol | 900 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Napthalene | 13,000 | ND | ND | ND | ND | ND | ND | ND |
| 2-Nitroaniline | 430 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 3-Nitroaniline | 500 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Nitroaniline | 50,000 | ND | ND | ND | ND | ND | ND | ND |
| Nitrobenzene | 200 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 2-Nitrophenol | 330 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Nitrophenol | 100 or MDL | ND | ND | ND | ND | ND | ND | ND |
| N-Nitrosodiphenylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Di-n-octyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Pentachlorophenol | 1,000 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Phenanthrene | 50,000 * | 38 J | ND | ND | ND | ND | ND | ND |
| Phenol | 30 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Bromophenyl phenylether | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 4-Chlorophenyl-phenylether | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| N-Nitroso-Di-n-propylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Pyrene | 50,000 * | 81 J | 580 | 890 | ND | ND | ND | 420 |
| 2,4,6-Trichlorophenol | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 100 | ND | ND | ND | ND | ND | ND | ND |
| Total SVOC's | 500,000 | 643 J | 1,140 | 2,290 | ND | ND | ND | 1,030 |

**Legend**
ND=Not Detected
* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.
J=Estimated
**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

## ANALYTICAL SUMMARY TABLE VI
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date

| ***8270C*** | NYSDEC Recommended Cleanup Objective | TT-11 | TT-12 | TT-12A | TT-13 | TT-13A | Foundation #1 | Foundation #2 |
|---|---|---|---|---|---|---|---|---|
| ***UG/KG (PPB)*** | | 3.0-4.5 | 1.0-2.4 | 14-14.2 | ~5.0' | ~8.0' | ~3.5' | ~3.0' |
| ***SVOC Compound*** | | 6/16/2003 | 6/17/2003 | 6/17/2003 | 6/18/2003 | 6/18/2003 | 6/18/2003 | 6/18/2003 |
| Acenaphthene | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Acenaphthylene | 41,000 | ND | ND | ND | ND | ND | ND | ND |
| Acetophenone | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Anthracene | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Atrazine | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Benzaldehyde | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Benzo(a)anthracene | 224 or MDL | 65 J | ND | ND | ND | ND | 130 J | ND |
| Benzo(a)pyrene | 61 or MDL | 47 J | ND | ND | ND | ND | **94 J** | ND |
| Benzo(b)fluoranthene | 1,000 or MDL | 86 J | ND | ND | ND | ND | 120 J | ND |
| Benzo(g,h,i)perylene | 50,000 * | ND | ND | ND | ND | ND | 88 J | ND |
| Benzo(k)fluoranthene | 1,100 or MDL | 59 J | ND | ND | ND | ND | 78 J | ND |
| Biphenyl | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Butyl benzyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | 20,000 |
| Di-n-butyl phthalate | 8,100 | 110 J | ND | ND | ND | 53 J | 140 J | **10,000** |
| Caprolactam | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Carbazole | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 3,200 | 45 J | ND | ND | ND | ND | 80 J | ND |
| 4-Chloroaniline | 220 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethoxyl)methane | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethyl)ether | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| 2-Chloronaphthalene | 50,000 * | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND=Not Detected

* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.

J=Estimated

**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

# ANALYTICAL SUMMARY TABLE VI
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date

| ***8270C*** | NYSDEC | TT-11 | TT-12 | TT-12A | TT-13 | TT-13A | Foundation #1 | Foundation #2 |
|---|---|---|---|---|---|---|---|---|
| ***UG/KG (PPB)*** | Recommended | 3.0-4.5 | 1.0-2.4 | 14-14.2 | ~5.0' | ~8.0' | ~3.5' | ~3.0' |
| ***SVOC Compound*** | Cleanup Objective | 6/16/2003 | 6/17/2003 | 6/17/2003 | 6/18/2003 | 6/18/2003 | 6/18/2003 | 6/18/2003 |
| 2-Chlorophenol | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| 2,2-oxybis(1-Chloropropane) | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Chrysene | 400 | 78 J | ND | ND | ND | ND | 130 J | ND |
| Dibenz(a,h)anthracene | 14 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Dibenzofuran | 6,200 | ND | ND | ND | ND | ND | ND | ND |
| 3,3'-Dichlorobenzidine | N/A | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dichlorophenol | 400 | ND | ND | ND | ND | ND | ND | ND |
| Diethylphthalate | 7,100 | ND | ND | ND | ND | ND | ND | ND |
| Dimethyl phthalate | 2,000 | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dimethylphenol | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrophenol | 200 | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrotoluene | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 2,6-Dinitrotoluene | 1,000 | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-ethylhexyl)phthalate | 50,000* | 100 JB | ND | ND | ND | 71 JB | 110 JB | 35,000 |
| Fluoranthene | 50,000 * | 110 J | ND | ND | ND | ND | 340 J | 25,000 |
| Fluorene | 50,000 * | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobenzene | 410 | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorocyclopentadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Hexachloroethane | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Isophorone | 4,400 | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND=Not Detected

* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.

J=Estimated

**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

## ANALYTICAL SUMMARY TABLE VI
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date

| ***8270C*** <br> ***UG/KG (PPB)*** <br> ***SVOC Compound*** | NYSDEC Recommended Cleanup Objective | TT-11 <br> 3.0-4.5 <br> 6/16/2003 | TT-12 <br> 1.0-2.4 <br> 6/17/2003 | TT-12A <br> 14-14.2 <br> 6/17/2003 | TT-13 <br> ~5.0' <br> 6/18/2003 | TT-13A <br> ~8.0' <br> 6/18/2003 | Foundation #1 <br> ~3.5' <br> 6/18/2003 | Foundation #2 <br> ~3.0' <br> 6/18/2003 |
|---|---|---|---|---|---|---|---|---|
| 2-Methylnapthalene | 36,400 | ND | ND | ND | ND | 78 J | ND | **53,000** |
| 4,6-Dinitro-2-methylphenol | 50,000 | ND | ND | ND | ND | ND | ND | ND |
| 4-Chloro-3-methylphenol | 240 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 2-Methylphenol | 100 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Methylphenol | 900 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Napthalene | 13,000 | ND | ND | ND | ND | ND | ND | **33,000** |
| 2-Nitroaniline | 430 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 3-Nitroaniline | 500 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Nitroaniline | 50,000 | ND | ND | ND | ND | ND | ND | ND |
| Nitrobenzene | 200 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 2-Nitrophenol | 330 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Nitrophenol | 100 or MDL | ND | ND | ND | ND | ND | ND | ND |
| N-Nitrosodiphenylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Di-n-octyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Pentachlorophenol | 1,000 or MDL | ND | ND | ND | ND | ND | ND | ND |
| Phenanthrene | 50,000 * | 40 J | ND | ND | ND | ND | 190 J | 15,000 |
| Phenol | 30 or MDL | ND | ND | ND | ND | ND | ND | ND |
| 4-Bromophenyl phenylether | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 4-Chlorophenyl-phenylether | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| N-Nitroso-Di-n-propylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| Pyrene | 50,000 * | 110 J | ND | ND | ND | ND | 190 J | 16,000 |
| 2,4,6-Trichlorophenol | 50,000* | ND | ND | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 100 | ND | ND | ND | ND | ND | ND | ND |
| Total SVOC's | 500,000 | 850 JB | ND | ND | ND | 202 J | 1,690 J | 207,000 |

**Legend**

ND=Not Detected

* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.

J=Estimated

**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

**ANALYTICAL SUMMARY TABLE VI**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**

Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date

| ***8270C***<br>***UG/KG (PPB)***<br>***SVOC Compound*** | NYSDEC<br>Recommended<br>Cleanup Objective | Foundation #3<br>~3.0'<br>6/18/2003 | SSU-1<br>0' - 3"<br>6/20/2003 | SSU-2<br>0' - 3"<br>6/20/2003 | SSU-3<br>0' - 3"<br>6/20/2003 | SSU-4<br>0' - 3"<br>6/20/2003 | SSU-5<br>0' - 3"<br>6/20/2003 | SSU-6<br>0' - 3"<br>6/20/2003 | SSU-7<br>0' - 3"<br>6/20/2003 |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 50,000 * | ND | ND | 810 J | ND | ND | ND | 42 J | ND |
| Acenaphthylene | 41,000 | ND | ND | ND | ND | ND | ND | 60 J | ND |
| Acetophenone | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| Anthracene | 50,000 * | 310 J | ND | 1,400 J | ND | 12,000 | ND | 310 J | ND |
| Atrazine | 50,000 * | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzaldehyde | 50,000 * | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(a)anthracene | 224 or MDL | **1,100** | **3,900** | **3,400 J** | **4,700** | **22,000** | **10,000** | **860** | **1,300** |
| Benzo(a)pyrene | 61 or MDL | **1,000 J** | ND | **3,000 J** | **4,800** | **19,000** | **14,000** | **740** | **1,400** |
| Benzo(b)fluoranthene | 1,000 or MDL | 950 J | ND | **4,300 J** | **4,300** | **17,000** | **12,000** | 910 | **1,500** |
| Benzo(g,h,i)perylene | 50,000 * | 630 J | ND | 1,100 J | ND | 11,000 | 11,000 | 210 J | ND |
| Benzo(k)fluoranthene | 1,100 or MDL | 950 J | ND | **1,900 J** | **4,400** | **16,000** | **12,000** | 620 | **1,300** |
| Biphenyl | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| Butyl benzyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | 85 J | ND |
| Di-n-butyl phthalate | 8,100 | ND | ND | ND | ND | ND | ND | 83 J | ND |
| Caprolactam | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbazole | 50,000* | 320 J | ND | 930 J | ND | ND | ND | 97 J | ND |
| Indeno(1,2,3-cd)pyrene | 3,200 | 600 J | ND | 2,900 J | ND | **11,000** | **9,600** | 640 | ND |
| 4-Chloroaniline | 220 or MDL | ND | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethoxyl)methane | 50,000 * | ND | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-chloroethyl)ether | 50,000 * | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Chloronaphthalene | 50,000 * | ND | ND | ND | ND | ND | ND | ND | ND |

**Legend**
ND=Not Detected
* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.
J=Estimated
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# ANALYTICAL SUMMARY TABLE VI
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date

| ***8270C***<br>***UG/KG (PPB)***<br>***SVOC Compound*** | NYSDEC<br>Recommended<br>Cleanup Objective | Foundation #3<br>~3.0'<br>6/18/2003 | SSU-1<br>0' - 3"<br>6/20/2003 | SSU-2<br>0' - 3"<br>6/20/2003 | SSU-3<br>0' - 3"<br>6/20/2003 | SSU-4<br>0' - 3"<br>6/20/2003 | SSU-5<br>0' - 3"<br>6/20/2003 | SSU-6<br>0' - 3"<br>6/20/2003 | SSU-7<br>0' - 3"<br>6/20/2003 |
|---|---|---|---|---|---|---|---|---|---|
| 2-Chlorophenol | 50,000 * | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,2-oxybis(1-Chloropropane) | 50,000 * | ND | ND | ND | ND | ND | ND | ND | ND |
| Chrysene | 400 | **1,100 J** | **4,000** | **4,000 J** | **5,400** | **20,000** | **11,000** | **920** | **1,600** |
| Dibenz(a,h)anthracene | 14 or MDL | **210 J** | ND | **820 J** | ND | ND | ND | **180 J** | ND |
| Dibenzofuran | 6,200 | ND | ND | 550 J | ND | ND | ND | ND | ND |
| 3,3'-Dichlorobenzidine | N/A | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dichlorophenol | 400 | ND | ND | ND | ND | ND | ND | ND | ND |
| Diethylphthalate | 7,100 | ND | ND | ND | ND | ND | ND | ND | ND |
| Dimethyl phthalate | 2,000 | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dimethylphenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrophenol | 200 | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4-Dinitrotoluene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,6-Dinitrotoluene | 1,000 | ND | ND | ND | ND | ND | ND | ND | ND |
| Bis(2-ethylhexyl)phthalate | 50,000* | ND | ND | ND | ND | ND | ND | 380 JB | 4,200 |
| Fluoranthene | 50,000 * | 2,600 | 9,800 | 9,700 | 12,000 | **61,000** | 24,000 | 2,500 | 3,000 |
| Fluorene | 50,000 * | ND | ND | 790 J | ND | ND | ND | 75 J | ND |
| Hexachlorobenzene | 410 | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorocyclopentadiene | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachloroethane | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| Isophorone | 4,400 | ND | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND=Not Detected

* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.

J=Estimated

**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

## ANALYTICAL SUMMARY TABLE VI
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

| | | Test Trench (TT) or Surface Soil (SSU) Location ID, Sample Collection interval (ft below grade) & sample date | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ***8270C***<br>***UG/KG (PPB)***<br>***SVOC Compound*** | NYSDEC Recommended Cleanup Objective | Foundation #3<br>~3.0'<br>6/18/2003 | SSU-1<br>0' - 3"<br>6/20/2003 | SSU-2<br>0' - 3"<br>6/20/2003 | SSU-3<br>0' - 3"<br>6/20/2003 | SSU-4<br>0' - 3"<br>6/20/2003 | SSU-5<br>0' - 3"<br>6/20/2003 | SSU-6<br>0' - 3"<br>6/20/2003 | SSU-7<br>0' - 3"<br>6/20/2003 |
| 2-Methylnapthalene | 36,400 | ND | ND | ND | ND | ND | ND | ND | ND |
| 4,6-Dinitro-2-methylphenol | 50,000 | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Chloro-3-methylphenol | 240 or MDL | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Methylphenol | 100 or MDL | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methylphenol | 900 or MDL | ND | ND | ND | ND | ND | ND | ND | ND |
| Napthalene | 13,000 | ND | ND | 470 J | ND | ND | ND | ND | ND |
| 2-Nitroaniline | 430 or MDL | ND | ND | ND | ND | ND | ND | ND | ND |
| 3-Nitroaniline | 500 or MDL | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Nitroaniline | 50,000 | ND | ND | ND | ND | ND | ND | ND | ND |
| Nitrobenzene | 200 or MDL | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Nitrophenol | 330 or MDL | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Nitrophenol | 100 or MDL | ND | ND | ND | ND | ND | ND | ND | ND |
| N-Nitrosodiphenylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| Di-n-octyl phthalate | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| Pentachlorophenol | 1,000 or MDL | ND | ND | ND | ND | ND | ND | ND | ND |
| Phenanthrene | 50,000 * | 1,700 J | 5,800 | 7,900 | 6,700 | 49,000 | 12,000 | 1,100 | ND |
| Phenol | 30 or MDL | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Bromophenyl phenylether | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Chlorophenyl-phenylether | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| N-Nitroso-Di-n-propylamine | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| Pyrene | 50,000 * | 1,900 | 6,500 | 6,900 | 8,600 | 36,000 | 18,000 | 1,500 | 1,900 |
| 2,4,6-Trichlorophenol | 50,000* | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 100 | ND | ND | ND | ND | ND | ND | ND | ND |
| Total SVOC's | 500,000 | 13,370 J | 30,000 | 30,890 J | 50,900 | 274,000 | 133,600 | 11,312 JB | 16,200 |

**Legend**

ND=Not Detected

* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.

J=Estimated

**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

**ANALYTICAL SUMMARY TABLE VI**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**

Surface Soil Samples collected in 2004

| ***8270C***<br>***UG/KG (PPB)***<br>***SVOC Compound*** | NYSDEC Recommended Cleanup Objective | SSU-8<br>0' - 3"<br>6/1/2004 | SSU-9<br>0 - 3"<br>6/1/2004 | SSU-10<br>0' - 3"<br>6/1/2004 | SSU-11<br>0' - 3"<br>6/4/2004 | SSU-11D<br>0' - 3"<br>6/4/2004 |
|---|---|---|---|---|---|---|
| Acenaphthene | 50,000 * | 79 | ND | 130 | 59 | ND |
| Acenaphthylene | 41,000 | 55 | 50 | 190 | ND | ND |
| Acetophenone | 50,000* | ND | 65 | ND | ND | ND |
| Anthracene | 50,000 * | 240 | 130 | 650 | 180 J | 210 |
| Atrazine | 50,000 * | ND | ND | ND | ND | ND |
| Benzaldehyde | 50,000 * | ND | 150 | ND | ND | ND |
| Benzo(a)anthracene | 224 or MDL | **680** | **520** | **2,200** | **1,000 J** | **940** |
| Benzo(a)pyrene | 61 or MDL | **700** | **530** | **1,900** | **1,200 J** | **1,000** |
| Benzo(b)fluoranthene | 1,000 or MDL | **1,100** | 870 | **2,600** | **1,900 J** | **1,800** |
| Benzo(g,h,i)perylene | 50,000 * | 140 | 100 | 500 | 440 | 500 |
| Benzo(k)fluoranthene | 1,100 or MDL | 430 | 280 | 1,000 | 640 J | 450 |
| Biphenyl | 50,000* | ND | ND | ND | ND | ND |
| Butyl benzyl phthalate | 50,000* | 440 | 92 | 310 | 430 | 420 |
| Di-n-butyl phthalate | 8,100 | 120 | 120 | 210 | 52 J | 290 |
| Caprolactam | 50,000* | ND | ND | ND | ND | ND |
| Carbazole | 50,000* | 130 | 82 | 360 | 170 J | 200 |
| Indeno(1,2,3-cd)pyrene | 3,200 | 470 | 340 | 1,300 | 850 J | 830 |
| 4-Chloroaniline | 220 or MDL | ND | ND | ND | ND | ND |
| Bis(2-chloroethoxyl)methane | 50,000 * | ND | ND | ND | ND | ND |
| Bis(2-chloroethyl)ether | 50,000 * | ND | ND | ND | ND | ND |
| 2-Chloronaphthalene | 50,000 * | ND | ND | ND | ND | ND |

**Legend**
ND=Not Detected
* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.
J=Estimated
**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

## ANALYTICAL SUMMARY TABLE VI
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

| | | Surface Soil Samples collected in 2004 | | | | |
|---|---|---|---|---|---|---|
| ***8270C UG/KG (PPB) SVOC Compound*** | NYSDEC Recommended Cleanup Objective | SSU-8 0' - 3" 6/1/2004 | SSU-9 0 - 3" 6/1/2004 | SSU-10 0' - 3" 6/1/2004 | SSU-11 0' - 3" 6/4/2004 | SSU-11D 0' - 3" 6/4/2004 |
| 2-Chlorophenol | 50,000 * | ND | ND | ND | ND | ND |
| 2,2-oxybis(1-Chloropropane) | 50,000 * | ND | ND | ND | ND | ND |
| Chrysene | 400 | **800** | **620** | **2,300** | **1,400 J** | **1,300** |
| Dibenz(a,h)anthracene | 14 or MDL | **140** | **100** | **400 J** | **230 J** | **220** |
| Dibenzofuran | 6,200 | 53 | ND | 110 | 44 | ND |
| 3,3'-Dichlorobenzidine | N/A | ND | ND | ND | ND | ND |
| 2,4-Dichlorophenol | 400 | ND | ND | ND | ND | ND |
| Diethylphthalate | 7,100 | ND | ND | ND | ND | ND |
| Dimethyl phthalate | 2,000 | ND | ND | ND | ND | ND |
| 2,4-Dimethylphenol | 50,000* | ND | ND | ND | ND | ND |
| 2,4-Dinitrophenol | 200 | ND J | ND J | ND J | ND J | ND J |
| 2,4-Dinitrotoluene | 50,000* | ND | ND | ND | ND | ND |
| 2,6-Dinitrotoluene | 1,000 | ND | ND | ND | ND | ND |
| Bis(2-ethylhexyl)phthalate | 50,000* | ND | ND | ND | ND | ND |
| Fluoranthene | 50,000 * | 1,800 | 1,400 | 5,400 | 2,900 J | 2,700 |
| Fluorene | 50,000 * | 78 | 44 | 210 | 53 | ND |
| Hexachlorobenzene | 410 | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | 50,000* | ND | ND | ND | ND | ND |
| Hexachlorocyclopentadiene | 50,000* | ND | ND | ND | ND | ND |
| Hexachloroethane | 50,000* | ND | ND | ND | ND | ND |
| Isophorone | 4,400 | ND | ND | ND | ND | ND |

**Legend**

ND=Not Detected

* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.

J=Estimated

**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

**ANALYTICAL SUMMARY TABLE VI**

**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**

**2003 - 2004 TEST PIT AND SURFACE SOIL RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**

Surface Soil Samples collected in 2004

| ***8270C***<br>***UG/KG (PPB)***<br>***SVOC Compound*** | NYSDEC Recommended Cleanup Objective | SSU-8<br>0' - 3"<br>6/1/2004 | SSU-9<br>0 - 3"<br>6/1/2004 | SSU-10<br>0' - 3"<br>6/1/2004 | SSU-11<br>0' - 3"<br>6/4/2004 | SSU-11D<br>0' - 3"<br>6/4/2004 |
|---|---|---|---|---|---|---|
| 2-Methylnapthalene | 36,400 | 48 | ND | 52 J | 84 | 94 |
| 4,6-Dinitro-2-methylphenol | 50,000 | ND | ND | ND | ND | ND |
| 4-Chloro-3-methylphenol | 240 or MDL | ND | ND | ND | ND | ND |
| 2-Methylphenol | 100 or MDL | ND | ND | ND | ND | ND |
| 4-Methylphenol | 900 or MDL | ND | ND | ND | ND | ND |
| Napthalene | 13,000 | 60 | 59 | 52 | 59 | ND |
| 2-Nitroaniline | 430 or MDL | ND | ND | ND | ND | ND |
| 3-Nitroaniline | 500 or MDL | ND | ND | ND | ND | ND |
| 4-Nitroaniline | 50,000 | ND | ND | ND | ND | ND |
| Nitrobenzene | 200 or MDL | ND | ND | ND | ND | ND |
| 2-Nitrophenol | 330 or MDL | ND | ND | ND | ND | ND |
| 4-Nitrophenol | 100 or MDL | ND | ND | ND | ND | ND |
| N-Nitrosodiphenylamine | 50,000* | ND | ND | ND | ND | ND |
| Di-n-octyl phthalate | 50,000* | ND | ND | ND | ND | ND |
| Pentachlorophenol | 1,000 or MDL | ND | ND | ND | ND | ND |
| Phenanthrene | 50,000 * | 900 | 620 | 2,700 | 1,300 J | 1,100 |
| Phenol | 30 or MDL | ND | ND | ND | ND | ND |
| 4-Bromophenyl phenylether | 50,000* | ND | ND | ND | ND | ND |
| 4-Chlorophenyl-phenylether | 50,000* | ND | ND | ND | ND | ND |
| N-Nitroso-Di-n-propylamine | 50,000* | ND | ND | ND | ND | ND |
| Pyrene | 50,000 * | 1,100 | 840 | 3,500 | 2,000 J | 1,400 |
| 2,4,6-Trichlorophenol | 50,000* | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 100 | ND | ND | ND | ND | ND |
| Total SVOC's | 500,000 | 9,563 | 7,012 | 26,074 | 14,991 | 13,454 |

**Legend**

ND=Not Detected

* Per TAGM 4046 each SVOC may not exceed 50,000 PPB.

J=Estimated

**Bold**=Compound above NYSDEC Cleanup Objective in TAGM 4046

### ANALYTICAL SUMMARY TABLE VII
### 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
### 2003 TEST PIT AND SURFACE SOIL RESULTS, PCB'S AND ETHYLENE GLYCOL

Test Pit (TT) or Surface Soil (SSU) Location ID, Sample Collection Interval (Feet below grade), Sample Date

| ***8082***<br>***PCB'S***<br>***UG/KG (PPB)*** | Recommended NYSDEC Cleanup Objective | TT-1<br>1.0-2.0<br>6/18/2003 | TT-2<br>1.7-2.8'<br>6/17/2003 | TT-3<br>0.0-3.0<br>6/17/2003 | TT-3 DUP<br>0.0-3.0<br>6/17/2003 | TT-4<br>5.0-5.5<br>6/20/2003 | TT-4B<br>8.0-9.0<br>6/20/2003 | TT-5<br>1.0-1.7<br>6/17/2003 |
|---|---|---|---|---|---|---|---|---|
| PCB Aroclor 1016 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| PCB Aroclor 1221 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| PCB Aroclor 1232 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| PCB Aroclor 1242 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| PCB Aroclor 1248 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| PCB Aroclor 1254 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| PCB Aroclor 1260 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| **Ethylene Glycol Method 89-9** | Not Applicable | ND | ND | ND |  | ND | ND | ND |
|  |  |  |  |  |  |  |  |  |
| **Percent Solids Method 160.0** | Not Applicable | 88.3 | 89.3 | 80.9 | 79.4 | 84.1 | 88.2 | 90.3 |

| ***8082***<br>***UG/KG (PPB)***<br>***PCB'S*** | Recommended NYSDEC Cleanup Objective | TT-6<br>0.0-2.0<br>6/17/2003 | TT-7<br>2.5-3.0<br>6/17/2003 | TT-8<br>0.0-3.0<br>6/16/2003 | TT-9<br>1.0-3.4<br>6/16/2003 | TT-10<br>0.0-3.5<br>6/16/2003 | TT-11<br>3.0-4.5<br>6/16/2003 | TT-12<br>1.0-2.4<br>6/17/2003 |
|---|---|---|---|---|---|---|---|---|
| PCB Aroclor 1016 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| PCB Aroclor 1221 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| PCB Aroclor 1232 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| PCB Aroclor 1242 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| PCB Aroclor 1248 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| PCB Aroclor 1254 | 10,000 PPB* | ND | ND | 66 | ND | ND | ND | ND |
| PCB Aroclor 1260 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | ND |
| **Ethylene Glycol Method 89-9** | Not Applicable | ND | ND | ND | ND | ND | ND | 1.2 |
|  |  |  |  |  |  |  |  |  |
| **Percent Solids Method 160.0** | Not Applicable | 85.1 | 87.7 | 88.6 | 84.2 | 85.9 | 83.8 | 83.5 |

**Legend**

ND = Not Detected
NR = Analysis Not Required
PQL for PCB analysis = 33 PPB

Cleanup Objectives NYSDEC TAGM 4046
* Recommended PCB Cleanup Objective 1,000 PPB surface soil, 10,000 PPB subsurface soil
**Bold =** Detected above TAGM 4046

## ANALYTICAL SUMMARY TABLE VII
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 TEST PIT AND SURFACE SOIL RESULTS, PCB'S AND ETHYLENE GLYCOL

Test Pit (TT) or Surface Soil (SSU) Location ID, Sample Collection Interval (Feet below grade), Sample Date

| ***8082***<br>***PCB'S***<br>***UG/KG (PPB)*** | Recommended NYSDEC Cleanup Objective | TT-12A<br>14-14.2<br>6/17/2003 | TT-13<br>~5.0<br>6/18/2003 | TT-13A<br>~8.0<br>6/18/2003 | Foundation #1<br>~3.5<br>6/18/2003 | Foundation #2<br>~3.0<br>6/18/2003 | Foundation #3<br>~4.0<br>6/18/2003 | SSU-1<br><br>6/20/2003 |
|---|---|---|---|---|---|---|---|---|
| PCB Aroclor 1016 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | NR |
| PCB Aroclor 1221 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | NR |
| PCB Aroclor 1232 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | NR |
| PCB Aroclor 1242 | 10,000 PPB* | ND | ND | ND | ND | 2,800 | ND | NR |
| PCB Aroclor 1248 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | NR |
| PCB Aroclor 1254 | 10,000 PPB* | ND | ND | ND | ND | ND | 130 | NR |
| PCB Aroclor 1260 | 10,000 PPB* | ND | ND | ND | ND | ND | ND | NR |
| **Ethylene Glycol Method 89-9** | Not Applicable | ND | ND | ND | ND | ND | 1.23 | ND |
| | | | | | | | | |
| **Percent Solids Method 160.0** | Not Applicable | 84.0 | 89.8 | 90.0 | 88.5 | 85.0 | 88.5 | 86.6 |

| ***8082***<br>***UG/KG (PPB)***<br>***PCB'S*** | Recommended NYSDEC Cleanup Objective | SSU-2<br><br>6/20/2003 | SSU-3<br><br>6/20/2003 | SSU-4<br><br>6/20/2003 | SSU-5<br><br>6/20/2003 | SSU-6<br><br>6/20/2003 | SSU-7<br><br>6/20/2003 |
|---|---|---|---|---|---|---|---|
| PCB Aroclor 1016 | 10,000 PPB* | ND | NR | NR | NR | ND | ND |
| PCB Aroclor 1221 | 10,000 PPB* | ND | NR | NR | NR | ND | ND |
| PCB Aroclor 1232 | 10,000 PPB* | ND | NR | NR | NR | ND | ND |
| PCB Aroclor 1242 | 10,000 PPB* | ND | NR | NR | NR | ND | **2,800** |
| PCB Aroclor 1248 | 10,000 PPB* | ND | NR | NR | NR | ND | ND |
| PCB Aroclor 1254 | 10,000 PPB* | ND | NR | NR | NR | ND | 120 |
| PCB Aroclor 1260 | 10,000 PPB* | ND | NR | NR | NR | ND | 92 |
| **Ethylene Glycol Method 89-9** | Not Applicable | ND | ND | ND | ND | ND | ND |
| | | | | | | | |
| **Percent Solids Method 160.0** | Not Applicable | 72.6 | 81.2 | 88.1 | 93.9 | 85.5 | 93.8 |

**Legend**

ND = Not Detected
NR = Analysis Not Required
PQL for PCB analysis = 33 PPB

Cleanup Objectives NYSDEC TAGM 4046
* Recommended PCB Cleanup Objective 1,000 PPB surface soil, 10,000 PPB subsurface soil
**Bold =** Detected above TAGM 4046

## ANALYTICAL SUMMARY TABLE VIII
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 TEST TRENCH AND SURFACE SOIL RESULTS, RCRA 8 METALS

Test Pit (TT) or Surface Soil (SSU) Location ID, Sample Collection Interval (Feet below grade) and Sample Date

| ***6010B RCRA 8 Metals MG/KG (PPM)*** | Recommended NYSDEC Cleanup Objective, PPM | Eastern USA Background Range, PPM | TT-1<br>1.0-2.0<br>6/18/2003 | TT-2<br>1.7-2.8'<br>6/17/2003 | TT-3<br>0.0-3.0<br>6/17/2003 | TT-3 Dup<br>0.0-3.0<br>6/17/2003 | TT-4<br>5.0-5.5<br>6/20/2003 | TT-4A<br>Sidewall 5.0<br>6/20/2003 |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7.5 or SB | 3.0-12 | 4.89 | 6.35 | 4.5 | 5.0 | 6.7 | 5.89 |
| Barium | 300 or SB | 15-600 | 45.9 | 61.4 | 45.9 B | 41 B | 68.8 | 42.4 |
| Cadmium | 1.0 or SB | 0.1-1.0 | ND | ND | ND | ND | 0.47 B | ND |
| Chromium | 10 or SB | 1.5-40 | 8.65 | 9.29 | 8.5 | 7.7 | 11.8 | 10.4 |
| Lead | SB | urban, 200-500 | 82.2 | 89.2 | 13.9 | 11.7 | 184 | 30.9 |
| Mercury | 0.1 | 0.001-0.2 | **0.864** | **0.216** | 0.05 B | 0.03 B | 0.09 | 0.0386 |
| Selenium | 2.0 or SB | 0.1-3.9 | ND | ND | ND | ND | ND | ND |
| Silver | SB | Not Applicable | ND | ND | ND | ND | ND | ND |

| ***6010B RCRA 8 Metals MG/KG (PPM)*** | Recommended NYSDEC Cleanup Objective, PPM | Eastern USA Background Range, PPM | TT-4B<br>8.0-9.0<br>6/20/2003 | TT-5<br>1.0-1.7<br>6/17/2003 | TT-6<br>0.0-2.0<br>6/17/2003 | TT-7<br>2.5-3.0<br>6/17/2003 | TT-8<br>0.0-3.0<br>6/16/2003 | TT-8 Dup<br>0.0-3.0<br>6/16/2003 |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7.5 or SB | 3.0-12 | 2.94 | 5.5 | 4.32 | 7.89 | 6.83 | 7.08 |
| Barium | 300 or SB | 15-600 | 25.6 | 32.4 | 32.7 | 63.4 | 55.6 | 54 |
| Cadmium | 1.0 or SB | 0.1-1.0 | ND | ND | ND | 0.649 | **1.19** | 0.829 |
| Chromium | 10 or SB | 1.5-40 | 6.01 | 8.28 | 10.3 | 10.5 | 10.3 | 11.6 |
| Lead | SB | urban, 200-500 | ND | 38.5 | 68.4 | 140 | 83.6 | 90 |
| Mercury | 0.1 | 0.001-0.2 | ND | 0.052 | 0.0924 | **0.202** | **0.119** | 0.0892 |
| Selenium | 2.0 or SB | 0.1-3.9 | ND | ND | ND | ND | ND | ND |
| Silver | SB | Not Applicable | ND | ND | ND | ND | ND | ND |

**Legend**

SB = Site Background   Cleanup Objectives from NYSDEC HWR TAGM 4046
ND = Not Detected
J = Estimated Value
B = Reported Value below Contract Required Detection Limit but equal or greater than Instrument Detection Limit
**Bold =** Compound Detected above NYSDEC Cleanup Objective

## ANALYTICAL SUMMARY TABLE VIII
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 TEST TRENCH AND SURFACE SOIL RESULTS, RCRA 8 METALS

Test Pit (TT) or Surface Soil (SSU) Location ID, Sample Collection Interval (Feet below grade) and Sample Date

| ***6010B***<br>***RCRA 8 Metals***<br>***MG/KG (PPM)*** | Recommended NYSDEC Cleanup Objective, PPM | Eastern USA Background Range, PPM | TT-9<br>1.0-3.4<br>6/16/2003 | TT-10<br>0.0-3.5<br>6/16/2003 | TT-11<br>3.0-4.5<br>6/16/2003 | TT-12<br>1.0-2.4<br>6/17/2003 | TT-12A<br>14-14.2<br>6/17/2003 |
|---|---|---|---|---|---|---|---|
| Arsenic | 7.5 or SB | 3.0-12 | 4.73 | 6.93 | 5.6 | 5.7 | 2.44 |
| Barium | 300 or SB | 15-600 | 44.7 | 75.3 | 56.9 | 54.6 | 23.8 |
| Cadmium | 1.0 or SB | 0.1-1.0 | ND | 0.847 | 0.09 B | ND | ND |
| Chromium | 10 or SB | 1.5-40 | 8.55 | 11.9 | 9.5 | 9.45 | 5.3 |
| Lead | SB | urban, 200-500 | 33.5 | 157 | 74.3 | 51.4 | ND |
| Mercury | 0.1 | 0.001-0.2 | 0.0922 | **0.156** | **0.16** | **0.182** | ND |
| Selenium | 2.0 or SB | 0.1-3.9 | ND | ND | ND | 0.691 | ND |
| Silver | SB | Not Applicable | ND | ND | ND | ND | ND |

| ***6010B***<br>***RCRA 8 Metals***<br>***MG/KG (PPM)*** | Recommended NYSDEC Cleanup Objective, PPM | Eastern USA Background Range, PPM | TT-13<br>~5.0<br>6/18/2003 | TT-13A<br>~8.0<br>6/18/2003 | Foundation #1<br>~3.5<br>6/18/2003 | Foundation #2<br>~3.0<br>6/18/2003 | Foundation #3<br>~4.0<br>6/18/2003 |
|---|---|---|---|---|---|---|---|
| Arsenic | 7.5 or SB | 3.0-12 | 3.12 | 2.4 | 4.4 | 6.36 | 6.23 |
| Barium | 300 or SB | 15-600 | 28 | 20.4 B | 32.4 B | 164 | 64.2 |
| Cadmium | 1.0 or SB | 0.1-1.0 | ND | ND | ND | **8.35** | **1.15** |
| Chromium | 10 or SB | 1.5-40 | 5.84 | 5.5 | 8.2 | 39.6 | 8.85 |
| Lead | SB | urban, 200-500 | 7.72 | 3.7 | 8.9 | **1,320** | 131 |
| Mercury | 0.1 | 0.001-0.2 | ND | ND | 0.02 B | **0.281** | **0.242** |
| Selenium | 2.0 or SB | 0.1-3.9 | ND | ND | ND | ND | ND |
| Silver | SB | Not Applicable | ND | ND | ND | ND | ND |

**Legend**

SB = Site Background
ND = Not Detected
J = Estimated Value
B = Reported Value below Contract Required Detection Limit but equal or greater than Instrument Detection Limit
**Bold =** Compound Detected above NYSDEC Cleanup Objective

# ANALYTICAL SUMMARY TABLE VIII
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2003 TEST TRENCH AND SURFACE SOIL RESULTS, RCRA 8 METALS

Test Pit (TT) or Surface Soil (SSU) Location ID, Sample Collection Interval (Feet below grade) and Sample Date

| ***6010B RCRA 8 Metals MG/KG (PPM)*** | Recommended NYSDEC Cleanup Objective, PPM | Eastern USA Background Range, PPM | SSU-1 6/20/2003 | SSU-2 6/20/2003 | SSU-3 6/20/2003 | SSU-4 6/20/2003 | SSU-5 6/20/2003 | SSU-6 6/20/2003 |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 7.5 or SB | 3.0-12 | 5.99 | 6.3 | 6.7 | 5.03 | 5.08 | 10.7 |
| Barium | 300 or SB | 15-600 | 48.2 | 104 | 65.1 | 45.5 | 67.5 | 120 |
| Cadmium | 1.0 or SB | 0.1-1.0 | **1.43** | **2.9** | **1.4** | **2.02** | **3.94** | **1.1 B** |
| Chromium | 10 or SB | 1.5-40 | 13.2 | 15.3 | 11.2 | 11.6 | 16.3 | 13.7 |
| Lead | SB | urban, 200-500 | 181 | 379 | 310 | 161 | 263 | 310 |
| Mercury | 0.1 | 0.001-0.2 | **0.128** | **0.29** | **0.14** | **0.141** | **0.168** | **0.44** |
| Selenium | 2.0 or SB | 0.1-3.9 | ND | ND | ND | ND | ND | ND |
| Silver | SB | Not Applicable | ND | ND | ND | ND | ND | ND |

| ***6010B RCRA 8 Metals MG/KG (PPM)*** | Recommended NYSDEC Cleanup Objective, PPM | Eastern USA Background Range, PPM | SSU-7 6/20/2003 |
|---|---|---|---|
| Arsenic | 7.5 or SB | 3.0-12 | 11.6 |
| Barium | 300 or SB | 15-600 | 179 |
| Cadmium | 1.0 or SB | 0.1-1.0 | **1.79** |
| Chromium | 10 or SB | 1.5-40 | 20 |
| Lead | SB | urban, 200-500 | **1,050** |
| Mercury | 0.1 | 0.001-0.2 | **0.402** |
| Selenium | 2.0 or SB | 0.1-3.9 | ND |
| Silver | SB | Not Applicable | 1.4 |

**Legend**

SB = Site Background
ND = Not Detected
J = Estimated Value
B = Reported Value below Contract Required Detection Limit but equal or greater than Instrument Detection Limit
**Bold =** Compound Detected above NYSDEC Cleanup Objective

# ANALYTICAL SUMMARY TABLE IX
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# AUGUST 2000 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS

| **VOCs, 8260 ASP UG/L (PPB) Parameter** | **NYSDEC Class GA Groundwater Standards TOGS 1.1.1** | **MW-1** 8/1/2000 | **MW-1(FD)** 8/1/2000 | **MW-2** 8/1/2000 | **MW-3*** 8/1/2000 | **MW-4** 8/1/2000 |
|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | NA | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 5 | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 5 | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | 1 | ND | ND | ND | ND | ND |
| 1,1-Dichloroethane | 5 | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 5 | ND | ND | ND | ND | ND |
| 1,1-Dichloropropene | 5 | ND | ND | ND | ND | ND |
| 1,2,3-Trichlorobenzene | 5 | ND | ND | ND | ND | ND |
| 1,2,3-Trichloropropane | 5 | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 5 | ND | ND | ND | ND | ND |
| 1,2,4-Trimethylbenzene | 5 | **210** | **190** | **8 J** | **1,500** | **1,200** |
| 1,2-Dibromo-3-chloropropane | 50 | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane | 0 | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 5 | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 5 | **60 J** | **57 J** | ND | ND | ND |
| 1,2-Dichloroethene, Total | 5 | ND | ND | ND | ND | ND |
| 1,2-Dichloropropane | 5 | ND | ND | ND | ND | ND |
| 1,3,5-Trimethylbenzene | 5 | **52 J** | **49 J** | **27** | **380 J** | **330 J** |
| 1,3-Dichlorobenzene | 5 | ND | ND | ND | ND | ND |
| 1,3-Dichloropropane | 5 | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 5 | ND | ND | ND | ND | ND |
| 2,2-Dichloropropane | 5 | ND | ND | ND | ND | ND |
| 2-Butanone | 50 | **52 J** | **54 J** | 5 J | **110 J** | **110 J** |
| 2-Chloroethyl vinyl ether | NA | ND | ND | ND | ND | ND |
| 2-Chlorotoluene | 5 | ND | ND | ND | ND | ND |
| 2-Hexanone | NA | ND | ND | 3 J | ND | ND |
| 4-Chlorotoluene | 5 | ND | ND | ND | ND | ND |
| 4-Isopropyltoluene | 5 | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | NA | ND | ND | ND | ND | ND |
| Acetone | 50 | **69 J** | **71 J** | 8 J | ND | **180 J** |
| Acrolein | NA | ND | ND | ND | ND | ND |
| Benzene | 1 | **2,400** | **2,300** | **5 J** | **760** | **810** |
| Bromobenzene | 5 | ND | ND | ND | ND | ND |
| Bromochloromethane | 5 | ND | ND | ND | ND | ND |
| Bromodichloromethane | 50 | ND | ND | ND | ND | ND |
| Bromoform | 50 | ND | ND | ND | ND | ND |
| Bromomethane | 5 | ND | ND | ND | ND | ND |
| Carbon disulfide | NA | ND | ND | ND | ND | ND |
| Carbon tetrachloride | 5 | ND | ND | ND | ND | ND |
| Chlorobenzene | 5 | ND | ND | ND | ND | ND |

# ANALYTICAL SUMMARY TABLE IX
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# AUGUST 2000 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS

| **VOCs, 8260 ASP UG/L (PPB) Parameter** | **NYSDEC Class GA Groundwater Standards TOGS 1.1.1** | **MW-1** 8/1/2000 | **MW-1(FD)** 8/1/2000 | **MW-2** 8/1/2000 | **MW-3*** 8/1/2000 | **MW-4** 8/1/2000 |
|---|---|---|---|---|---|---|
| Chloroethane | 5.0 | ND | ND | ND | ND | ND |
| Chloroform | 7.0 | ND | ND | ND | ND | ND |
| Chloromethane | NA | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND | ND |
| cis-1,3-Dichloropropene | 0.4 | ND | ND | ND | ND | ND |
| Dibromochloromethane | 50.0 | ND | ND | ND | ND | ND |
| Dibromomethane | 5.0 | ND | ND | ND | ND | ND |
| Dichlorodifluoromethane | 5.0 | ND | ND | 3 J | ND | ND |
| Diethyl Ether | NA | ND | ND | ND | ND | ND |
| Ethylbenzene | 5.0 | **420** | **380** | 4 J | **1,100** | **690** |
| Hexachlorobutadiene | 5.0 | ND | ND | ND | ND | ND |
| Iodomethane | ND | ND | ND | ND | ND | ND |
| Isopropylbenzene | 5.0 | ND | ND | ND | ND | ND |
| m,p-Xylene | 5.0 | ND | ND | ND | ND | ND |
| Methyl tert-butyl ether | 10.0 | ND | ND | **260 E** | ND | **990** |
| Methylene chloride | 5.0 | ND | ND | ND | ND | ND |
| n-Butylbenzene | 5.0 | ND | ND | 4 J | ND | ND |
| n-Propylbenzene | 5.0 | ND | ND | ND | **160 J** | ND |
| Naphthalene | 10.0 | **50 J** | **43 J** | 3 J | **330 J** | **220 J** |
| o-Xylene | 5.0 | ND | ND | ND | ND | ND |
| sec-Butylbenzene | 5.0 | ND | ND | ND | ND | ND |
| Styrene | 5.0 | ND | ND | ND | ND | ND |
| tert-Butylbenzene | 5.0 | ND | ND | ND | **270 J** | **210 J** |
| Tetrachloroethene | 5.0 | ND | ND | ND | ND | ND |
| Tetrahydrofuran | 50.0 | ND | ND | ND | ND | ND |
| Toluene | 5.0 | **1,500** | **1,400** | **5 J** | **960** | **2,000** |
| trans-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | 5.0 | ND | ND | ND | ND | ND |
| Trichloroethene | 5.0 | ND | ND | ND | ND | ND |
| Trichlorofluoromethane | 5.0 | ND | ND | ND | ND | ND |
| Vinyl acetate | NA | ND | ND | ND | ND | ND |
| Vinyl chloride | 2.0 | ND | ND | ND | ND | ND |
| Total Xylenes | 5.0 | **1,800** | **1,700** | **44** | **4,800** | **6,000** |
| **Total VOC's** | **NA** | **6,613** | **6,244** | **379** | **10,370** | **12,740** |

**Legend**

1) ND- Below Detection Limit
2) NA -Not Applicable, No Class GA Standard
3) J - Estimated Value
4) BJ - Estimated Value also found in associated blank

6) E - Value exceeds calibration range
7) * =  MW-3 is the MS/MSD location

# ANALYTICAL SUMMARY TABLE X
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## AUGUST 2000 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

| **SVOCs, Method 8270 ASP UG/L (PPB) Parameter** | **NYSDEC Class GA Groundwater Standards TOGS 1.1.1** | **MW-1** 8/1/2000 | **MW-1 (FD)** 8/1/2000 | **MW-2** 8/1/2000 | **MW-3*** 8/1/2000 | **MW-4** 8/1/2000 |
|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 5 | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 4.7 | ND | ND | ND | ND | ND |
| 1,3-Dichlorobenzene | 5 | ND | ND | ND | ND | ND |
| 1,4-Dichlorobenzene | 4.7 | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 1** | ND | ND | ND | ND | ND |
| 2,4,6-Trichlorophenol | 1** | ND | ND | ND | ND | ND |
| 2,4-Dichlorophenol | 1** | ND | ND | ND | ND | ND |
| 2,4-Dimethylphenol | 1** | **2 J** | **3 J** | **5 J** | **12** | **49** |
| 2,4-Dinitrophenol | 1** | ND | ND | ND | ND | ND |
| 2,4-Dinitrotoluene | none | ND | ND | ND | ND | ND |
| 2,6-Dichlorophenol | 1 | ND | ND | ND | ND | ND |
| 2,6-Dinitrotoluene | 5 | ND | ND | ND | ND | ND |
| 2-Chloronaphthane | 5 | ND | ND | ND | ND | ND |
| 2-Chlorophenol | 1** | ND | ND | ND | ND | ND |
| 2-Methylnapthalene | none | 3 J | 4 J | ND | 120 | 16 |
| 2-Methylphenol | 1 | **3 J** | **2 J** | ND | **1 J** | **12** |
| 2-Nitroaniline | none | ND | ND | ND | ND | ND |
| 2-Nitrophenol | 1** | ND | ND | ND | ND | ND |
| 3,3'-Dichlorobenzidine | none | ND | ND | ND | ND | ND |
| 3-Nitroaniline | none | ND | ND | ND | ND | ND |
| 4,6-Dinitro-2-methylphenol | 1** | ND | ND | ND | ND | ND |
| 4-Bromophenyl phenyl ether | none | ND | ND | ND | ND | ND |
| 4-Chloro-3-methylphenol | 1** | ND | ND | ND | ND | ND |
| 4-Chloroaniline | none | ND | ND | ND | ND | ND |
| 4-Chlorophenyl phenyl ether | 1** | ND | ND | ND | ND | ND |
| 4-Methylphenol | 1** | **1 J** | **1 J** | **2 J** | **1 J** | **14** |
| 4-Nitroaniline | none | ND | ND | ND | ND | ND |
| 4-Nitrophenol | 1** | ND | ND | ND | ND | ND |
| Acenaphthene | 20 | ND | ND | ND | ND | ND |
| Acenaphthylene | none | ND | ND | ND | ND | ND |
| Aniline | 5 | ND | ND | ND | ND | ND |
| Anthracene | 50 | ND | ND | ND | ND | ND |
| Benzo(a)anthracene | 0.002 | ND | ND | ND | ND | ND |
| Benzidine | 5 | ND | ND | ND | ND | ND |
| Benzo(a)pryene | 0.002 | ND | ND | ND | ND | ND |
| Benzo(b)fluoranthene | 0.002 | ND | ND | ND | ND | ND |
| Benzo(g,h,I)perylene | none | ND | ND | ND | ND | ND |

# ANALYTICAL SUMMARY TABLE X
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# AUGUST 2000 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

| **SVOCs, Method 8270 ASP UG/L (PPB) Parameter** | **NYSDEC Class GA Groundwater Standards TOGS 1.1.1** | **MW-1** 8/1/2000 | **MW-1 (FD)** 8/1/2000 | **MW-2** 8/1/2000 | **MW-3*** 8/1/2000 | **MW-4** 8/1/2000 |
|---|---|---|---|---|---|---|
| Benzo(k)fluoranthene | 0.002 | ND | ND | ND | ND | ND |
| Benzoic acid | none | 1 J | ND | ND | ND | 18 J |
| Benzyl alcholol | none | ND | ND | ND | ND | ND |
| Bis(2-chloroethoxy)methane | none | ND | ND | ND | 2 J | 3 J |
| Bis(2-chloroethyl)ether | 1 | ND | ND | ND | ND | ND |
| Bis(2-chloroisopropyl)ether | none | ND | ND | ND | ND | ND |
| Bis(2-ethylhexyl)phthalate | 5 | ND | 1 J | 1 J | 2 J | 3 J |
| Butyl benzyl phthalate | 50 | ND | ND | ND | ND | ND |
| Chrysene | 0.002 | ND | ND | **83 J** | ND | ND |
| Di-n-butyl phthalate | 50 | ND | ND | ND | ND | ND |
| Di-n-octyl phthalate | none | ND | ND | ND | ND | ND |
| Dibenz(a,h)anthracene | none | ND | ND | ND | ND | ND |
| Dibenzofuran | none | ND | ND | 72 J | ND | ND |
| Diethyl phthalate | 50 | ND | ND | ND | ND | ND |
| Dimethyl phthalate | 50 | ND | ND | ND | ND | ND |
| Fluoranthene | 50 | ND | ND | **180 J** | ND | ND |
| Fluorene | 50 | ND | ND | **93 J** | 1 J | ND |
| Hexachlorobenzene | 0.04 | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | 0.5 | ND | ND | ND | ND | ND |
| Hexachlorocyclopentadiene | 50 | ND | ND | ND | ND | ND |
| Hexachloroethane | 5 | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 0.002 | ND | ND | ND | ND | ND |
| Isophorone | 50 | ND | ND | ND | 2 J | ND |
| N-Nitrosodi-n-propylamine | 50 | ND | ND | ND | ND | ND |
| N-Nitrosodimethylamine | none | ND | ND | ND | ND | ND |
| N-Nitrosodiphenylamine | 50 | ND | ND | ND | ND | ND |
| Napthalene | 10 | **30** | **39** | ND | **160** | **26** |
| Nitrobenzene | 5 | ND | ND | ND | ND | ND |
| Pentachlorophenol | 1** | ND | ND | ND | ND | ND |
| Phenanthrene | 50 | ND | ND | ND | 2 J | ND |
| Phenol | 1** | **10** | **9 J** | ND | **4 J** | **14** |
| Pyrene | 50 | ND | ND | ND | ND | ND |
| **Total SVOC's** | none | **50** | **59** | **436** | **307** | **155** |

**Legend**

1) ND- Below Detection Limit
2) J - Estimated Value
3) BJ - Estimate Value also found in associated blank
4) FD - Field Duplicate
5) * = MW-3 is the MS/MSD location
6)** Refers to total Phenolic compounds

# ANALYTICAL SUMMARY TABLE XI
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# AUGUST 2000 GROUNDWATER RESULTS, METALS

| **Total Metals ASP UG/L (PPB) Parameter** | **NYSDEC Class GA Groundwater Standards TOGS 1.1.1 UG/L** | **MW-1** 8/1/2000 | **MW-1(FD)** 8/1/2000 | **MW-2** 8/1/2000 | **MW-3*** 8/1/2000 | **MW-4** 8/1/2000 |
|---|---|---|---|---|---|---|
| Aluminum | none established | 1,550 E | 1580 E | 207 E | 1,010 E | 617 E |
| Antimony | 3 | ND | ND | 2.6 B | 16.4 B | ND |
| Arsenic | 25 | 9.7 B | 9.1 B | ND | 5.8 B | 7.3 B |
| Barium | 1,000 | 238 | 229 | 153 B | 239 | 136 B |
| Beryllium | 3 | ND | ND | ND | ND | ND |
| Cadmium | 5 | ND | ND | ND | ND | ND |
| Calcium | none established | 115,000 E | 116,000 E | 125,000 | 93,400 E | 111,000 E |
| Chromium | 50 | 10.2 | 6.7 B | 0.84 B | 3.4 B | 2.7 B |
| Cobalt | none established | 2.2 B | 1.8 B | 0.90 B | 1.2 B | 1.3 B |
| Copper | 200 | 27.7 | 21.6 B | 4.2 B | 6.1 B | 8.2 B |
| Iron | 300 | 11,500 | 10,700 | 674 | 4,740 | 5,360 |
| Lead | 25 | 21.1 | 21.1 | 3.1 | 13.9 | 5.7 |
| Magnesium | 25,000 | 54,600 | 53,800 | 31,500 | 39,200 | 29,400 |
| Manganese | 300 | 207 | 211 | 237 | 86.7 | 723 |
| Mercury | 1 | ND | ND | ND | ND | ND |
| Nickel | 100 | ND | 9 | 6.6 B | 6.5 B | 5.8 B |
| Potassium | none established | 4,950 | 4,090 | 5,770 | 3,510 | 24,300 |
| Selenium | 10 | ND | ND | ND | ND | ND |
| Silver | 50 | ND | ND | 0.63 B | ND | ND |
| Sodium | 20,000 | 34,300 | 31,900 | 57,700 | 103,000 | 35,000 |
| Thallium | 1 | ND | ND | ND | ND | ND |
| Vanadium | none established | ND | ND | ND | ND | ND |
| Zinc | 2,000 | 78.9 | 89.6 | 115 | 134 | 61.2 |
| Cyanide | 200 | NA | NA | NA | NA | NA |

**Legend**

1) ND - Below Detection Limit
2) FB - Field Duplicate
3) E - Concentration exceeds calibration range
4) B - Found is associated blank
5) *= MW-3 is the MS/MSD location

# ANALYTICAL SUMMARY TABLE XII
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# NOVEMBER 2000 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS

| **VOCs, SW 8260 B**<br>**UG/L (PPB)**<br>**Parameter** | **NYSDEC Class GA**<br>**Groundwater Standrds**<br>**TOGS 1.1.1** | **MW-1**<br>11/30/2000 | **MW-2**<br>11/30/2000 | **MW-3**<br>11/30/2000 | **MW-4**<br>11/30/2000 | MW-1<br>Detection Limit | MW-2<br>Detection Limit | MW-3<br>Detection Limit | MW-4<br>Detection Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | NA | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,1,1-Trichloroethane | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,1,2,2-Tetrachloroethane | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,1,2-Trichloroethane | 1 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,1-Dichloroethane | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,1-Dichloroethene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,1-Dichloropropene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,2,3-Trichlorobenzene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,2,3-Trichloropropane | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,2,4-Trichlorobenzene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,2,4-Trimethylbenzene | 5 | **340** | **890** | **1800** | **25,000** | 120 | 25 | 250 | 2500 |
| 1,2-Dibromo-3-chloropropane | 50 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,2-Dibromoethane | 0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,2-Dichlorobenzene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,2-Dichloroethane | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,2-Dichloroethene, Total | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,2-Dichloropropane | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,3,5-Trimethylbenzene | 5 | **130** | **160** | **560** | **7300** | 120 | 25 | 250 | 2500 |
| 1,3-Dichlorobenzene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,3-Dichloropropane | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 1,4-Dichlorobenzene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 2,2-Dichloropropane | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 2-Butanone | 50 | ND | ND | ND | ND | 250 | 50 | 500 | 5000 |
| 2-Chloroethyl vinyl ether | NA | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 2-Chlorotoluene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 2-Hexanone | NA | ND | ND | ND | ND | 250 | 50 | 500 | 5000 |
| 4-Chlorotoluene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 4-Isopropyltoluene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| 4-Methyl-2-pentanone | NA | ND | ND | ND | ND | 250 | 50 | 500 | 5000 |
| Acetone | 50 | ND | **53** | ND | ND | 250 | 50 | 500 | 5000 |
| Acrolein | NA | ND | ND | ND | ND | 2500 | 500 | 5000 | 50,000 |
| Benzene | 1 | **1500** | **67** | **560** | ND | 120 | 25 | 250 | 2500 |
| Bromobenzene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Bromochloromethane | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Bromodichloromethane | 50 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Bromoform | 50 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |

## ANALYTICAL SUMMARY TABLE XII
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## NOVEMBER 2000 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS

| **VOCs, SW 8260 B UG/L (PPB) Parameter** | **NYSDEC Class GA Groundwater Standrds TOGS 1.1.1** | **MW-1** 11/30/2000 | **MW-2** 11/30/2000 | **MW-3** 11/30/2000 | **MW-4** 11/30/2000 | MW-1 Detection Limit | MW-2 Detection Limit | MW-3 Detection Limit | MW-4 Detection Limit |
|---|---|---|---|---|---|---|---|---|---|
| Bromomethane | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Carbon disulfide | NA | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Carbon tetrachloride | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Chlorobenzene | 5 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Chloroethane | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Chloroform | 7.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Chloromethane | NA | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| cis-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| cis-1,3-Dichloropropene | 0.4 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Dibromochloromethane | 50.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Dibromomethane | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Dichlorodifluoromethane | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Diethyl Ether | NA | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Ethylbenzene | 5.0 | **490** | **290** | **980** | **3300** | 120 | 25 | 250 | 2500 |
| Hexachlorobutadiene | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Iodomethane | ND | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Isopropylbenzene | 5.0 | ND | 32 | ND | ND | 120 | 25 | 250 | 2500 |
| m,p-Xylene | 5.0 | **1600** | **660** | **4500** | **14,000** | 120 | 25 | 250 | 2500 |
| Methyl tert-butyl ether | 10.0 | ND | **220** | **400** | ND | 120 | 25 | 250 | 2500 |
| Methylene chloride | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| n-Butylbenzene | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| n-Propylbenzene | 5.0 | ND | **74** | ND | **2800** | 120 | 25 | 250 | 2500 |
| Naphthalene | 10.0 | **ND** | **110** | **580** | **6000** | 120 | 25 | 250 | 2500 |
| o-Xylene | 5.0 | **240** | **100** | **920** | **3200** | 120 | 25 | 250 | 2500 |
| sec-Butylbenzene | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Styrene | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| tert-Butylbenzene | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Tetrachloroethene | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Tetrahydrofuran | 50.0 | ND | ND | ND | ND | 250 | 50 | 500 | 5000 |
| Toluene | 5.0 | **660** | **84** | **800** | ND | 120 | 25 | 250 | 2500 |
| trans-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| trans-1,3-Dichloropropene | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Trichloroethene | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Trichlorofluoromethane | 5.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Vinyl acetate | NA | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| Vinyl chloride | 2.0 | ND | ND | ND | ND | 120 | 25 | 250 | 2500 |
| **Total VOC's** | **NA** | **4,960** | **2,740** | **11,100** | **61,600** | | | | |

ND - Below Detection Limit

**Bold -** Exceeds applicable NYSDEC Class GA Standard

# ANALYTICAL SUMMARY TABLE XIII
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# NOVEMBER 2000 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

| **SVOCs, Method SW 8270 C UG/L (PPB) Parameter** | **NYSDEC Class GA Groundwater Standards TOGS 1.1.1** | **MW-1** 11/30/2000 | **MW-2** 11/30/2000 | **MW-3** 11/30/2000 | **MW-4** 11/30/2000 | MW-1 Detection Limit | MW-2 Detection Limit | MW-3 Detection Limit | MW-4 Detection Limit |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 5 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 1,2-Dichlorobenzene | 4.7 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 1,3-Dichlorobenzene | 5 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 1,4-Dichlorobenzene | 4.7 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 2,4,5-Trichlorophenol | 1** | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 2,4,6-Trichlorophenol | 1** | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 2,4-Dichlorophenol | 1** | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 2,4-Dimethylphenol | 1** | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 2,4-Dinitrophenol | 1** | ND | ND | ND | ND | 25 | 25 | 250 | 500 |
| 2,4-Dinitrotoluene | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 2,6-Dichlorophenol | 1 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 2,6-Dinitrotoluene | 5 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 2-Chloronaphthane | 5 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 2-Chlorophenol | 1** | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 2-Methylnapthalene | none | ND | ND | 630 | 2200 | 10 | 10 | 100 | 200 |
| 2-Methylphenol | 1 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 2-Nitroaniline | none | ND | ND | ND | ND | 25 | 25 | 250 | 500 |
| 2-Nitrophenol | 1** | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 3,3'-Dichlorobenzidine | none | ND | ND | ND | ND | 25 | 25 | 250 | 500 |
| 3-Nitroaniline | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 4,6-Dinitro-2-methylphenol | 1** | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 4-Bromophenyl phenyl ether | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 4-Chloro-3-methylphenol | 1** | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 4-Chloroaniline | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 4-Chlorophenyl phenyl ether | 1** | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 4-Methylphenol | 1** | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| 4-Nitroaniline | none | ND | ND | ND | ND | 25 | 25 | 250 | 500 |
| 4-Nitrophenol | 1** | ND | ND | ND | ND | 25 | 25 | 250 | 500 |
| Acenaphthene | 20 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Acenaphthylene | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Aniline | 5 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Anthracene | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Benzo(a)anthracene | 0.002 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Benzidine | 5 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Benzo(a)pryene | 0.002 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |

## ANALYTICAL SUMMARY TABLE XIII
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## NOVEMBER 2000 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS

| **SVOCs, Method SW 8270 C**<br>**UG/L (PPB)**<br>**Parameter** | **NYSDEC Class GA**<br>**Groundwater Standards**<br>**TOGS 1.1.1** | **MW-1**<br>11/30/2000 | **MW-2**<br>11/30/2000 | **MW-3**<br>11/30/2000 | **MW-4**<br>11/30/2000 | MW-1<br>Detection Limit | MW-2<br>Detection Limit | MW-3<br>Detection Limit | MW-4<br>Detection Limit |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(b)fluoranthene | 0.002 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Benzo(g,h,I)perylene | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Benzo(k)fluoranthene | 0.002 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Benzoic acid | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Benzyl alcholol | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Bis(2-chloroethoxy)methane | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Bis(2-chloroethyl)ether | 1 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Bis(2-chloroisopropyl)ether | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Bis(2-ethylhexyl)phthalate | 5 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Butyl benzyl phthalate | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Chrysene | 0.002 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Di-n-butyl phthalate | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Di-n-octyl phthalate | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Dibenz(a,h)anthracene | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Dibenzofuran | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Diethyl phthalate | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Dimethyl phthalate | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Fluoranthene | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Fluorene | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Hexachlorobenzene | 0.04 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Hexachlorobutadiene | 0.5 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Hexachlorocyclopentadiene | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Hexachloroethane | 5 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Indeno(1,2,3-cd)pyrene | 0.002 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Isophorone | 50 | ND | ND | **130** | ND | 10 | 10 | 100 | 200 |
| N-Nitrosodi-n-propylamine | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| N-Nitrosodimethylamine | none | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| N-Nitrosodiphenylamine | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Napthalene | 10 | **26** | **33** | **470** | **1500** | 10 | 10 | 100 | 200 |
| Nitrobenzene | 5 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Pentachlorophenol | 1** | ND | ND | ND | ND | 25 | 25 | 250 | 500 |
| Phenanthrene | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Phenol | 1** | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| Pyrene | 50 | ND | ND | ND | ND | 10 | 10 | 100 | 200 |
| **Total SVOC's** | **none** | **26** | **33** | **1230** | **3700** | NA | NA | NA | NA |

Notes: 1) ND - Below DetectionLimit **Bold** - Exceeds NYSDEC Class GA Standard 2) NA - Not Applicable

# ANALYTICAL SUMMARY TABLE XIV
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# NOVEMBER 2000 GROUNDWATER RESULTS, RCRA 8 METALS

**RCRA 8 Metals**
**SW6010B and**
**SW7470A**

| **UG/L (PPB)** **Parameter** | **NYSDEC Class GA Groundwater Standrds TOGS 1.1.1** | **MW-1** 11/30/2000 | **MW-2** 11/30/2000 | **MW-3** 11/30/2000 | **MW-4** 11/30/2000 | Detection Limit |
|---|---|---|---|---|---|---|
| Arsenic | 25 | ND | ND | 16 | ND | 10 |
| Barium | 1,000 | 230 | 210 | 240 | 230 | 50 |
| Cadmium | 5 | ND | ND | ND | ND | 5 |
| Chromium | 50 | ND | ND | ND | ND | 10 |
| Lead | 25 | 6 | 19 | 16 | **120** | 5 |
| Selenium | 10 | ND | ND | ND | ND | 5 |
| Silver | 50 | ND | ND | ND | ND | 5 |
| Mercury, Total | 1 | ND | ND | ND | ND | 1 |

Notes: 1) ND - Below Detection Limit
2) **Bold** - Exceeds applicable NYSDEC Class GA Standard

## ANALYTICAL SUMMARY TABLE XV
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS
## SEPTEMBER 2003 AND JUNE 2004

| Volatile Organic Compounds<br>TAL or TCL/STARS List of VOCs<br>Results UG/L (PPB)<br>Reporting List of Analytes | NYSDEC Class GA Groundwater Standards TOGS 1.1.1 | MW-1<br>Collected<br>09/08/03<br>TAL List | MW-1<br>Collected<br>06/17/04<br>TCL/STARS | MW-2<br>Collected<br>09/05/03<br>TAL List | MW-2<br>Collected<br>06/17/04<br>TCL/STARS | MW-3<br>Collected<br>09/08/03<br>TAL List | MW-3<br>Collected<br>06/17/04<br>TCL/STARS | MW-4<br>Collected<br>09/04/03<br>TAL List | MW-4<br>Collected<br>06/18/04<br>TCL/STARS |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.7 | **250** | **230** | **22** | **22 J** | **220** | **81** | **220** | **140** |
| sec-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | **12 J** | NA 1 | **12 J** | NA 1 | **10 J** |
| N-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | **19 J** | NA 1 | **17 J** | NA 1 | **17 J** |
| Tert-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | ND | NA 1 | ND | NA 1 | ND |
| Chlorobenzene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | 5.0 | **590** | **810** | **430** | **860** | **480** | **490** | **1,000** | **1,000** |
| Toluene | 5.0 | **240** | **250** | **110** | **370** | **200** | **60** | **240** | **320** |
| m,p-Xylene | 5.0 | **2,100** | **2,500** | **1,100** | **3,300** | **1,200** | **990** | **3,500** | **4,500** |
| o-Xylene | 5.0 | **190** | **120** | **200** | **560** | **190** | **100** | **650** | **690** |
| Styrene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 3.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| 1,3-Dichlorobenzene | 3.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| 1,4-Dichlorobenzene | 3.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| Isopropylbenzene | 5.0 | **26** | **35** | **46** | **67** | **43** | **54** | ND | **51** |
| N-propylbenzene | 5.0 | NA 1 | **81** | NA 1 | **180** | NA 1 | **140** | NA 1 | **130** |
| Naphthalene | 10.0 | NA 1 | **110** | NA 1 | **270** | NA 1 | **130** | NA 1 | **350** |
| p-Isopropyltoluene | 5.0 | NA 1 | ND | NA 1 | **23 J** | NA 1 | **8.2 J** | NA 1 | **25 J** |
| 1,3,5-Trimethylbenzene | 5.0 | NA 1 | **170** | NA 1 | **420** | NA 1 | **170** | NA 1 | **360** |
| 1,2,4-Trimethylbenzene | 5.0 | NA 1 | **640** | NA 1 | **1,700** | NA 1 | **880** | NA 1 | **1,400** |
| MTBE | 10.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromoform | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon tetrachloride | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 7.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | none | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromo-3-chloropropane | 0.04 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| Dibromochloromethane | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND = Not Detected  NA1 = Not Applicable, not included in the TAL List  NA2 = Not Applicable, not included in the TCL List

**Bold**=Exceeds applicable NYSDEC Class GA Standard

## ANALYTICAL SUMMARY TABLE XV
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS
## SEPTEMBER 2003 AND JUNE 2004

| Volatile Organic Compounds TAL or TCL/STARS List of VOCs Results UG/L (PPB) Reporting List of Analytes | NYSDEC Class GA Groundwater Standards TOGS 1.1.1 | MW-1 Collected 09/08/03 TAL List | MW-1 Collected 06/17/04 TCL/STARS | MW-2 Collected 09/05/03 TAL List | MW-2 Collected 06/17/04 TCL/STARS | MW-3 Collected 09/08/03 TAL List | MW-3 Collected 06/17/04 TCL/STARS | MW-4 Collected 09/04/03 TAL List | MW-4 Collected 06/18/04 TCL/STARS |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromomethane | 0.0006 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| Dichlorodifluoromethane | 5.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| 1,1-Dichloroethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 1.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloropropane | 1.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3 Dichloropropene | 0.4 | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | 0.4 | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene chloride | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 5.0 | ND | ND J | ND | ND J | ND | ND J | ND | ND J |
| Tetrachloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 5.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| 1,1,1-Trichloroethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | 1.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichlorotrifluoromethane | 5.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| 1,1,2-Trichloro1,2,2-Trifluroethane | 5.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| Vinyl Chloride | 2.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Cyclohexane | none | 300 | NA 2 | 120 | NA 2 | 220 | NA 2 | 160 | NA 2 |
| Methylcyclohexane | none | 160 | NA 2 | 54 | NA 2 | 140 | NA 2 | 64 | NA 2 |
| Acetone | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (Methyl ethyl ketone) | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Hexanone | none | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | none | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon disulfide | 60 | ND | ND | ND | ND | ND | ND | ND | ND |
| Methyl Acetate | none | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| Total Detected VOCs | | 3,856 | 4,946 | 2,082 | 7,803 | 2,693 | 3,132 | 5,834 | 8,993 |

**Legend**

ND = Not Detected  NA1 = Not Applicable, not included in the TAL List  NA2 = Not Applicable, not included in the TCL List

**Bold**=Exceeds applicable NYSDEC Class GA Standard

**ANALYTICAL SUMMARY TABLE XV**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS**
**SEPTEMBER 2003 AND JUNE 2004**

| Volatile Organic Compounds<br>TAL or TCL/STARS List of VOCs<br>Results UG/L (PPB)<br>Reporting List of Analytes | NYSDEC Class<br>GA Groundwater<br>Standards TOGS 1.1.1 | MW-5<br>Collected<br>09/04/03<br>TAL List | MW-5<br>Collected<br>06/15/04<br>TCL/STARS | MW-6<br>Collected<br>09/04/03<br>TAL List | MW-6<br>Collected<br>06/15/04<br>TCL/STARS | MW-7<br>Collected<br>09/08/03<br>TAL List | MW-7<br>Collected<br>06/18/04<br>TCL/STARS | MW-8<br>Collected<br>09/05/03<br>TAL List | MW-8<br>Collected<br>06/16/04<br>TCL/STARS |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.7 | ND | ND | ND | ND | **1,900** | **1,200** | **7** | **8.2** |
| sec-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | ND | NA 1 | ND | NA 1 | 2.8 J |
| N-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | ND | NA 1 | ND | NA 1 | 2.8 J |
| Tert-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | ND | NA 1 | ND | NA 1 | ND |
| Chlorobenzene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | 5.0 | ND | ND | ND | ND | **2,200** | **2,500** | **25** | **120** |
| Toluene | 5.0 | ND | ND | ND | ND | **8,600** | **6,500** | **15** | **25** |
| m,p-Xylene | 5.0 | ND | 1.2 | ND | ND | **8,600** | **10,000** | **200** | **290** |
| o-Xylene | 5.0 | ND | ND | ND | ND | **2,200** | **1,700** | **26** | **27** |
| Styrene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 3.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| 1,3-Dichlorobenzene | 3.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| 1,4-Dichlorobenzene | 3.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| Isopropylbenzene | 5.0 | ND | ND | ND | ND | ND | **96 J** | ND | **15** |
| N-propylbenzene | 5.0 | NA 1 | ND | NA 1 | ND | NA 1 | **250** | NA 1 | **25** |
| Naphthalene | 10.0 | NA 1 | 1.7 | NA 1 | ND | NA 1 | **490** | NA 1 | **51** |
| p-Isopropyltoluene | 5.0 | NA 1 | ND | NA 1 | ND | NA 1 | ND | NA 1 | 2.6 J |
| 1,3,5-Trimethylbenzene | 5.0 | NA 1 | ND | NA 1 | ND | NA 1 | **560** | NA 1 | **76** |
| 1,2,4-Trimethylbenzene | 5.0 | NA 1 | ND | NA 1 | ND | NA 1 | **2,200** | NA 1 | **340** |
| MTBE | 10.0 | ND | ND | ND | 1.7 J | **200** | ND | 5 | ND |
| Bromodichloromethane | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromoform | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon tetrachloride | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 7.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | none | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromo-3-chloropropane | 0.04 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| Dibromochloromethane | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND = Not Detected  NA1 = Not Applicable, not included in the TAL List  NA2 = Not Applicable, not included in the TCL List

**Bold**=Exceeds applicable NYSDEC Class GA Standard

**ANALYTICAL SUMMARY TABLE XV**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS**
**SEPTEMBER 2003 AND JUNE 2004**

| Volatile Organic Compounds TAL or TCL/STARS List of VOCs Results UG/L (PPB) Reporting List of Analytes | NYSDEC Class GA Groundwater Standards TOGS 1.1.1 | MW-5 Collected 09/04/03 TAL List | MW-5 Collected 06/15/04 TCL/STARS | MW-6 Collected 09/04/03 TAL List | MW-6 Collected 06/15/04 TCL/STARS | MW-7 Collected 09/08/03 TAL List | MW-7 Collected 06/18/04 TCL/STARS | MW-8 Collected 09/05/03 TAL List | MW-8 Collected 06/16/04 TCL/STARS |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromomethane | 0.0006 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| Dichlorodifluoromethane | 5.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| 1,1-Dichloroethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 1.0 | ND | ND | ND | ND | ND | **29 J** | ND | ND |
| 1,1-Dichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloropropane | 1.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3 Dichloropropene | 0.4 | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | 0.4 | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene chloride | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 5.0 | ND | ND J | ND | ND J | ND | ND J | ND | ND J |
| Tetrachloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 5.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| 1,1,1-Trichloroethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | 1.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichlorotrifluoromethane | 5.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| 1,1,2-Trichloro1,2,2-Trifluroethane | 5.0 | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| Vinyl Chloride | 2.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Cyclohexane | none | ND | NA 2 | ND | NA 2 | 240 | NA 2 | 10 | NA 2 |
| Methylcyclohexane | none | ND | NA 2 | ND | NA 2 | ND | NA 2 | 4 | NA 2 |
| Acetone | 50.0 | ND | ND | ND | 6.9 J | ND | ND | ND | ND |
| 2-Butanone (Methyl ethyl ketone) | 50.0 | ND | ND | ND | 3.3 J | ND | ND | ND | ND |
| 2-Hexanone | none | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | none | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon disulfide | 60 | ND | ND | ND | ND | ND | ND | ND | ND |
| Methyl Acetate | none | ND | NA 2 | ND | NA 2 | ND | NA 2 | ND | NA 2 |
| Total Detected VOCs | | 0 | 2.9 | 0 | 11.9 | 23,940 | 25,525 | 292 | 985.4 |

**Legend**

ND = Not Detected  NA1 = Not Applicable, not included in the TAL List  NA2 = Not Applicable, not included in the TCL List

**Bold**=Exceeds applicable NYSDEC Class GA Standard

## ANALYTICAL SUMMARY TABLE XV
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS
## SEPTEMBER 2003 AND JUNE 2004

| Volatile Organic Compounds TAL or TCL/STARS List of VOCs Results UG/L (PPB) Reporting List of Analytes | NYSDEC Class GA Groundwater Standards TOGS 1.1.1 | MW-9 Collected 09/05/03 TAL List | MW-9 Collected 06/18/04 TCL/STARS | MW-10 Collected 09/05/03 TAL List | MW-10Dup Collected 09/05/03 TAL List | MW-10 Collected 06/16/04 TCL/STARS | MW-11 Collected 09/05/03 TAL List | MW-11 Collected 06/16/04 TCL/STARS | MW-12 Collected 09/04/03 TAL List |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.7 | ND | **77 J** | **91** | **89** | **4.3 J** | **500** | **170** | ND |
| sec-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | NA 1 | ND | NA 1 | ND | NA 1 |
| N-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | NA 1 | ND | NA 1 | ND | NA 1 |
| Tert-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | NA 1 | **6.4** | NA 1 | ND | NA 1 |
| Chlorobenzene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethylbenzene | 5.0 | **2,100** | **2,000** | **1,200** | **1,200** | **72** | **260** | **240** | ND |
| Toluene | 5.0 | **3,500** | **2,500** | **1,900** | **1,900** | **63** | **130** | **44** | ND |
| m,p-Xylene | 5.0 | **8,200** | **7,700** | **4,600** | **4,500** | **260** | **380** | **300** | ND |
| o-Xylene | 5.0 | **2,600** | **2,200** | **1,300** | **1,300** | **21** | **50** | **17** | ND |
| Styrene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 3.0 | ND | NA 2 | ND | ND | NA 2 | ND | NA 2 | ND |
| 1,3-Dichlorobenzene | 3.0 | ND | NA 2 | ND | ND | NA 2 | ND | NA 2 | ND |
| 1,4-Dichlorobenzene | 3.0 | ND | NA 2 | ND | ND | NA 2 | ND | NA 2 | ND |
| Isopropylbenzene | 5.0 | ND | **50 J** | ND | ND | ND | ND | **5.8 J** | ND |
| N-propylbenzene | 5.0 | NA 1 | **190** | NA 1 | NA 1 | **5.2** | NA 1 | **16** | NA 1 |
| Naphthalene | 10.0 | NA 1 | **410** | NA 1 | NA 1 | **13** | NA 1 | **21** | NA 1 |
| p-Isopropyltoluene | 5.0 | NA 1 | ND | NA 1 | NA 1 | ND | NA 1 | ND | NA 1 |
| 1,3,5-Trimethylbenzene | 5.0 | NA 1 | **480** | NA 1 | NA 1 | **14** | NA 1 | **23** | NA 1 |
| 1,2,4-Trimethylbenzene | 5.0 | NA 1 | **1,800** | NA 1 | NA 1 | **55** | NA 1 | **120** | NA 1 |
| MTBE | 10.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromodichloromethane | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromoform | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon tetrachloride | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 7.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | none | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromo-3-chloropropane | 0.04 | ND | NA 2 | ND | ND | NA 2 | ND | NA 2 | ND |
| Dibromochloromethane | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND = Not Detected NA1 = Not Applicable, not included in the TAL List NA2 = Not Applicable, not included in the TCL List

**Bold**=Exceeds applicable NYSDEC Class GA Standard

**ANALYTICAL SUMMARY TABLE XV**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS**
**SEPTEMBER 2003 AND JUNE 2004**

| Volatile Organic Compounds TAL or TCL/STARS List of VOCs Results UG/L (PPB) Reporting List of Analytes | NYSDEC Class GA Groundwater Standards TOGS 1.1.1 | MW-9 Collected 09/05/03 TAL List | MW-9 Collected 06/18/04 TCL/STARS | MW-10 Collected 09/05/03 TAL List | MW-10Dup Collected 09/05/03 TAL List | MW-10 Collected 06/16/04 TCL/STARS | MW-11 Collected 09/05/03 TAL List | MW-11 Collected 06/16/04 TCL/STARS | MW-12 Collected 09/04/03 TAL List |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromomethane | 0.0006 | ND | NA 2 | ND | ND | NA 2 | ND | NA 2 | ND |
| Dichlorodifluoromethane | 5.0 | ND | NA 2 | ND | ND | NA 2 | ND | NA 2 | ND |
| 1,1-Dichloroethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 1.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloropropane | 1.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| cis-1,3 Dichloropropene | 0.4 | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | 0.4 | ND | ND | ND | ND | ND | ND | ND | ND |
| Methylene chloride | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 5.0 | ND | ND J | ND | ND | ND J | ND | ND J | ND |
| Tetrachloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 5.0 | ND | NA 2 | ND | ND | NA 2 | ND | NA 2 | ND |
| 1,1,1-Trichloroethane | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | 1.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichloroethene | 5.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichlorotrifluoromethane | 5.0 | ND | NA 2 | ND | ND | NA 2 | ND | NA 2 | ND |
| 1,1,2-Trichloro1,2,2-Trifluroethane | 5.0 | ND | NA 2 | ND | ND | NA 2 | ND | NA 2 | ND |
| Vinyl Chloride | 2.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Cyclohexane | none | 290 | NA 2 | 160 | 160 | NA 2 | 51 | NA 2 | ND |
| Methylcyclohexane | none | ND | NA 2 | ND | ND | NA 2 | ND | NA 2 | ND |
| Acetone | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Butanone (Methyl ethyl ketone) | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| 2-Hexanone | none | ND | ND | ND | ND | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | none | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon disulfide | 60 | ND | ND | ND | ND | ND | ND | ND | ND |
| Methyl Acetate | none | ND | NA 2 | ND | ND | NA 2 | ND | NA 2 | ND |
| Total Detected VOCs |  | 16,690 | 17,407 | 9,251 | 9,149 | 514 | 1,371 | 956.8 | 0 |

**Legend**
ND = Not Detected  NA1 = Not Applicable, not included in the TAL List  NA2 = Not Applicable, not included in the TCL List
**Bold**=Exceeds applicable NYSDEC Class GA Standard

## ANALYTICAL SUMMARY TABLE XV
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS
## SEPTEMBER 2003 AND JUNE 2004

| Volatile Organic Compounds TAL or TCL/STARS List of VOCs Results UG/L (PPB) Reporting List of Analytes | NYSDEC Class GA Groundwater Standards TOGS 1.1.1 | MW-12 Collected 06/16/04 TCL/STARS | MW-13 Collected 06/15/04 TAL/STARS | MW-13 Dup Collected 06/15/04 TAL List | MW-14 Collected 06/15/04 TAL/STARS |
|---|---|---|---|---|---|
| Benzene | 0.7 | ND | ND | ND | ND |
| sec-Butylbenzene | 5.0 | ND | ND | NA 1 | ND |
| N-Butylbenzene | 5.0 | ND | ND | NA 1 | ND |
| Tert-Butylbenzene | 5.0 | ND | ND | NA 1 | ND |
| Chlorobenzene | 5.0 | ND | ND | ND | ND |
| Ethylbenzene | 5.0 | ND | ND | ND | ND |
| Toluene | 5.0 | ND | ND | ND | ND |
| m,p-Xylene | 5.0 | ND | ND | ND | ND |
| o-Xylene | 5.0 | ND | ND | ND | ND |
| Styrene | 5.0 | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 3.0 | NA 2 | ND | ND | ND |
| 1,3-Dichlorobenzene | 3.0 | NA 2 | ND | ND | ND |
| 1,4-Dichlorobenzene | 3.0 | NA 2 | ND | ND | ND |
| Isopropylbenzene | 5.0 | ND | ND | ND | ND |
| N-propylbenzene | 5.0 | ND | ND | NA 1 | ND |
| Naphthalene | 10.0 | ND | ND | NA 1 | ND |
| p-Isopropyltoluene | 5.0 | ND | ND | NA 1 | ND |
| 1,3,5-Trimethylbenzene | 5.0 | ND | ND | NA 1 | ND |
| 1,2,4-Trimethylbenzene | 5.0 | ND | ND | NA 1 | ND |
| MTBE | 10.0 | ND | 1.4 J | ND | ND |
| Bromodichloromethane | 50.0 | ND | ND | ND | ND |
| Bromomethane | 5.0 | ND | ND | ND | ND |
| Bromoform | 50.0 | ND | ND | ND | ND |
| Carbon tetrachloride | 5.0 | ND | ND | ND | ND |
| Chloroethane | 5.0 | ND | ND | ND | ND |
| Chloroform | 7.0 | ND | ND | ND | ND |
| Chloromethane | none | ND | ND | ND | ND |
| 1,2-Dibromo-3-chloropropane | 0.04 | NA 2 | ND | ND | ND |
| Dibromochloromethane | 50.0 | ND | ND | ND | ND |

**Legend**

ND = Not Detected  NA1 = Not Applicable, not included in the TAL List  NA2 = Not Applicable, not included in the TCL List

**Bold**=Exceeds applicable NYSDEC Class GA Standard

**ANALYTICAL SUMMARY TABLE XV**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS**
**SEPTEMBER 2003 AND JUNE 2004**

| Volatile Organic Compounds TAL or TCL/STARS List of VOCs Results UG/L (PPB) Reporting List of Analytes | NYSDEC Class GA Groundwater Standards TOGS 1.1.1 | MW-12 Collected 06/16/04 TCL/STARS | MW-13 Collected 06/15/04 TAL/STARS | MW-13 Dup Collected 06/15/04 TAL List | MW-14 Collected 06/15/04 TAL/STARS |
|---|---|---|---|---|---|
| 1,2-Dibromomethane | 0.0006 | NA 2 | ND | ND | ND |
| Dichlorodifluoromethane | 5.0 | NA 2 | ND | ND | ND |
| 1,1-Dichloroethane | 5.0 | ND | ND | ND | ND |
| 1,2-Dichloroethane | 1.0 | ND | ND | ND | ND |
| 1,1-Dichloroethene | 5.0 | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND |
| 1,2-Dichloropropane | 1.0 | ND | ND | ND | ND |
| cis-1,3 Dichloropropene | 0.4 | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | 0.4 | ND | ND | ND | ND |
| Methylene chloride | 5.0 | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 5.0 | ND J | ND | ND | ND |
| Tetrachloroethene | 5.0 | 2.2 J | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 5.0 | ND | ND J | ND J | ND J |
| 1,1,1-Trichloroethane | 5.0 | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | 1.0 | ND | ND | ND | ND |
| Trichloroethene | 5.0 | ND | ND | ND | ND |
| Trichlorotrifluoromethane | 5.0 | ND | ND | ND | ND |
| 1,1,2-Trichloro1,2,2-Trifluroethane | 5.0 | ND | ND | ND | ND |
| Vinyl Chloride | 2.0 | ND | ND | ND | ND |
| Cyclohexane | none | NA 2 | ND | ND | ND |
| Methylcyclohexane | none | NA 2 | ND | ND | ND |
| Acetone | 50.0 | ND | ND | ND | ND |
| 2-Butanone (Methyl ethyl ketone) | 50.0 | ND | ND | ND | ND |
| 2-Hexanone | none | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | none | ND | ND | ND | ND |
| Carbon disulfide | 60 | ND | ND | ND | ND |
| Methyl Acetate | none | NA 2 | ND | ND | ND |
| Total Detected VOCs | | 2.2 J | 1.4 | 0 | 0 |

**Legend**
ND = Not Detected  NA1 = Not Applicable, not included in the TAL List  NA2 = Not Applicable, not included in the TCL List
**Bold**=Exceeds applicable NYSDEC Class GA Standard

## ANALYTICAL SUMMARY TABLE XV
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS
## SEPTEMBER 2003 AND JUNE 2004

| Volatile Organic Compounds TAL or TCL/STARS List of VOCs Results UG/L (PPB) Reporting List of Analytes | NYSDEC Class GA Groundwater Standards TOGS 1.1.1 | Field Blank Collected 09/08/03 TAL List | Field Blank Collected 6/16/2004 TCL List | Cooler Blank Collected 06/15/04 TAL List | Trip Blank Collected 06/18/04 TCL List |
|---|---|---|---|---|---|
| Benzene | 0.7 | ND | ND | ND | ND |
| sec-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | ND |
| N-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | ND |
| Tert-Butylbenzene | 5.0 | NA 1 | ND | NA 1 | ND |
| Chlorobenzene | 5.0 | ND | ND | ND | ND |
| Ethylbenzene | 5.0 | ND | ND | ND | ND |
| Toluene | 5.0 | ND | ND | ND | ND |
| m,p-Xylene | 5.0 | ND | ND | ND | ND |
| o-Xylene | 5.0 | ND | ND | ND | ND |
| Styrene | 5.0 | ND | ND | ND | ND |
| 1,2-Dichlorobenzene | 3.0 | ND | NA 2 | ND | NA 2 |
| 1,3-Dichlorobenzene | 3.0 | ND | NA 2 | ND | NA 2 |
| 1,4-Dichlorobenzene | 3.0 | ND | NA 2 | ND | NA 2 |
| Isopropylbenzene | 5.0 | ND | ND | ND | ND |
| N-propylbenzene | 5.0 | NA 1 | ND | NA 1 | ND |
| Naphthalene | 10.0 | NA 1 | ND | NA 1 | ND |
| p-Isopropyltoluene | 5.0 | NA 1 | ND | NA 1 | ND |
| 1,3,5-Trimethylbenzene | 5.0 | NA 1 | ND | NA 1 | ND |
| 1,2,4-Trimethylbenzene | 5.0 | NA 1 | ND | NA 1 | ND |
| MTBE | 10.0 | ND | ND | ND | ND |
| Bromodichloromethane | 50.0 | ND | ND | ND | ND |
| Bromomethane | 5.0 | ND | ND | ND | ND |
| Bromoform | 50.0 | ND | ND | ND | ND |
| Carbon tetrachloride | 5.0 | ND | ND | ND | ND |
| Chloroethane | 5.0 | ND | ND | ND | ND |
| Chloroform | 7.0 | ND | ND | ND | ND |
| Chloromethane | none | ND | ND | ND | ND |
| 1,2-Dibromo-3-chloropropane | 0.04 | ND | NA 2 | ND | NA 2 |
| Dibromochloromethane | 50.0 | ND | ND | ND | ND |

**Legend**

ND = Not Detected  NA1 = Not Applicable, not included in the TAL List  NA2 = Not Applicable, not included in the TCL List

**Bold**=Exceeds applicable NYSDEC Class GA Standard

## ANALYTICAL SUMMARY TABLE XV
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 GROUNDWATER RESULTS, VOLATILE ORGANIC COMPOUNDS
## SEPTEMBER 2003 AND JUNE 2004

| Volatile Organic Compounds TAL or TCL/STARS List of VOCs Results UG/L (PPB) Reporting List of Analytes | NYSDEC Class GA Groundwater Standards TOGS 1.1.1 | Field Blank Collected 09/08/03 TAL List | Field Blank Collected 6/16/2004 TCL List | Cooler Blank Collected 06/15/04 TAL List | Trip Blank Collected 06/18/04 TCL List |
|---|---|---|---|---|---|
| 1,2-Dibromomethane | 0.0006 | ND | ND | ND | ND |
| Dichlorodifluoromethane | 5.0 | ND | ND | ND | ND |
| 1,1-Dichloroethane | 5.0 | ND | ND | ND | ND |
| 1,2-Dichloroethane | 1.0 | ND | ND | ND | ND |
| 1,1-Dichloroethene | 5.0 | ND | ND | ND | ND |
| cis-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND |
| trans-1,2-Dichloroethene | 5.0 | ND | ND | ND | ND |
| 1,2-Dichloropropane | 1.0 | ND | ND | ND | ND |
| cis-1,3 Dichloropropene | 0.4 | ND | ND | ND | ND |
| trans-1,3-Dichloropropene | 0.4 | ND | ND | ND | ND |
| Methylene chloride | 5.0 | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 5.0 | ND | ND J | ND | ND J |
| Tetrachloroethene | 5.0 | ND | ND | ND | ND |
| 1,2,4-Trichlorobenzene | 5.0 | ND | ND | ND J | ND |
| 1,1,1-Trichloroethane | 5.0 | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | 1.0 | ND | ND | ND | ND |
| Trichloroethene | 5.0 | ND | ND | ND | ND |
| Trichlorotrifluoromethane | 5.0 | ND | ND | ND | ND |
| 1,1,2-Trichloro1,2,2-Trifluroethane | 5.0 | ND | ND | ND | ND |
| Vinyl Chloride | 2.0 | ND | ND | ND | ND |
| Cyclohexane | none | ND | NA 2 | ND | NA 2 |
| Methylcyclohexane | none | ND | NA 2 | ND | NA 2 |
| Acetone | 50.0 | ND | ND | ND | ND |
| 2-Butanone (Methyl ethyl ketone) | 50.0 | ND | ND | ND | ND |
| 2-Hexanone | none | ND | ND | ND | ND |
| 4-Methyl-2-pentanone | none | ND | ND | ND | ND |
| Carbon disulfide | 60 | ND | ND | ND | ND |
| Methyl Acetate | none | ND | NA 2 | ND | NA 2 |
| Total Detected VOCs | | 0 | 0 | 0 | 0 |

**Legend**

ND = Not Detected NA1 = Not Applicable, not included in the TAL List NA2 = Not Applicable, not included in the TCL List

**Bold**=Exceeds applicable NYSDEC Class GA Standard

## ANALYTICAL SUMMARY TABLE XVI
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS
## SEPTEMBER 2003 AND JUNE 2004

| ***SVOC COMPOUND*** ***Method 8270*** ***UG/L (PPB)*** ***Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-1 Collected 09/08/03 TCL List | MW-1 Collected 06/17/04 STARS | MW-2 Collected 09/05/03 TCL List | MW-2 Collected 06/17/04 STARS | MW-3 Collected 09/08/03 TCL List | MW-3 Collected 06/17/04 STARS | MW-4 Collected 09/08/03 TCL LIST | MW-4 Collected 06/18/04 STARS |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 20 | ND | ND | ND | ND | ND | ND | ND | ND |
| Acenaphthylene | none | ND | NA | ND | NA | ND | NA | ND | NA |
| Acetophenone | none | ND | NA | ND | NA | ND | NA | ND | NA |
| Anthracene | 50 | ND | ND | ND | ND | ND | ND | ND | ND |
| Atrazine | 7.5 | ND | NA | ND | NA | ND | NA | ND | NA |
| Benzaldehyde | none | ND | NA | ND | NA | ND | NA | ND | NA |
| Benao(a)anthracene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(a)pyrene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(b)fluoranthrene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(g,h,i)perylene | none | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(k)fluoranthrene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1'-Biphenyl (Biphenyl) | 5 | ND | NA | ND | NA | ND | NA | ND | NA |
| Butyl benzyl phthalate | 50 | ND | NA | ND | NA | ND | NA | ND | NA |
| Di-n-butyl phthalate | 50 | ND | NA | ND | NA | ND | NA | ND | NA |
| Caprolactam | none | ND | NA | ND | NA | ND | NA | ND | NA |
| Carbazole | none | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Chloroaniline | 5 | ND | NA | ND | NA | ND | NA | ND | NA |
| Bis(-2-chloroethoxyl) methane | 5 | ND | NA | ND | NA | ND | NA | ND | NA |
| Bis(2-chloroethyl) ether | 1 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2-Chloronaphthalene | 10.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2-Chlorophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,2'-Oxbis(1-Chloropropane) | none | ND | NA | ND | NA | ND | NA | ND | NA |

**Legend**
Results uG/L ND=Not Detected NA = Not Applicable not in STARS List
J=Estimated B=Found in method blank
D=Dilution factor
**Bold**=Compound above GA Groundwater Standard

**ANALYTICAL SUMMARY TABLE XVI**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**
**SEPTEMBER 2003 AND JUNE 2004**

| ***SVOC COMPOUND Method 8270 UG/L (PPB) Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-1 Collected 09/08/03 TCL List | MW-1 Collected 06/17/04 STARS | MW-2 Collected 09/05/03 TCL List | MW-2 Collected 06/17/04 STARS | MW-3 Collected 09/08/03 TCL List | MW-3 Collected 06/17/04 STARS | MW-4 Collected 09/08/03 TCL LIST | MW-4 Collected 06/18/04 STARS |
|---|---|---|---|---|---|---|---|---|---|
| Chrysene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibenzo(a,h)anthracene | none | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibenzofuran | none | ND | NA | ND | NA | ND | NA | ND | NA |
| 3,3'-Dichlorobenzidine | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,4-Dichlorophenol | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Diethyl phthalate | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Dimethyl phthalate | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,4-Dimethylphenol | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,4-Dinitrophenol | 10.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,4-Dinitrotoluene | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,6-Dinitrotoluene | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Bis(2-ethylhexyl) phtahalate | 5.0 | **27** | NA | **92** | NA | ND | NA | ND | NA |
| Fluoranthene | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Fluorene | 50.0 | ND | ND | ND | ND | ND | ND | ND | 19 J |
| Hexachlorobenzene | 0.04 | ND | NA | ND | NA | ND | NA | ND | NA |
| Hexachlorobutadiene | 0.5 | ND | NA | ND | NA | ND | NA | ND | NA |
| Hexachlorocyclopentadine | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Hexachloroethane | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Isophorone | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2-Methylnaphthalene | 4.7 | **11** | NA | **30** | NA | **56** | NA | **5,200** | NA |
| 4,6-Dinitro-2-methylphenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Chloro-3-methylphenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |

**Legend**
Results uG/L ND=Not Detected NA = Not Applicable not in STARS List
J=Estimated B=Found in method blank
D=Dilution factor
**Bold**=Compound above GA Groundwater Standard

**ANALYTICAL SUMMARY TABLE XVI**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**
**SEPTEMBER 2003 AND JUNE 2004**

| ***SVOC COMPOUND Method 8270 UG/L (PPB) Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-1 Collected 09/08/03 TCL List | MW-1 Collected 06/17/04 STARS | MW-2 Collected 09/05/03 TCL List | MW-2 Collected 06/17/04 STARS | MW-3 Collected 09/08/03 TCL List | MW-3 Collected 06/17/04 STARS | MW-4 Collected 09/08/03 TCL LIST | MW-4 Collected 06/18/04 STARS |
|---|---|---|---|---|---|---|---|---|---|
| 2-Methylphenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Methylphenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Naphthalene | 10.0 | **71** | **97** | **92** | **220** | **81** | **100** | **2,700** | **800** |
| 2-Nitroaniline | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 3-Nitroaniline | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Nitroaniline | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Nitrobenzene | 0.4 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2-Nitrophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Nitrophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| N-nitrosodiphenylamine | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Di-n-octyl phthalate | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Pentachlorophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Phenanthrene | 50.0 | ND | ND | ND | ND | ND | ND | ND | 12 J |
| Phenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Bromophenyl phenyl ether | none | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Chlorophenyl phenyl ether | none | ND | NA | ND | NA | ND | NA | ND | NA |
| N-Nitroso-Di-n-propylamine | none | ND | NA | ND | NA | ND | NA | ND | NA |
| Pyrene | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,4,6-Trichlorophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Total SVOCs: | none | 109 | 97 | 214 | 220 | 137 | 100 | 7,900 | 831 |

**Legend**
Results uG/L ND=Not Detected NA = Not Applicable not in STARS List
J=Estimated B=Found in method blank
D=Dilution factor
**Bold**=Compound above GA Groundwater Standard

# ANALYTICAL SUMMARY TABLE XVI
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS
## SEPTEMBER 2003 AND JUNE 2004

| ***SVOC COMPOUND*** ***Method 8270*** ***UG/L (PPB)*** ***Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-5 Collected 09/04/03 TCL List | MW-5 Collected 06/15/04 STARS | MW-6 Collected 09/04/03 TCL List | MW-6 Collected 06/15/04 STARS | MW-7 Collected 09/08/03 TCL List | MW-7 Collected 06/18/04 STARS | MW-8 Collected 09/05/03 TCL List | MW-8 Collected 06/16/04 STARS |
|---|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 20 | ND | ND | ND | ND | ND | ND | ND | ND |
| Acenaphthylene | none | ND | NA | ND | NA | ND | NA | ND | NA |
| Acetophenone | none | ND | NA | ND | NA | ND | NA | 10 | NA |
| Anthracene | 50 | ND | ND | ND | ND | ND | ND | ND | ND |
| Atrazine | 7.5 | ND | NA | ND | NA | ND | NA | ND | NA |
| Benzaldehyde | none | ND | NA | ND | NA | ND | NA | ND | NA |
| Benao(a)anthracene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(a)pyrene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(b)fluoranthrene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(g,h,i)perylene | none | ND | ND | ND | ND | ND | ND | ND | ND |
| Benzo(k)fluoranthrene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1'-Biphenyl (Biphenyl) | 5 | ND | NA | ND | NA | ND | NA | ND | NA |
| Butyl benzyl phthalate | 50 | ND | NA | ND | NA | ND | NA | ND | NA |
| Di-n-butyl phthalate | 50 | 13 B | NA | 8 JB | NA | ND | NA | 6 JB | NA |
| Caprolactam | none | ND | NA | ND | NA | ND | NA | ND | NA |
| Carbazole | none | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Chloroaniline | 5 | ND | NA | ND | NA | ND | NA | ND | NA |
| Bis(-2-chloroethoxyl) methane | 5 | ND | NA | ND | NA | ND | NA | ND | NA |
| Bis(2-chloroethyl) ether | 1 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2-Chloronaphthalene | 10.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2-Chlorophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,2'-Oxbis(1-Chloropropane) | none | ND | NA | ND | NA | ND | NA | ND | NA |

**Legend**

Results uG/L ND=Not Detected NA = Not Applicable not in STARS List
J=Estimated B=Found in method blank
D=Dilution factor
**Bold**=Compound above GA Groundwater Standard

**ANALYTICAL SUMMARY TABLE XVI**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**
**SEPTEMBER 2003 AND JUNE 2004**

| ***SVOC COMPOUND Method 8270 UG/L (PPB) Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-5 Collected 09/04/03 TCL List | MW-5 Collected 06/15/04 STARS | MW-6 Collected 09/04/03 TCL List | MW-6 Collected 06/15/04 STARS | MW-7 Collected 09/08/03 TCL List | MW-7 Collected 06/18/04 STARS | MW-8 Collected 09/05/03 TCL List | MW-8 Collected 06/16/04 STARS |
|---|---|---|---|---|---|---|---|---|---|
| Chrysene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibenzo(a,h)anthracene | none | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibenzofuran | none | ND | NA | ND | NA | ND | NA | ND | NA |
| 3,3'-Dichlorobenzidine | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,4-Dichlorophenol | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Diethyl phthalate | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Dimethyl phthalate | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,4-Dimethylphenol | 50.0 | ND | NA | ND | NA | ND | NA | 6 J | NA |
| 2,4-Dinitrophenol | 10.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,4-Dinitrotoluene | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,6-Dinitrotoluene | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Bis(2-ethylhexyl) phtahalate | 5.0 | **42 B** | NA | **21 B** | NA | ND | NA | **140 E** | NA |
| Fluoranthene | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Fluorene | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobenzene | 0.04 | ND | NA | ND | NA | ND | NA | ND | NA |
| Hexachlorobutadiene | 0.5 | ND | NA | ND | NA | ND | NA | ND | NA |
| Hexachlorocyclopentadine | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Hexachloroethane | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Isophorone | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2-Methylnaphthalene | 4.7 | ND | NA | ND | NA | **120** | NA | 1 J | NA |
| 4,6-Dinitro-2-methylphenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Chloro-3-methylphenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |

**Legend**
Results uG/L ND=Not Detected NA = Not Applicable not in STARS List
J=Estimated B=Found in method blank
D=Dilution factor
**Bold**=Compound above GA Groundwater Standard

**ANALYTICAL SUMMARY TABLE XVI**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**
**SEPTEMBER 2003 AND JUNE 2004**

| ***SVOC COMPOUND*** ***Method 8270*** ***UG/L (PPB)*** ***Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-5 Collected 09/04/03 TCL List | MW-5 Collected 06/15/04 STARS | MW-6 Collected 09/04/03 TCL List | MW-6 Collected 06/15/04 STARS | MW-7 Collected 09/08/03 TCL List | MW-7 Collected 06/18/04 STARS | MW-8 Collected 09/05/03 TCL List | MW-8 Collected 06/16/04 STARS |
|---|---|---|---|---|---|---|---|---|---|
| 2-Methylphenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Methylphenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Naphthalene | 10.0 | ND | ND | ND | ND | **370** | **450** | **11** | **31** |
| 2-Nitroaniline | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 3-Nitroaniline | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Nitroaniline | 5.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Nitrobenzene | 0.4 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2-Nitrophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Nitrophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| N-nitrosodiphenylamine | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Di-n-octyl phthalate | 50.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Pentachlorophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Phenanthrene | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Phenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Bromophenyl phenyl ether | none | ND | NA | ND | NA | ND | NA | ND | NA |
| 4-Chlorophenyl phenyl ether | none | ND | NA | ND | NA | ND | NA | ND | NA |
| N-Nitroso-Di-n-propylamine | none | ND | NA | ND | NA | ND | NA | ND | NA |
| Pyrene | 50.0 | ND | ND | ND | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 0.002 | ND | ND | ND | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| 2,4,6-Trichlorophenol | 1.0 | ND | NA | ND | NA | ND | NA | ND | NA |
| Total SVOCs: | none | 55 B | 0 | 29 JB | 0 | 490 | 450 | 174 JBE | 31 |

**Legend**
Results uG/L ND=Not Detected NA = Not Applicable not in STARS List
J=Estimated B=Found in method blank
D=Dilution factor
**Bold**=Compound above GA Groundwater Standard

## ANALYTICAL SUMMARY TABLE XVI
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS
## SEPTEMBER 2003 AND JUNE 2004

| ***SVOC COMPOUND*** ***Method 8270*** ***UG/L (PPB)*** ***Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-9 Collected 09/05/03 TCL List | MW-9 Collected 06/18/04 STARS | MW-10 Collected 09/05/03 TCL List | MW-10Dup Collected 09/05/03 TCL List | MW-10 Collected 06/16/04 STARS | MW-11 Collected 09/05/03 TCL List | MW-11 Collected 06/16/04 STARS |
|---|---|---|---|---|---|---|---|---|
| Acenaphthene | 20 | ND | ND | ND | ND | ND | ND | ND |
| Acenaphthylene | none | ND | NA | ND | ND | NA | ND | NA |
| Acetophenone | none | ND | NA | ND | ND | NA | ND | NA |
| Anthracene | 50 | ND | ND | ND | ND | ND | ND | ND |
| Atrazine | 7.5 | ND | NA | ND | ND | NA | ND | NA |
| Benzaldehyde | none | ND | NA | ND | ND | NA | ND | NA |
| Benao(a)anthracene | 0.002 | ND | ND | ND | ND | ND | ND | ND |
| Benzo(a)pyrene | 0.002 | ND | ND | ND | ND | ND | ND | ND |
| Benzo(b)fluoranthrene | 0.002 | ND | ND | ND | ND | ND | ND | ND |
| Benzo(g,h,i)perylene | none | ND | ND | ND | ND | ND | ND | ND |
| Benzo(k)fluoranthrene | 0.002 | ND | ND | ND | ND | ND | ND | ND |
| 1,1'-Biphenyl (Biphenyl) | 5 | ND | NA | ND | ND | NA | ND | NA |
| Butyl benzyl phthalate | 50 | ND | NA | ND | ND | NA | ND | NA |
| Di-n-butyl phthalate | 50 | 6 JBD | NA | 5 JB | 8 B | NA | 10 B | NA |
| Caprolactam | none | ND | NA | ND | ND | NA | ND | NA |
| Carbazole | none | ND | NA | ND | ND | NA | ND | NA |
| 4-Chloroaniline | 5 | ND | NA | ND | ND | NA | ND | NA |
| Bis(-2-chloroethoxyl) methane | 5 | ND | NA | ND | ND | NA | ND | NA |
| Bis(2-chloroethyl) ether | 1 | ND | NA | ND | ND | NA | ND | NA |
| 2-Chloronaphthalene | 10.0 | ND | NA | ND | ND | NA | ND | NA |
| 2-Chlorophenol | 1.0 | ND | NA | ND | ND | NA | ND | NA |
| 2,2'-Oxbis(1-Chloropropane) | none | ND | NA | ND | ND | NA | ND | NA |

**Legend**

Results uG/L ND=Not Detected NA = Not Applicable not in STARS List

J=Estimated B=Found in method blank

D=Dilution factor

**Bold**=Compound above GA Groundwater Standard

## ANALYTICAL SUMMARY TABLE XVI
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS
## SEPTEMBER 2003 AND JUNE 2004

| ***SVOC COMPOUND*** ***Method 8270*** ***UG/L (PPB)*** ***Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-9 Collected 09/05/03 TCL List | MW-9 Collected 06/18/04 STARS | MW-10 Collected 09/05/03 TCL List | MW-10Dup Collected 09/05/03 TCL List | MW-10 Collected 06/16/04 STARS | MW-11 Collected 09/05/03 TCL List | MW-11 Collected 06/16/04 STARS |
|---|---|---|---|---|---|---|---|---|
| Chrysene | 0.002 | ND | ND | ND | ND | ND | ND | ND |
| Dibenzo(a,h)anthracene | none | ND | ND | ND | ND | ND | ND | ND |
| Dibenzofuran | none | ND | NA | ND | ND | NA | ND | NA |
| 3,3'-Dichlorobenzidine | 5.0 | ND | NA | ND | ND | NA | ND | NA |
| 2,4-Dichlorophenol | 5.0 | ND | NA | ND | ND | NA | ND | NA |
| Diethyl phthalate | 50.0 | ND | NA | ND | ND | NA | ND | NA |
| Dimethyl phthalate | 50.0 | ND | NA | ND | ND | NA | ND | NA |
| 2,4-Dimethylphenol | 50.0 | ND | NA | ND | ND | NA | ND | NA |
| 2,4-Dinitrophenol | 10.0 | ND | NA | ND | ND | NA | ND | NA |
| 2,4-Dinitrotoluene | 5.0 | ND | NA | ND | ND | NA | ND | NA |
| 2,6-Dinitrotoluene | 5.0 | ND | NA | ND | ND | NA | ND | NA |
| Bis(2-ethylhexyl) phtahalate | 5.0 | **45 JD** | NA | 3 JB | **34 D** | NA | **78 E** | NA |
| Fluoranthene | 50.0 | ND | ND | ND | ND | ND | ND | ND |
| Fluorene | 50.0 | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobenzene | 0.04 | ND | NA | ND | ND | NA | ND | NA |
| Hexachlorobutadiene | 0.5 | ND | NA | ND | ND | NA | ND | NA |
| Hexachlorocyclopentadine | 50.0 | ND | NA | ND | ND | NA | ND | NA |
| Hexachloroethane | 5.0 | ND | NA | ND | ND | NA | ND | NA |
| Isophorone | 50.0 | ND | NA | ND | ND | NA | ND | NA |
| 2-Methylnaphthalene | 4.7 | **140** | NA | ND | **48** | NA | 2 J | NA |
| 4,6-Dinitro-2-methylphenol | 1.0 | ND | NA | ND | ND | NA | ND | NA |
| 4-Chloro-3-methylphenol | 1.0 | ND | NA | ND | ND | NA | ND | NA |

**Legend**

Results uG/L ND=Not Detected NA = Not Applicable not in STARS List
J=Estimated B=Found in method blank
D=Dilution factor
**Bold**=Compound above GA Groundwater Standard

**ANALYTICAL SUMMARY TABLE XVI**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**
**SEPTEMBER 2003 AND JUNE 2004**

| ***SVOC COMPOUND*** ***Method 8270*** ***UG/L (PPB)*** ***Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-9 Collected 09/05/03 TCL List | MW-9 Collected 06/18/04 STARS | MW-10 Collected 09/05/03 TCL List | MW-10Dup Collected 09/05/03 TCL List | MW-10 Collected 06/16/04 STARS | MW-11 Collected 09/05/03 TCL List | MW-11 Collected 06/16/04 STARS |
|---|---|---|---|---|---|---|---|---|
| 2-Methylphenol | 1.0 | ND | NA | ND | ND | NA | ND | NA |
| 4-Methylphenol | 1.0 | ND | NA | ND | ND | NA | ND | NA |
| Naphthalene | 10.0 | **330** | **340** | ND | **150** | **28** | **14** | **19** |
| 2-Nitroaniline | 5.0 | ND | NA | ND | ND | NA | ND | NA |
| 3-Nitroaniline | 5.0 | ND | NA | ND | ND | NA | ND | NA |
| 4-Nitroaniline | 5.0 | ND | NA | ND | ND | NA | ND | NA |
| Nitrobenzene | 0.4 | ND | NA | ND | ND | NA | ND | NA |
| 2-Nitrophenol | 1.0 | ND | NA | ND | ND | NA | ND | NA |
| 4-Nitrophenol | 1.0 | ND | NA | ND | ND | NA | ND | NA |
| N-nitrosodiphenylamine | 50.0 | ND | NA | ND | ND | NA | ND | NA |
| Di-n-octyl phthalate | 50.0 | ND | NA | ND | ND | NA | ND | NA |
| Pentachlorophenol | 1.0 | ND | NA | ND | ND | NA | ND | NA |
| Phenanthrene | 50.0 | ND | ND | ND | ND | ND | ND | ND |
| Phenol | 1.0 | ND | NA | ND | ND | NA | ND | NA |
| 4-Bromophenyl phenyl ether | none | ND | NA | ND | ND | NA | ND | NA |
| 4-Chlorophenyl phenyl ether | none | ND | NA | ND | ND | NA | ND | NA |
| N-Nitroso-Di-n-propylamine | none | ND | NA | ND | ND | NA | ND | NA |
| Pyrene | 50.0 | ND | ND | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 0.002 | ND | ND | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 1.0 | ND | NA | ND | ND | NA | ND | NA |
| 2,4,6-Trichlorophenol | 1.0 | ND | NA | ND | ND | NA | ND | NA |
| Total SVOCs: | none | 470 | 340 | 8 JB | 240 | 28 | 104 | 19 |

**Legend**
Results uG/L ND=Not Detected NA = Not Applicable not in STARS List
J=Estimated B=Found in method blank
D=Dilution factor
**Bold**=Compound above GA Groundwater Standard

**ANALYTICAL SUMMARY TABLE XVI**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS**
**SEPTEMBER 2003 AND JUNE 2004**

| ***SVOC COMPOUND Method 8270 UG/L (PPB) Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-12 Collected 09/04/03 TCL List | MW-12 Collected 06/16/04 STARS | MW-13 Collected 06/15/04 TCL List | MW-13Dup Collected 06/15/04 TCL List | MW-14 Collected 06/15/04 TCL List | Field Blank Collected 06/16/04 STARS |
|---|---|---|---|---|---|---|---|
| Acenaphthene | 20 | ND | ND | ND | ND | ND | ND |
| Acenaphthylene | none | ND | NA | ND | ND | ND | NA |
| Acetophenone | none | ND | NA | ND | ND | ND | NA |
| Anthracene | 50 | ND | ND | ND | ND | ND | ND |
| Atrazine | 7.5 | ND | NA | ND | ND | ND | NA |
| Benzaldehyde | none | ND | NA | ND | ND | ND | NA |
| Benao(a)anthracene | 0.002 | ND | ND | ND | ND | ND | ND |
| Benzo(a)pyrene | 0.002 | ND | ND | ND | ND | ND | ND |
| Benzo(b)fluoranthrene | 0.002 | ND | ND | ND | ND | ND | ND |
| Benzo(g,h,i)perylene | none | ND | ND | ND | ND | ND | ND |
| Benzo(k)fluoranthrene | 0.002 | ND | ND | ND | ND | ND | ND |
| 1,1'-Biphenyl (Biphenyl) | 5 | ND | NA | ND | ND | ND | NA |
| Butyl benzyl phthalate | 50 | ND | NA | ND | ND | 1 J | NA |
| Di-n-butyl phthalate | 50 | 7 JB | NA | ND | ND | ND | NA |
| Caprolactam | none | ND | NA | 120 J | 37 J | ND | NA |
| Carbazole | none | ND | NA | ND | ND | ND | NA |
| 4-Chloroaniline | 5 | ND | NA | ND | ND | ND | NA |
| Bis(-2-chloroethoxyl) methane | 5 | ND | NA | ND | ND | ND | NA |
| Bis(2-chloroethyl) ether | 1 | ND | NA | ND | ND | ND | NA |
| 2-Chloronaphthalene | 10.0 | ND | NA | ND | ND | ND | NA |
| 2-Chlorophenol | 1.0 | ND | NA | ND | ND | ND | NA |
| 2,2'-Oxbis(1-Chloropropane) | none | ND | NA | ND | ND | ND | NA |

**Legend**
Results uG/L ND=Not Detected NA = Not Applicable not in STARS List
J=Estimated B=Found in method blank
D=Dilution factor
**Bold**=Compound above GA Groundwater Standard

### ANALYTICAL SUMMARY TABLE XVI
### 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
### 2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS
### SEPTEMBER 2003 AND JUNE 2004

| ***SVOC COMPOUND*** ***Method 8270*** ***UG/L (PPB)*** ***Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-12 Collected 09/04/03 TCL List | MW-12 Collected 06/16/04 STARS | MW-13 Collected 06/15/04 TCL List | MW-13Dup Collected 06/15/04 TCL List | MW-14 Collected 06/15/04 TCL List | Field Blank Collected 06/16/04 STARS |
|---|---|---|---|---|---|---|---|
| Chrysene | 0.002 | ND | ND | ND | ND | ND | ND |
| Dibenzo(a,h)anthracene | none | ND | ND | ND | ND | ND | ND |
| Dibenzofuran | none | ND | NA | ND | ND | ND | NA |
| 3,3'-Dichlorobenzidine | 5.0 | ND | NA | ND | ND | ND | NA |
| 2,4-Dichlorophenol | 5.0 | 3 J | NA | ND | ND | ND | NA |
| Diethyl phthalate | 50.0 | ND | NA | ND | ND | ND | NA |
| Dimethyl phthalate | 50.0 | ND | NA | ND | ND | ND | NA |
| 2,4-Dimethylphenol | 50.0 | 3 J | NA | ND | ND | ND | NA |
| 2,4-Dinitrophenol | 10.0 | ND | NA | ND | ND | ND | NA |
| 2,4-Dinitrotoluene | 5.0 | ND | NA | ND | ND | ND | NA |
| 2,6-Dinitrotoluene | 5.0 | ND | NA | ND | ND | ND | NA |
| Bis(2-ethylhexyl) phtahalate | 5.0 | **23** | NA | ND | ND | ND | NA |
| Fluoranthene | 50.0 | ND | ND | ND | ND | ND | ND |
| Fluorene | 50.0 | ND | ND | ND | ND | ND | ND |
| Hexachlorobenzene | 0.04 | ND | NA | ND | ND | ND | NA |
| Hexachlorobutadiene | 0.5 | ND | NA | ND | ND | ND | NA |
| Hexachlorocyclopentadine | 50.0 | ND | NA | ND | ND | ND | NA |
| Hexachloroethane | 5.0 | ND | NA | ND | ND | ND | NA |
| Isophorone | 50.0 | ND | NA | ND | ND | ND | NA |
| 2-Methylnaphthalene | 4.7 | **52** | NA | ND | ND | ND | NA |
| 4,6-Dinitro-2-methylphenol | 1.0 | ND | NA | ND | ND | ND | NA |
| 4-Chloro-3-methylphenol | 1.0 | ND | NA | ND | ND | ND | NA |

**Legend**
Results uG/L ND=Not Detected NA = Not Applicable not in STARS List
J=Estimated B=Found in method blank
D=Dilution factor
**Bold**=Compound above GA Groundwater Standard

# ANALYTICAL SUMMARY TABLE XVI
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 GROUNDWATER RESULTS, SEMI-VOLATILE ORGANIC COMPOUNDS
## SEPTEMBER 2003 AND JUNE 2004

| ***SVOC COMPOUND*** ***Method 8270*** ***UG/L (PPB)*** ***Reported List Of SVOCs*** | NYSDEC Class GA Standard TOGS 1.1.1 | MW-12 Collected 09/04/03 TCL List | MW-12 Collected 06/16/04 STARS | MW-13 Collected 06/15/04 TCL List | MW-13Dup Collected 06/15/04 TCL List | MW-14 Collected 06/15/04 TCL List | Field Blank Collected 06/16/04 STARS |
|---|---|---|---|---|---|---|---|
| 2-Methylphenol | 1.0 | ND | NA | ND | ND | ND | NA |
| 4-Methylphenol | 1.0 | ND | NA | ND | ND | ND | NA |
| Naphthalene | 10.0 | **150 E** | ND | ND | ND | ND | ND |
| 2-Nitroaniline | 5.0 | ND | NA | ND | ND | ND | NA |
| 3-Nitroaniline | 5.0 | ND | NA | ND | ND | ND | NA |
| 4-Nitroaniline | 5.0 | ND | NA | ND | ND | ND | NA |
| Nitrobenzene | 0.4 | ND | NA | ND | ND | ND | NA |
| 2-Nitrophenol | 1.0 | ND | NA | ND | ND | ND | NA |
| 4-Nitrophenol | 1.0 | ND | NA | ND | ND | ND | NA |
| N-nitrosodiphenylamine | 50.0 | ND | NA | ND | ND | ND | NA |
| Di-n-octyl phthalate | 50.0 | ND | NA | ND | ND | ND | NA |
| Pentachlorophenol | 1.0 | ND | NA | ND | ND | ND | NA |
| Phenanthrene | 50.0 | ND | ND | ND | ND | ND | ND |
| Phenol | 1.0 | ND | NA | ND | ND | ND | NA |
| 4-Bromophenyl phenyl ether | none | ND | NA | ND | ND | ND | NA |
| 4-Chlorophenyl phenyl ether | none | ND | NA | ND | ND | ND | NA |
| N-Nitroso-Di-n-propylamine | none | ND | NA | ND | ND | ND | NA |
| Pyrene | 50.0 | ND | ND | ND | ND | ND | ND |
| Indeno(1,2,3-cd)pyrene | 0.002 | ND | ND | ND | ND | ND | ND |
| 2,4,5-Trichlorophenol | 1.0 | ND | NA | ND | ND | ND | NA |
| 2,4,6-Trichlorophenol | 1.0 | ND | NA | ND | ND | ND | NA |
| Total SVOCs: | none | 238 | 0 | 120 J | 37 J | 1 J | 0 |

**Legend**

Results uG/L ND=Not Detected NA = Not Applicable not in STARS List
J=Estimated B=Found in method blank
D=Dilution factor
**Bold**=Compound above GA Groundwater Standard

# ANALYTICAL SUMMARY TABLE XVII
# 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
# 2003 GROUNDWATER RESULTS, RCRA 8 METALS

| Heavy Metals via ICP UG/L (PPB) | NYSDEC Class GA Groundwater Standards TOGS 1.1.1 | MDL | MW-1 Collected 09/08/03 | MW-2 Collected 09/05/03 | MW-3 Collected 09/08/03 | MW-4 Collected 09/08/03 | MW-5 Collected 09/04/03 | MW-6 Collected 09/04/03 | MW-7 Collected 09/08/03 |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 25 | 10 | ND | ND | ND | 13.3 | 4.4 B | 2.5 B | 11.1 |
| Barium | 1,000 | 20 | 267 | 144 | 29 | 133 | 63.9 B | 257 | 292 |
| Cadmium | 5 | 5 | ND | ND | ND | ND | ND | ND | ND |
| Chromium | 50 | 10 | ND | ND | ND | ND | 1.7 B | 1.1 B | 0.79 B |
| Lead | 25 | 5 | ND | ND | ND | ND | 1.4 B | ND | 2.5 B |
| Mercury | 0.7 | 0.3 | ND | ND | ND | ND | 0.03 B | 0.04 B | 0.05 B |
| Selenium | 10 | 5 | ND | ND | ND | ND | ND | ND | ND |
| Silver | 50 | 10 | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND = Not Detected above MDL
MDL = Method Detection Limit
UG/L = Micrograms Per Liter
J = Estimated
B = Detected in the associated method blank
**Bold =** Exceeds applicable NYSDEC Class GA Standard

## ANALYTICAL SUMMARY TABLE XVII
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 GROUNDWATER RESULTS, RCRA 8 METALS

| Heavy Metals via ICP UG/L (PPB) | NYSDEC Class GA Groundwater Standards TOGS 1.1.1 | MDL | MW-8 Collected 09/05/03 | MW-9 Collected 09/05/03 | MW-10 Collected 09/05/03 | MW-10Dup Collected 09/05/03 | MW-11 Collected 09/05/03 | MW-12 Collected 09/04/03 | Field Blank Collected 09/08/03 |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 25 | 10 | 4.9 B | 12.3 | 7.8 B | 6.1 B | 4.9 B | 2.3 B | ND |
| Barium | 1,000 | 20 | 234 | 251 | 257 | 247 | 428 | 97.6 B | ND |
| Cadmium | 5 | 5 | ND | ND | ND | ND | ND | ND | ND |
| Chromium | 50 | 10 | 0.92 B | 0.90 B | 1.6 B | 1.0 B | 1.7 B | 6.0 B | ND |
| Lead | 25 | 5 | 2.4 B | 2.0 B | 3.1 | 2.1 B | 3.2 | 6.2 | ND |
| Mercury | 0.7 | 0.3 | 0.04 B | 0.04 B | 0.03 B | 0.04 B | 0.03 B | 0.04 B | ND |
| Selenium | 10 | 5 | ND | ND | ND | ND | ND | ND | 0.00676 |
| Silver | 50 | 10 | ND | ND | ND | ND | ND | ND | ND |

**Legend**

ND = Not Detected above MDL

MDL = Method Detection Limit

UG/L = Micrograms Per Liter

J = Estimated

B = Detected in the associated method blank

**Bold =** Exceeds applicable NYSDEC Class GA Standard

## TABLE XVIII
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## SURFACE SOIL SAMPLES
## POLYNUCLEAR AROMATIC HYDROCARBON (PAH) ANALYSIS, 2000 - 2004

| Semi-Volatile Organic Compounds<br>PAHs, EPA Method 8270 | Average BKGD Value | Maximum BKGD Value | Minimum BKGD Value* | SU-17 collected 07/07/2000 | SU-18 collected 07/07/2000 | SU-19 collected 07/07/2000 | SSU-1 collected 6/20/2003 | SSU-2 collected 6/20/2003 | SSU-3 collected 6/20/2003 | SSU-4 collected 6/20/2003 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total PAHs, UG/KG (PPB) | | | | 8,600 | 13,200 | 21,960 | 30,000 | 30,890 | 50,900 | 274,000 |
| Individual CPAH Concentrations, ppb* | | | | | | | | | | |
| Benzo(a)anthracene | 1,668 | 2,900 | 240 | 0 | 0 | 1,800 | 3,900 | 3,400 | 4,700 | 22,000 |
| Benzo (a) pyrene | 2,346 | 3,900 | 330 | 0 | 0 | 2,000 | 0 | 3,000 | 4,800 | 19,000 |
| Benzo(b)fluoranthene | 2,628 | 4,400 | 340 | 0 | 0 | 0 | 0 | 4,300 | 4,300 | 17,000 |
| Benzo(k)fluoranthene | 2,156 | 3,700 | 380 | 0 | 0 | 400 | 0 | 1,900 | 4,400 | 16,000 |
| Chrysene | 2,080 | 3,600 | 300 | 0 | 0 | 2,100 | 4,000 | 4,000 | 5,400 | 20,000 |
| Dibenzo (a,h)anthracene | 246 | 710 | 0 | 0 | 0 | 0 | 0 | 820 | 0 | 0 |
| Indeno(1,2,3-cd)pyrene | 1,192 | 1,700 | 160 | 0 | 0 | 1,500 | 0 | 2,900 | 0 | 11,000 |
| total CPAH, UG/KG | 12,346 | 20,910 | 1,750 | 0 | 0 | 7,800 | 7,900 | 20,320 | 23,600 | 105,000 |

| Rochester Background CPAH Concentrations | | |
|---|---|---|
| Average Total CPAH Value | 12,346 | |
| Maximum Total CPAH Value* | 20,910 | |
| Minimum Total CPAH Value* | 1,820 | |

| Total BAP Toxicity Equivalent<br>BAP equivalents, Individual CPAH ppb | Average BKGD | Maximum BKGD | Minimum BKGD | SU-17 | SU-18 | SU-19 | SSU-1 | SSU-2 | SSU-3 | SSU-4 |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene, 0.10X multiplier | 169 | 290 | 24 | 0 | 0 | 180 | 390 | 340 | 470 | 2,200 |
| Benzo (a) pyrene, 1X multiplier | 2,346 | 3,900 | 330 | 0 | 0 | 2,000 | 0 | 3,000 | 4,800 | 19,000 |
| Benzo(b)fluoranthene, 0.10X multiplier | 263 | 440 | 34 | 0 | 0 | 0 | 0 | 430 | 430 | 1,700 |
| Benzo(k)fluoranthene, 0.01X multiplier | 22 | 37 | 4 | 0 | 0 | 4 | 0 | 19 | 44 | 160 |
| Chrysene, 0.01X multiplier | 21 | 36 | 3 | 0 | 0 | 21 | 40 | 40 | 54 | 200 |
| Dibenzo (a,h)anthracene, 1X multiplier | 256 | 710 | 0 | 0 | 0 | 0 | 0 | 820 | 0 | 0 |
| Indeno(1,2,3-cd)pyrene, 0.10X multiplier | 119 | 170 | 16 | 0 | 0 | 150 | 0 | 290 | 0 | 1,100 |
| total CPAH BAP | 3,196 | 5,583 | 411 | 0 | 0 | 2,355 | 430 | 4,939 | 5,798 | 24,360 |

Legend
PAH via EPA Method 8270
CPAH = Carcinogenic
Polynuclear Aromatic Hydrocarbons
BAP Equivalent = the PAH Benzo (a) pyrene
toxicity equivalent for individual CPAHs
* Minimum values from different soil samples

BKGD=Rochester Background CPAH Concentrations provided by Sear Brown and the City of Rochester. CPAH values for the Atlantic Ave/Akron St. samples from the APCO investigation conducted in 1998.
APCO Background CPAH Concentrations based on average, maximum and minimum total CPAH values, for sample points SS-17, SS-18, SS-19, SS-20 and SS-21 collected January 23, 1998.

BKGD=Roche
and the City o
samples from
APCO Backgr
and minimum
SS-17, SS-18

## TABLE XVIII
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## SURFACE SOIL SAMPLES
## POLYNUCLEAR AROMATIC HYDROCARBON (PAH) ANALYSIS, 2000 - 2004

| Semi-Volatile Organic Compounds<br>PAHs, EPA Method 8270 | Average BKGD Value | Maximum BKGD Value | Minimum BKGD Value* | SSU-5 collected 6/20/2003 | SSU-6 collected 6/20/2003 | SSU-7 collected 6/20/2003 |
|---|---|---|---|---|---|---|
| Total PAHs, UG/KG (PPB) | | | | 133,600 | 11,312 | 16,200 |
| Individual CPAH Concentrations, ppb* | | | | | | |
| Benzo(a)anthracene | 1,668 | 2,900 | 240 | 10,000 | 860 | 1,300 |
| Benzo (a) pyrene | 2,346 | 3,900 | 330 | 14,000 | 740 | 1,400 |
| Benzo(b)fluoranthene | 2,628 | 4,400 | 340 | 12,000 | 910 | 1,500 |
| Benzo(k)fluoranthene | 2,156 | 3,700 | 380 | 12,000 | 620 | 1,300 |
| Chrysene | 2,080 | 3,600 | 300 | 11,000 | 920 | 1,600 |
| Dibenzo (a,h)anthracene | 246 | 710 | 0 | 0 | 180 | 0 |
| Indeno(1,2,3-cd)pyrene | 1,192 | 1,700 | 160 | 9,600 | 640 | 0 |
| total CPAH, UG/KG | 12,346 | 20,910 | 1,750 | 68,600 | 4,870 | 7,100 |

| Rochester Background CPAH Concentrations | |
|---|---|
| Average Total CPAH Value | 12,346 |
| Maximum Total CPAH Value* | 20,910 |
| Minimum Total CPAH Value* | 1,820 |

| Total BAP Toxicity Equivalent<br>BAP equivalents, Individual CPAH ppb | Average BKGD | Maximum BKGD | Minimum BKGD | SSU-5 | SSU-6 | SSU-7 |
|---|---|---|---|---|---|---|
| Benzo(a)anthracene, 0.10X multiplier | 169 | 290 | 24 | 1,000 | 86 | 130 |
| Benzo (a) pyrene, 1X multiplier | 2,346 | 3,900 | 330 | 14,000 | 740 | 1,400 |
| Benzo(b)fluoranthene, 0.10X multiplier | 263 | 440 | 34 | 1,200 | 91 | 150 |
| Benzo(k)fluoranthene, 0.01X multiplier | 22 | 37 | 4 | 120 | 6 | 13 |
| Chrysene, 0.01X multiplier | 21 | 36 | 3 | 110 | 9 | 16 |
| Dibenzo (a,h)anthracene, 1X multiplier | 256 | 710 | 0 | 0 | 180 | 0 |
| Indeno(1,2,3-cd)pyrene, 0.10X multiplier | 119 | 170 | 16 | 960 | 64 | 0 |
| total CPAH BAP | 3,196 | 5,583 | 411 | 17,390 | 1,176 | 1,709 |

Legend
PAH via EPA Method 8270
CPAH = Carcinogenic
Polynuclear Aromatic Hydrocarbons
BAP Equivalent = the PAH Benzo (a) pyrene
toxicity equivalent for individual CPAHs
* Minimum values from different soil samples

ester Background CPAH Concentrations provided by Sear Brown
of Rochester. CPAH values for the Atlantic Ave/Akron St.
ı the APCO investigation conducted in 1998.
ɟround CPAH Concentrations based on average, maximum
ı total CPAH values, for sample points
3, SS-19, SS-20 and SS-21 collected January 23, 1998.

## TABLE XVIII
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## SURFACE SOIL SAMPLES
## POLYNUCLEAR AROMATIC HYDROCARBON (PAH) ANALYSIS, 2000 - 2004

| Semi-Volatile Organic Compounds PAHs, EPA Method 8270 | Average BKGD Value | Maximum BKGD Value | Minimum BKGD Value* | SSU-8 collected 6/01/2004 | SSU-9 collected 6/01/2004 | SSU-10 collected 6/01/2004 | SU-11 collected 6/04/2004 | SSU-11D collected 6/04/2004 |
|---|---|---|---|---|---|---|---|---|
| Total PAHs, UG/KG (PPB) | | | | 9,563 | 7,012 | 26,074 | 14,991 | 13,454 |
| Individual CPAH Concentrations, ppb* | | | | | | | | |
| Benzo(a)anthracene | 1,668 | 2,900 | 240 | 680 | 520 | 2,200 | 1,000 | 940 |
| Benzo (a) pyrene | 2,346 | 3,900 | 330 | 700 | 530 | 1,900 | 1,200 | 1,000 |
| Benzo(b)fluoranthene | 2,628 | 4,400 | 340 | 1,100 | 870 | 2,600 | 1,900 | 1,800 |
| Benzo(k)fluoranthene | 2,156 | 3,700 | 380 | 430 | 280 | 1,000 | 640 | 450 |
| Chrysene | 2,080 | 3,600 | 300 | 800 | 620 | 2,300 | 1,400 | 1,300 |
| Dibenzo (a,h)anthracene | 246 | 710 | 0 | 140 | 100 | 400 | 230 | 220 |
| Indeno(1,2,3-cd)pyrene | 1,192 | 1,700 | 160 | 470 | 340 | 1,300 | 850 | 830 |
| total CPAH, UG/KG | 12,346 | 20,910 | 1,750 | 4,320 | 3,260 | 11,700 | 7,220 | 6,540 |

| Rochester Background CPAH Concentrations | |
|---|---|
| Average Total CPAH Value | 12,346 |
| Maximum Total CPAH Value* | 20,910 |
| Minimum Total CPAH Value* | 1,820 |

| Total BAP Toxicity Equivalent BAP equivalents, Individual CPAH ppb | Average BKGD | Maximum BKGD | Minimum BKGD | SSU-8 | SSU-9 | SSU-10 | SU-11 | SSU-11D |
|---|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene, 0.10X multiplier | 169 | 290 | 24 | 68 | 52 | 220 | 100 | 94 |
| Benzo (a) pyrene, 1X multiplier | 2,346 | 3,900 | 330 | 700 | 530 | 1,900 | 1,200 | 1,000 |
| Benzo(b)fluoranthene, 0.10X multiplier | 263 | 440 | 34 | 110 | 87 | 260 | 190 | 180 |
| Benzo(k)fluoranthene, 0.01X multiplier | 22 | 37 | 4 | 4 | 3 | 10 | 6 | 5 |
| Chrysene, 0.01X multiplier | 21 | 36 | 3 | 8 | 6 | 23 | 14 | 13 |
| Dibenzo (a,h)anthracene, 1X multiplier | 256 | 710 | 0 | 140 | 100 | 400 | 230 | 220 |
| Indeno(1,2,3-cd)pyrene, 0.10X multiplier | 119 | 170 | 16 | 47 | 34 | 130 | 85 | 83 |
| total CPAH BAP | 3,196 | 5,583 | 411 | 1,077 | 812 | 2,943 | 1,825 | 1,595 |

Legend
PAH via EPA Method 8270
CPAH = Carcinogenic
Polynuclear Aromatic Hydrocarbons
BAP Equivalent = the PAH Benzo (a) pyrene
toxicity equivalent for individual CPAHs
* Minimum values from different soil samples

BKGD=Rochester Background CPAH Concentrations provided by Sear Brown and the City of Rochester. CPAH values for the Atlantic Ave/Akron St. samples from the APCO investigation conducted in 1998.
APCO Background CPAH Concentrations based on average, maximum and minimum total CPAH values, for sample points SS-17, SS-18, SS-19, SS-20 and SS-21 collected January 23, 1998.

## TABLE XVIII
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## SURFACE SOIL SAMPLES
## POLYNUCLEAR AROMATIC HYDROCARBON (PAH) ANALYSIS, 2000 - 2004

| Semi-Volatile Organic Compounds PAHs, EPA Method 8270 | Average BKGD Value | Maximum BKGD Value | Minimum BKGD Value* | SS-17 collected 1/23/1998 | SS-18 collected 1/23/1998 | SS-19 collected 1/23/1998 | SS-20 collected 1/23/1998 | SS-21 collected 1/23/1998 |
|---|---|---|---|---|---|---|---|---|
| Total PAHs, UG/KG (PPB) | | | | These samples are Rochester Background provided by Sear Brown | | | | |
| Individual CPAH Concentrations, ppb* | | | | | | | | |
| Benzo(a)anthracene | 1,668 | 2,900 | 240 | 1,400 | 240 | 2,000 | 2,900 | 1,900 |
| Benzo (a) pyrene | 2,346 | 3,900 | 330 | 1,700 | 330 | 2,800 | 3,900 | 3,000 |
| Benzo(b)fluoranthene | 2,628 | 4,400 | 340 | 1,900 | 340 | 3,000 | 4,400 | 3,500 |
| Benzo(k)fluoranthene | 2,156 | 3,700 | 380 | 1,600 | 380 | 2,400 | 3,700 | 2,700 |
| Chrysene | 2,080 | 3,600 | 300 | 1,700 | 300 | 2,400 | 3,600 | 2,400 |
| Dibenzo (a,h)anthracene | 246 | 710 | 0 | 500 | 70 | 0 | 710 | 0 |
| Indeno(1,2,3-cd)pyrene | 1,192 | 1,700 | 160 | 1,000 | 160 | 1,400 | 1,700 | 1,700 |
| total CPAH, UG/KG | 12,346 | 20,910 | 1,750 | 9,800 | 1,820 | 14,000 | 20,910 | 15,200 |

| Rochester Background CPAH Concentrations | |
|---|---|
| Average Total CPAH Value | 12,346 |
| Maximum Total CPAH Value* | 20,910 |
| Minimum Total CPAH Value* | 1,820 |

| Total BAP Toxicity Equivalent BAP equivalents, Individual CPAH ppb | Average BKGD | Maximum BKGD | Minimum BKGD | SS-17 | SS-18 | SS-19 | SS-20 | SS-21 |
|---|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene, 0.10X multiplier | 169 | 290 | 24 | 140 | 24 | 200 | 290 | 190 |
| Benzo (a) pyrene, 1X multiplier | 2,346 | 3,900 | 330 | 1,700 | 330 | 2,800 | 3,900 | 3,000 |
| Benzo(b)fluoranthene, 0.10X multiplier | 263 | 440 | 34 | 190 | 34 | 300 | 440 | 350 |
| Benzo(k)fluoranthene, 0.01X multiplier | 22 | 37 | 4 | 16 | 4 | 24 | 37 | 27 |
| Chrysene, 0.01X multiplier | 21 | 36 | 3 | 17 | 3 | 24 | 36 | 24 |
| Dibenzo (a,h)anthracene, 1X multiplier | 256 | 710 | 0 | 500 | 70 | 0 | 710 | 0 |
| Indeno(1,2,3-cd)pyrene, 0.10X multiplier | 119 | 170 | 16 | 100 | 16 | 140 | 170 | 170 |
| total CPAH BAP | 3,196 | 5,583 | 411 | 2,663 | 481 | 3,488 | 5,583 | 3,761 |

Legend
PAH via EPA Method 8270
CPAH = Carcinogenic
Polynuclear Aromatic Hydrocarbons
BAP Equivalent = the PAH Benzo (a) pyrene
toxicity equivalent for individual CPAHs
* Minimum values from different soil samples

BKGD=Rochester Background CPAH Concentrations provided by Sear Brown and the City of Rochester. CPAH values for the Atlantic Ave/Akron St. samples from the APCO investigation conducted in 1998.
APCO Background CPAH Concentrations based on average, maximum and minimum total CPAH values, for sample points SS-17, SS-18, SS-19, SS-20 and SS-21 collected January 23, 1998.

## ANALYTICAL SUMMARY TABLE XIX
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 TO-15 SOIL VAPOR AND BASEMENT VENTILATION SYSTEM LABORATORY ANALYSIS

| | | NYSDOH Indoor Air 75th Percentile | NYSDOH Outdoor Air 75th Percentile | Sub Slab | | BVS Exhaust | | Outdoor Background | | BVS Exhaust | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 9/18/2003 | | 6/1/2004 | | 7/8/2004 | | 7/8/2004 | |
| | | | | CAS | | Centek | | | | | |
| **CAS #** | **Compound** | **µg/m$^3$** | **µg/m$^3$** | **Result µg/m$^3$** | MRL µg/m$^3$ | **Result µg/m$^3$** | MRL µg/m$^3$ | **Result µg/m$^3$** | MRL µg/m$^3$ | **Result µg/m$^3$** | MRL µg/m$^3$ |
| 67-64-1 | Acetone | 46 | 23 | **18** | 6.8 | **190** | 12 | **26.3** | 2.41 | **75.3** | 9.66 |
| 71-43-2 | Benzene | 5.7 | 2.6 | **1.8** | 1.4 | ND | 16 | ND | 3.25 | **3.57** | 3.25 |
| 75-27-4 | Bromodichloromethane | NA | NA | **1.9** | 1.4 | ND | 34 | ND | 6.81 | ND | 6.81 |
| 78-93-3 | 2-Butanone (MEK) | 7.5 | 2.6 | **4.9** | 1.4 | **41** | 15 | ND | 3 | ND | 4.16 |
| 75-15-0 | Carbon Disulfide | NA | NA | **12** | 1.4 | ND | 16 | ND | 3.17 | ND | 3.17 |
| 75-00-3 | Chloroethane | ND, <0.25 | ND, <0.25 | ND | 1.4 | ND | 13 | ND | 2.68 | ND | 2.68 |
| 67-66-3 | Chloroform | 0.54 | ND, <0.25 | **26** | 1.4 | ND | 25 | ND | 4.96 | ND | 4.96 |
| 110-82-7 | Cyclohexane | 2.9 | 0.62 | NA | NA | ND | 17 | ND | 3.50 | ND | 3.50 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.54 | ND, <0.25 | ND | 1.4 | ND | 31 | ND | 6.11 | ND | 6.11 |
| 75-71-8 | Dichlorodifluoromethane/Freon 12 | 5.6 | 5.1 | NA | NA | ND | 25 | ND | 5.03 | ND | 5.03 |
| 156-59-2 | cis-1,2-Dichloroethene | ND, <0.25 | ND, <0.25 | **1.9** | 1.4 | ND | 20 | ND | 4.03 | ND | 4.03 |
| 100-41-4 | Ethylbenzene | 2.8 | 0.61 | **3.0** | 1.4 | ND | 22 | ND | 4.41 | **8.78** | 4.41 |
| 622-96-8 | 4-Ethyltoluene | NA | NA | NA | NA | ND | 25 | ND | 5.00 | ND | 5.00 |
| 142-82-5 | Heptane | NA | NA | NA | NA | ND | 21 | ND | 4.17 | **5.37** | 4.17 |
| 110-54-3 | Hexane | NA | NA | NA | NA | **21** | 18 | ND | 3.58 | **11.9** | 3.58 |
| 591-78-6 | 2-Hexanone/Methyl Butyl Ketone | 7.5 | 2.6 | **1.4** | 1.4 | ND | 21 | ND | 4.16 | ND | 4.16 |
| 67-63-0 | Isopropyl Alcohol | NA | NA | NA | NA | ND | 12 | ND | 2.50 | ND | 2.50 |
| 75-09-2 | Methylene chloride | 6.3 | 0.87 | **1.5** | 1.4 | ND | 18 | ND | 3.53 | ND | 3.53 |
| 108-10-1 | Methyl Isobutyl Ketone | 0.7 | 0.25 | ND | 1.4 | ND | 21 | ND | 4.16 | ND | 4.16 |
| 1634-04-04 | Methyl tert-butyl ether | 6.7 | 1 | ND | 1.4 | ND | 18 | ND | 3.66 | ND | 3.66 |

NA = Not Available. These constituents are not listed in the NYSDOH Summary of Indoor and Outdoor Levels of VOCs from Fuel Oil Heated Homes

NYSDOH values are the 75th percentile for results released February 18, 2005

ND = Not Detected

MRL = Method Reporting Limit for ND results

**Bold** = Detected above the MRL

Results Expressed as Micrograms per Cubic Meter, µg/m$^3$

## ANALYTICAL SUMMARY TABLE XIX
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 TO-15 SOIL VAPOR AND BASEMENT VENTILATION SYSTEM LABORATORY ANALYSIS

| | | NYSDOH Indoor Air 75th Percentile | NYSDOH Outdoor Air 75th Percentile | Sub Slab | | BVS Exhaust | | Outdoor Background | | BVS Exhaust | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 9/18/2003 | | 6/1/2004 | | 7/8/2004 | | 7/8/2004 | |
| | | | | CAS | | Centek | | | | | |
| **CAS #** | **Compound** | **$\mu g/m^3$** | **$\mu g/m^3$** | **Result $\mu g/m^3$** | MRL $\mu g/m^3$ | **Result $\mu g/m^3$** | MRL $\mu g/m^3$ | **Result $\mu g/m^3$** | MRL $\mu g/m^3$ | **Result $\mu g/m^3$** | MRL $\mu g/m^3$ |
| 75-69-4 | Trichlorofluoromethane/Freon 11 | 5.5 | 2.6 | **2.0** | 1.4 | ND | 29 | ND | 5.71 | ND | 5.71 |
| 76-13-1 | Trichlorotrifluoroethane/Freon 113 | NA | NA | **8.6** | 1.4 | ND | 39 | ND | 7.79 | ND | 7.79 |
| 108-05-4 | Vinyl Acetate | NA | NA | **4.6** | 1.4 | ND | 18 | ND | 3.58 | ND | 3.58 |
| 127-18-4 | Tetrachloroethene | 1.2 | 0.34 | **38** | 1.4 | ND | 34 | ND | 6.89 | **38.5** | 6.89 |
| 108-88-3 | Toluene | 25 | 3.3 | **18** | 1.4 | **46** | 19 | **13.6** | 3.83 | **28.3** | 3.83 |
| 79-01-6 | Trichloroethene | ND, <0.25 | ND, <0.25 | **12** | 1.4 | ND | 27 | ND | 5.46 | ND | 5.46 |
| 71-55-6 | 1,1,1-Trichloroethane | 1.4 | 0.38 | **4.3** | 1.4 | ND | 28 | ND | 5.55 | ND | 5.55 |
| 95-63-6 | 1,2,4-Trimethylbenzene | 4.4 | 1 | **8.7** | 1.4 | ND | 25 | **6.9** | 5.00 | **12.4** | 5.00 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.7 | 0.44 | **2.2** | 1.4 | ND | 25 | ND | 5.00 | ND | 5.00 |
| 540-84-1 | 2,2,4-Trimethylpentane | NA | NA | NA | NA | ND | 24 | ND | 4.75 | ND | 4.75 |
| 100-42-5 | Styrene | 0.68 | ND, <0.25 | **3.2** | 1.4 | ND | 22 | ND | 4.33 | **5.11** | 4.33 |
| 108-38-3 | m-Xylene | NA | NA | NA | NA | **30** | 22 | **7.64** | 4.41 | **23.2** | 4.41 |
| 95-47-6 | o-Xylene | 3.1 | 0.74 | **3.8** | 1.4 | ND | 22 | ND | 4.41 | **8.34** | 4.41 |
| 106-42-3 | p-Xylene | NA | NA | NA | NA | ND | 22 | ND | 4.41 | **7.28** | 4.41 |
| 136777-61-2 | m,p-Xylenes | 4.7 | 0.69 | **11** | 1.4 | NA | NA | NA | NA | NA | NA |

NA = Not Available.  These constituents are not listed in the NYSDOH Summary
of Indoor and Outdoor Levels of Volatile Organic Compounds from Fuel Oil Heated Homes
NYSDOH values are the 75th percentile for results released February 18, 2005
ND = Not Detected
MRL = Method Reporting Limit for ND results
**Bold** = Detected above the MRL
Results Expressed as Micrograms per Cubic Meter, $\mu g/m^3$

**ANALYTICAL SUMMARY TABLE XIX**
**1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**
**2003 - 2004 TO-15 SOIL VAPOR AND BASEMENT VENTILATION SYSTEM LABORATORY ANALYSIS**

| | | NYSDOH Indoor Air 75th Percentile | NYSDOH Outdoor Air 75th Percentile | Basement Ambient | | BVS Exhaust | | BVS Exhaust | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 8/9/2004 | | 8/9/2004 | | 9/8/2004 | |
| | | | | Centek | | | | | |
| **CAS #** | **Compound** | **µg/m³** | **µg/m³** | **Result µg/m³** | MRL µg/m³ | **Result µg/m³** | **Result µg/m³** | **Result µg/m³** | **Result µg/m³** |
| 67-64-1 | Acetone | 46 | 23 | **52** | 3.60 | **1600** | 97 | **54** | 14 |
| 71-43-2 | Benzene | 5.7 | 2.6 | **7.4** | 0.49 | **1.9** | 0.49 | **0.81** | 0.49 |
| 75-27-4 | Bromodichloromethane | NA | NA | ND | 1.00 | ND | 1.00 | ND | 1.0 |
| 78-93-3 | 2-Butanone (MEK) | 7.5 | 2.6 | ND | 0.90 | ND | 0.90 | ND | 0.90 |
| 75-15-0 | Carbon Disulfide | NA | NA | **1.0** | 0.47 | ND | 0.47 | ND | 0.47 |
| 75-00-3 | Chloroethane | ND, <0.25 | ND, <0.25 | ND | 0.40 | **3.6** | 0.40 | ND | 0.40 |
| 67-66-3 | Chloroform | 0.54 | ND, <0.25 | ND | 0.74 | ND | 0.74 | **4.1** | 0.74 |
| 110-82-7 | Cyclohexane | 2.9 | 0.62 | **5.5** | 0.52 | ND | 0.52 | **0.80** | 0.52 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.54 | ND, <0.25 | **25** | 0.92 | **1.6** | 0.92 | **11** | 0.92 |
| 75-71-8 | Dichlorodifluoromethane/Freon 12 | 5.6 | 5.1 | **8.2** | 0.75 | **7.7** | 0.75 | **3.2** | 0.75 |
| 156-59-2 | cis-1,2-Dichloroethene | ND, <0.25 | ND, <0.25 | ND | 0.60 | ND | 0.60 | **5.2** | 0.60 |
| 100-41-4 | Ethylbenzene | 2.8 | 0.61 | **2.9** | 0.66 | **2.7** | 0.66 | **1.1** | 0.66 |
| 622-96-8 | 4-Ethyltoluene | NA | NA | **5.9** | 0.75 | **1.5** | 0.75 | **2.1** | 0.75 |
| 142-82-5 | Heptane | NA | NA | **3.5** | 0.62 | **110** | 19 | **7.0** | 0.62 |
| 110-54-3 | Hexane | NA | NA | **20** | 0.54 | **51** | 5.40 | ND | 0.54 |
| 591-78-6 | 2-Hexanone/Methyl Butyl Ketone | 7.5 | 2.6 | ND | 1.20 | ND | 1.20 | ND | 1.2 |
| 67-63-0 | Isopropyl Alcohol | NA | NA | **36** | 3.70 | ND | 0.37 | ND | 0.37 |
| 75-09-2 | Methylene chloride | 6.3 | 0.87 | **23** | 5.30 | **4.1** | 0.53 | **6.3** | 0.53 |
| 108-10-1 | Methyl Isobutyl Ketone | 0.7 | 0.25 | **1.2** | 1.20 | **7.9** | 1.20 | ND | 1.2 |
| 1634-04-04 | Methyl tert-butyl ether | 6.7 | 1 | **3.3** | 0.55 | ND | 0.55 | **1.9** | 0.55 |

NA = Not Available. These constituents are not listed in the NYSDOH Summary of Indoor and Outdoor Levels of VOCs from Fuel Oil Heated Homes
NYSDOH values are the 75th percentile for results released February 18, 2005
ND = Not Detected
MRL = Method Reporting Limit for ND results
**Bold** = Detected above the MRL
Results Expressed as Micrograms per Cubic Meter, µg/m³

## ANALYTICAL SUMMARY TABLE XIX
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 TO-15 SOIL VAPOR AND BASEMENT VENTILATION SYSTEM LABORATORY ANALYSIS

| | | NYSDOH Indoor Air 75th Percentile | NYSDOH Outdoor Air 75th Percentile | Basement Ambient | | BVS Exhaust | | BVS Exhaust | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 8/9/2004 | | 8/9/2004 | | 9/8/2004 | |
| | | | | Centek | | | | | |
| **CAS #** | **Compound** | **µg/m$^3$** | **µg/m$^3$** | **Result µg/m$^3$** | MRL µg/m$^3$ | **Result µg/m$^3$** | **Result µg/m$^3$** | **Result µg/m$^3$** | **Result µg/m$^3$** |
| 75-69-4 | Trichlorofluoromethane/Freon 11 | 5.5 | 2.6 | **3.5** | 0.86 | **3.7** | 0.86 | **1.9** | 0.86 |
| 76-13-1 | Trichlorotrifluoroethane/Freon 113 | NA | NA | ND | 1.20 | ND | 1.20 | **5.0** | 1.2 |
| 108-05-4 | Vinyl Acetate | NA | NA | ND | 0.54 | ND | 0.54 | ND | 0.54 |
| 127-18-4 | Tetrachloroethene | 1.2 | 0.34 | **1.9** | 1.00 | **5.4** | 1.00 | **2.4** | 1.0 |
| 108-88-3 | Toluene | 25 | 3.3 | **42** | 5.70 | **7.2** | 0.57 | **6.8** | 0.57 |
| 79-01-6 | Trichloroethene | ND, <0.25 | ND, <0.25 | ND | 0.82 | ND | 0.82 | **4.0** | 0.82 |
| 71-55-6 | 1,1,1-Trichloroethane | 1.4 | 0.38 | ND | 0.83 | ND | 0.83 | ND | 0.83 |
| 95-63-6 | 1,2,4-Trimethylbenzene | 4.4 | 1 | **7.2** | 0.75 | **4.6** | 0.75 | **6.2** | 0.75 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.7 | 0.44 | **7.7** | 0.75 | **2.4** | 0.75 | **5.6** | 0.75 |
| 540-84-1 | 2,2,4-Trimethylpentane | NA | NA | **6.1** | 0.71 | ND | 0.71 | ND | 0.71 |
| 100-42-5 | Styrene | 0.68 | ND, <0.25 | **5.4** | 0.65 | ND | 0.65 | ND | 0.65 |
| 108-38-3 | m-Xylene | NA | NA | **7.2** | 0.66 | **7.2** | 0.66 | **4.3** | 0.66 |
| 95-47-6 | o-Xylene | 3.1 | 0.74 | **7.6** | 0.66 | **4.1** | 0.66 | **4.3** | 0.66 |
| 106-42-3 | p-Xylene | NA | NA | **3.2** | 0.66 | **2.2** | 0.66 | **1.6** | 0.66 |
| 136777-61-2 | m,p-Xylenes | 4.7 | 0.69 | NA | NA | NA | NA | NA | NA |

NA = Not Available. These constituents are not listed in the NYSDOH Summary
of Indoor and Outdoor Levels of Volatile Organic Compounds from Fuel Oil Heated Homes
NYSDOH values are the 75th percentile for results released February 18, 2005
ND = Not Detected
MRL = Method Reporting Limit for ND results
**Bold** = Detected above the MRL
Results Expressed as Micrograms per Cubic Meter, µg/m$^3$

## ANALYTICAL SUMMARY TABLE XIX
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 TO-15 SOIL VAPOR AND BASEMENT VENTILATION SYSTEM LABORATORY ANALYSIS

| | | NYSDOH Indoor Air 75th Percentile | NYSDOH Outdoor Air 75th Percentile | 1st Floor Living Space | | Basement Ambient | | Outdoor Background | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 10/14/2004 | | 10/14/2004 | | 10/14/2004 | |
| | | | | Centek | | | | | |
| **CAS #** | **Compound** | **μg/m$^3$** | **μg/m$^3$** | **Result μg/m$^3$** | MRL μg/m$^3$ | **Result μg/m$^3$** | **Result μg/m$^3$** | **Result μg/m$^3$** | **Result μg/m$^3$** |
| 67-64-1 | Acetone | 46 | 23 | **16** | 7.2 | **29** | 7.2 | **28** | 7.2 |
| 71-43-2 | Benzene | 5.7 | 2.6 | **2.0** | 0.49 | **4.0** | 0.49 | **3.5** | 0.49 |
| 75-27-4 | Bromodichloromethane | NA | NA | ND | 1.00 | ND | 1.00 | ND | 1.0 |
| 78-93-3 | 2-Butanone (MEK) | 7.5 | 2.6 | ND | 0.90 | ND | 0.90 | ND | 0.90 |
| 75-15-0 | Carbon Disulfide | NA | NA | ND | 0.47 | ND | 0.47 | ND | 0.47 |
| 75-00-3 | Chloroethane | ND, <0.25 | ND, <0.25 | ND | 0.40 | ND | 0.40 | ND | 0.40 |
| 67-66-3 | Chloroform | 0.54 | ND, <0.25 | ND | 0.74 | ND | 0.74 | ND | 0.74 |
| 110-82-7 | Cyclohexane | 2.9 | 0.62 | ND | 0.52 | **1.4** | 0.52 | **1.2** | 0.52 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.54 | ND, <0.25 | **1.3** | 0.92 | ND | 0.92 | ND | 0.92 |
| 75-71-8 | Dichlorodifluoromethane/Freon 12 | 5.6 | 5.1 | ND | 0.75 | **3.1** | 0.75 | **2.6** | 0.75 |
| 156-59-2 | cis-1,2-Dichloroethene | ND, <0.25 | ND, <0.25 | ND | 0.60 | ND | 0.60 | ND | 0.60 |
| 100-41-4 | Ethylbenzene | 2.8 | 0.61 | **1.6** | 0.66 | **3.2** | 0.66 | **3.3** | 0.66 |
| 622-96-8 | 4-Ethyltoluene | NA | NA | **0.85** | 0.75 | **2.0** | 0.75 | **2.1** | 0.75 |
| 142-82-5 | Heptane | NA | NA | **1.1** | 0.62 | **2.6** | 0.62 | **2.0** | 0.62 |
| 110-54-3 | Hexane | NA | NA | **2.9** | 0.54 | **7.5** | 5.40 | **9.7** | 5.4 |
| 591-78-6 | 2-Hexanone/Methyl Butyl Ketone | 7.5 | 2.6 | ND | 1.20 | ND | 1.20 | ND | 0.9 |
| 67-63-0 | Isopropyl Alcohol | NA | NA | ND | 3.70 | ND | 0.37 | ND | 0.37 |
| 75-09-2 | Methylene chloride | 6.3 | 0.87 | **16** | 5.30 | **17** | 5.30 | **17** | 5.3 |
| 108-10-1 | Methyl Isobutyl Ketone | 0.7 | 0.25 | ND | 1.20 | ND | 1.20 | ND | 1.2 |
| 1634-04-04 | Methyl tert-butyl ether | 6.7 | 1 | ND | 0.55 | ND | 0.55 | ND | 0.55 |

NA = Not Available. These constituents are not listed in the NYSDOH Summary of Indoor and Outdoor Levels of VOCs from Fuel Oil Heated Homes

NYSDOH values are the 75th percentile for results released February 18, 2005

ND = Not Detected

MRL = Method Reporting Limit for ND results

**Bold** = Detected above the MRL

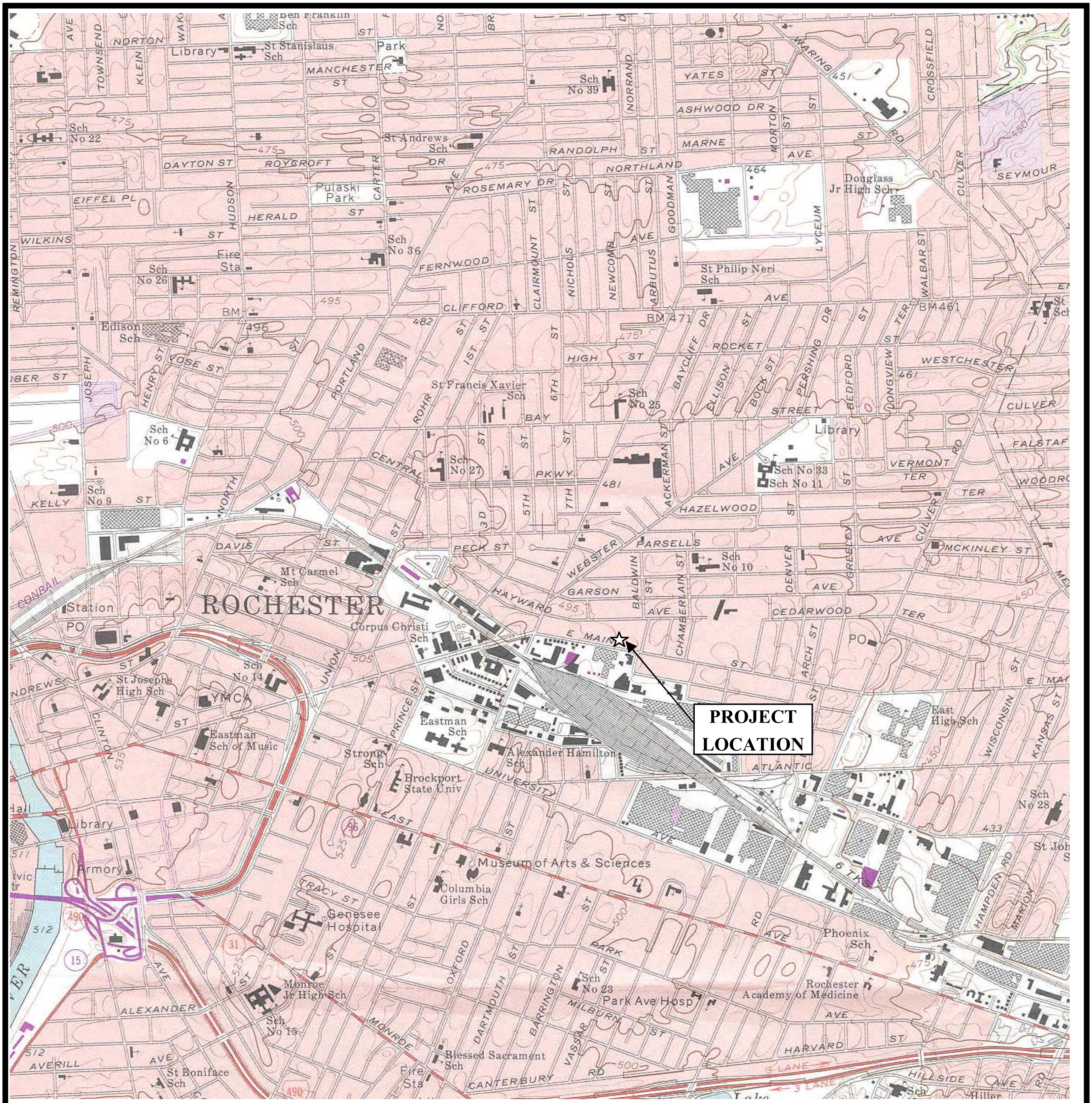
Results Expressed as Micrograms per Cubic Meter, μg/m$^3$

## ANALYTICAL SUMMARY TABLE XIX
## 1200 EAST MAIN STREET SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT
## 2003 - 2004 TO-15 SOIL VAPOR AND BASEMENT VENTILATION SYSTEM LABORATORY ANALYSIS

| | | NYSDOH Indoor Air 75th Percentile | NYSDOH Outdoor Air 75th Percentile | 1st Floor Living Space | | Basement Ambient | | Outdoor Background | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 10/14/2004 | | 10/14/2004 | | 10/14/2004 | |
| | | | | Centek | | | | | |
| **CAS #** | **Compound** | **$\mu g/m^3$** | **$\mu g/m^3$** | **Result $\mu g/m^3$** | MRL $\mu g/m^3$ | **Result $\mu g/m^3$** | **Result $\mu g/m^3$** | **Result $\mu g/m^3$** | **Result $\mu g/m^3$** |
| 75-69-4 | Trichlorofluoromethane/Freon 11 | 5.5 | 2.6 | **1.1** | 0.86 | **1.9** | 0.86 | **1.9** | 0.86 |
| 76-13-1 | Trichlorotrifluoroethane/Freon 113 | NA | NA | ND | 1.2 | ND | 1.20 | ND | 1.2 |
| 108-05-4 | Vinyl Acetate | NA | NA | ND | 0.54 | ND | 0.54 | ND | 0.54 |
| 127-18-4 | Tetrachloroethene | 1.2 | 0.34 | **1.3** | 1.00 | **1.1** | 1.00 | ND | 0.82 |
| 108-88-3 | Toluene | 25 | 3.3 | **8.3** | 0.57 | **14** | 5.70 | **22** | 5.7 |
| 79-01-6 | Trichloroethene | ND, <0.25 | ND, <0.25 | ND | 0.82 | ND | 0.82 | ND | 0.82 |
| 71-55-6 | 1,1,1-Trichloroethane | 1.4 | 0.38 | ND | 0.83 | ND | 0.83 | ND | 0.83 |
| 95-63-6 | 1,2,4-Trimethylbenzene | 4.4 | 1 | **2.3** | 0.75 | ND | 0.75 | **5.7** | 0.75 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 1.7 | 0.44 | ND | 0.75 | **1.6** | 0.75 | **1.5** | 0.75 |
| 540-84-1 | 2,2,4-Trimethylpentane | NA | NA | **0.81** | 0.71 | **1.4** | 0.71 | **1.3** | 0.71 |
| 100-42-5 | Styrene | 0.68 | ND, <0.25 | ND | 0.65 | ND | 0.65 | ND | 0.65 |
| 108-38-3 | m-Xylene | NA | NA | **3.5** | 0.66 | **7.3** | 0.66 | **8** | 0.66 |
| 95-47-6 | o-Xylene | 3.1 | 0.74 | **1.7** | 0.66 | **4.0** | 0.66 | **4.1** | 0.66 |
| 106-42-3 | p-Xylene | NA | NA | **1.7** | 0.66 | **3.5** | 0.66 | **3.1** | 0.66 |
| 136777-61-2 | m,p-Xylenes | 4.7 | 0.69 | NA | NA | NA | NA | NA | NA |

NA = Not Available. These constituents are not listed in the NYSDOH Summary
of Indoor and Outdoor Levels of Volatile Organic Compounds from Fuel Oil Heated Homes
NYSDOH values are the 75th percentile for results released February 18, 2005
ND = Not Detected
MRL = Method Reporting Limit for ND results
**Bold** = Detected above the MRL
Results Expressed as Micrograms per Cubic Meter, $\mu g/m^3$

# FIGURES



Scale 1Inch = 2000 Feet (approximate)

EJJ

BERGMANN
associates

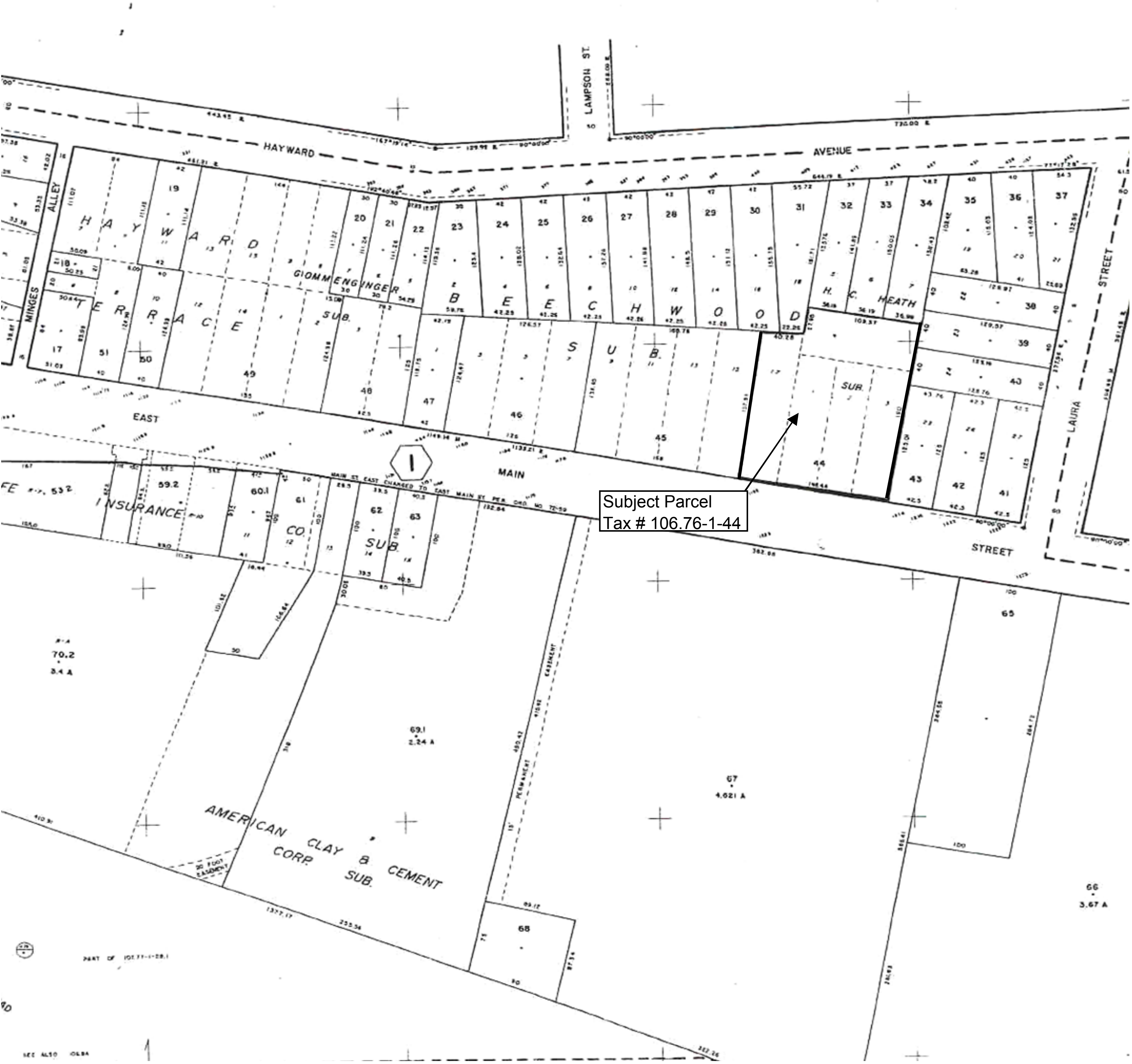
**1200 East Main Street**
**City of Rochester, Monroe County, NY**
**Site Investigation Remedial Alternatives Report**

## USGS TOPOGRAPHIC MAP

USGS 7.5 Minute Topographic Map, Rochester East, NY Quadrangle, 1978

Date
**September 2005**

Figure
**1**



Scale 1Inch = 150 Feet (approximate)

N

EJJ

BERGMANN associates

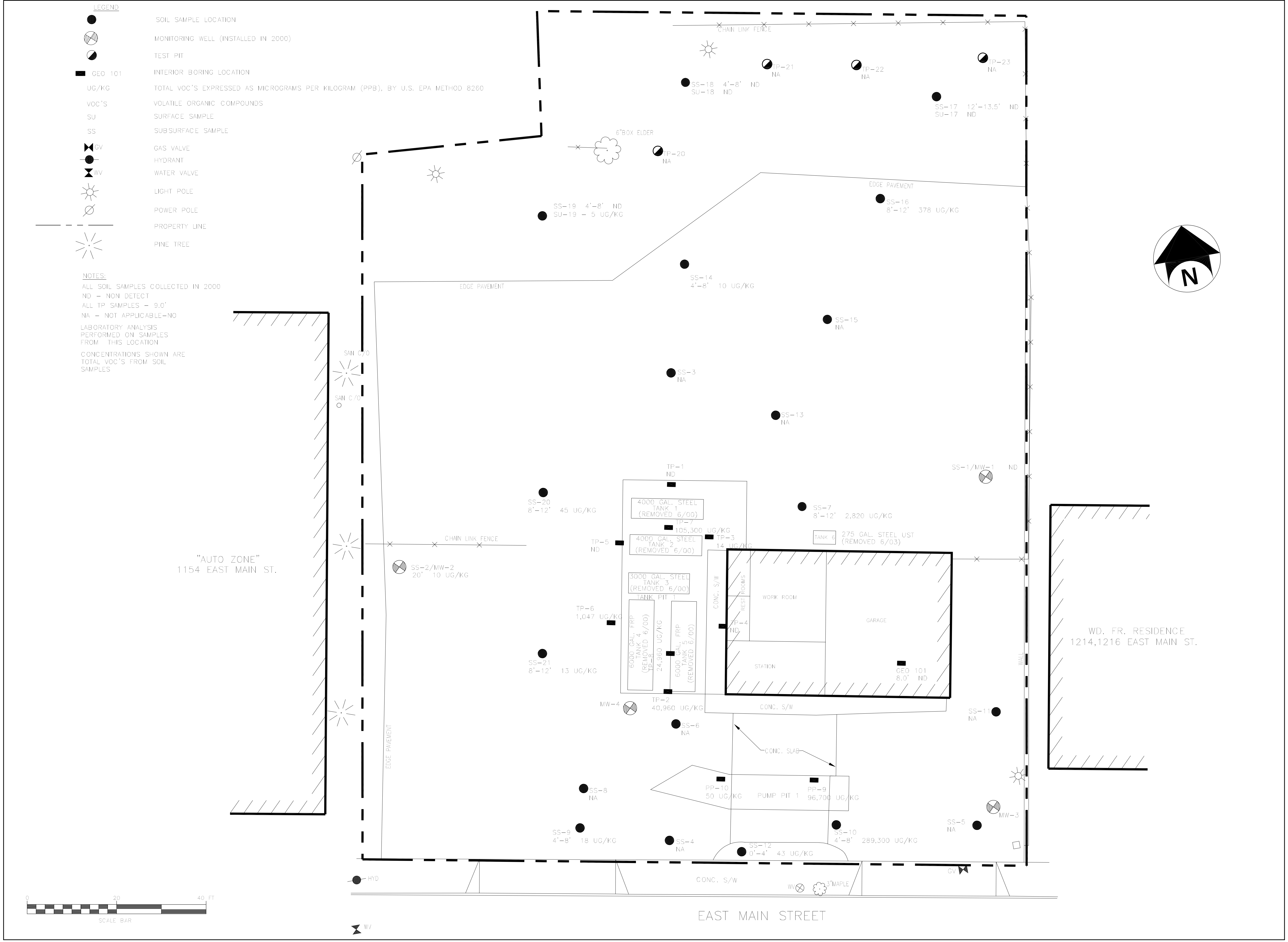
**1200 East Main Street**
**City of Rochester, Monroe County, NY**
**Site Investigation Remedial Alternatives Report**

## PROJECT LOCATION MAP

City of Rochester Tax Map, Sheet No. 106.76

Date
**September 2005**

Figure
**2**



# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

**BERGMANN associates**
Engineers / Architects / Surveyors

REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## 2000 MONITORING WELL GEOPROBE BORING AND TEST PIT LOCATION MAP

Project Manager:
GF

Designed by:
TSB

Drawn by:
TSB

Checked by:
JM

Date Issued:
SEPTEMBER 30, 2005

Scale:
AS SHOWN

Date

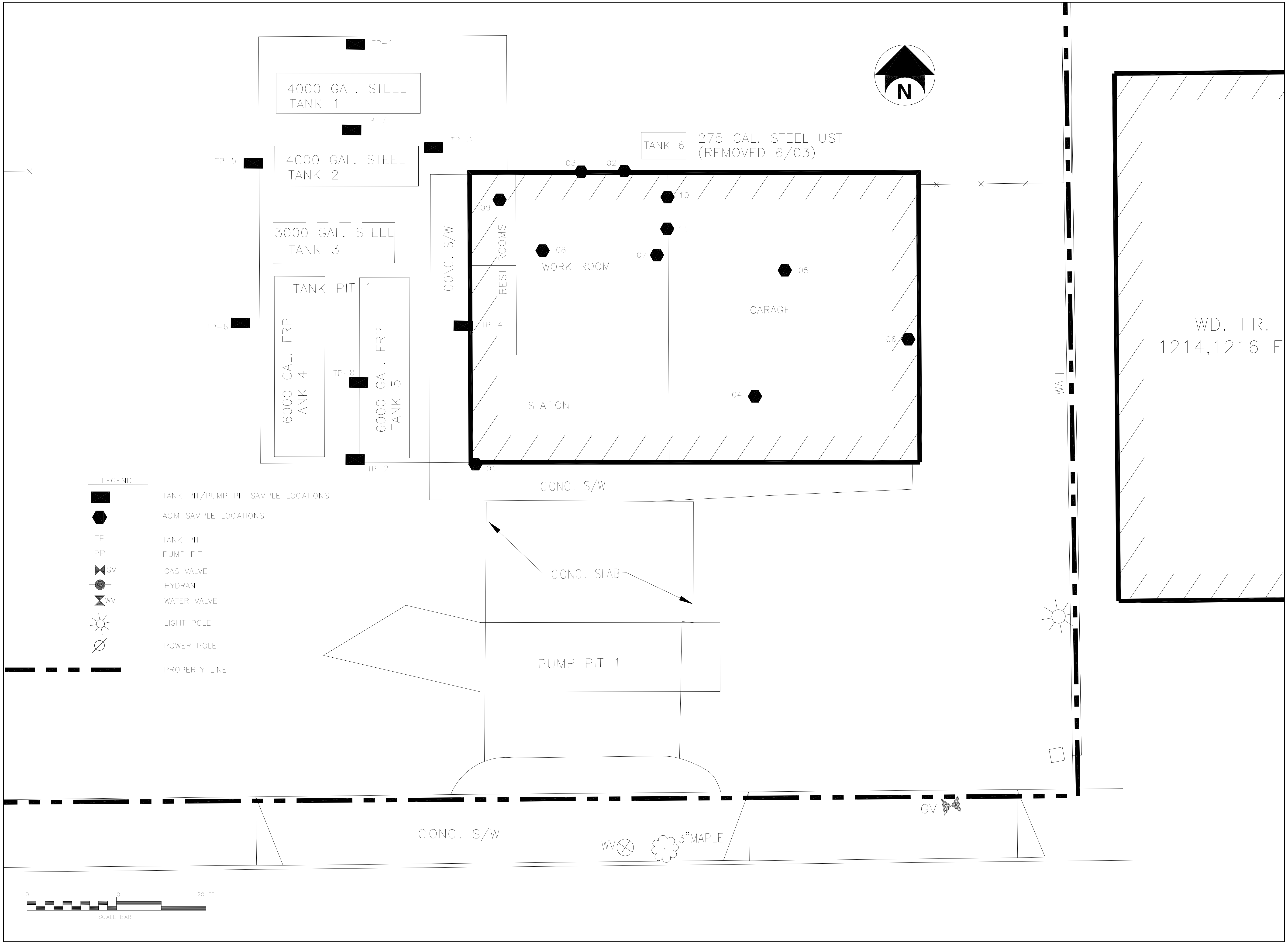
Project Number:
4453.03

File Name:
I:\SUR\ENV\EMAIN\FIG\FIG3.DWG

Drawing Number:

# FIG 3

of



# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

## SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

BERGMANN
associates
Engineers / Architects / Surveyors

REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

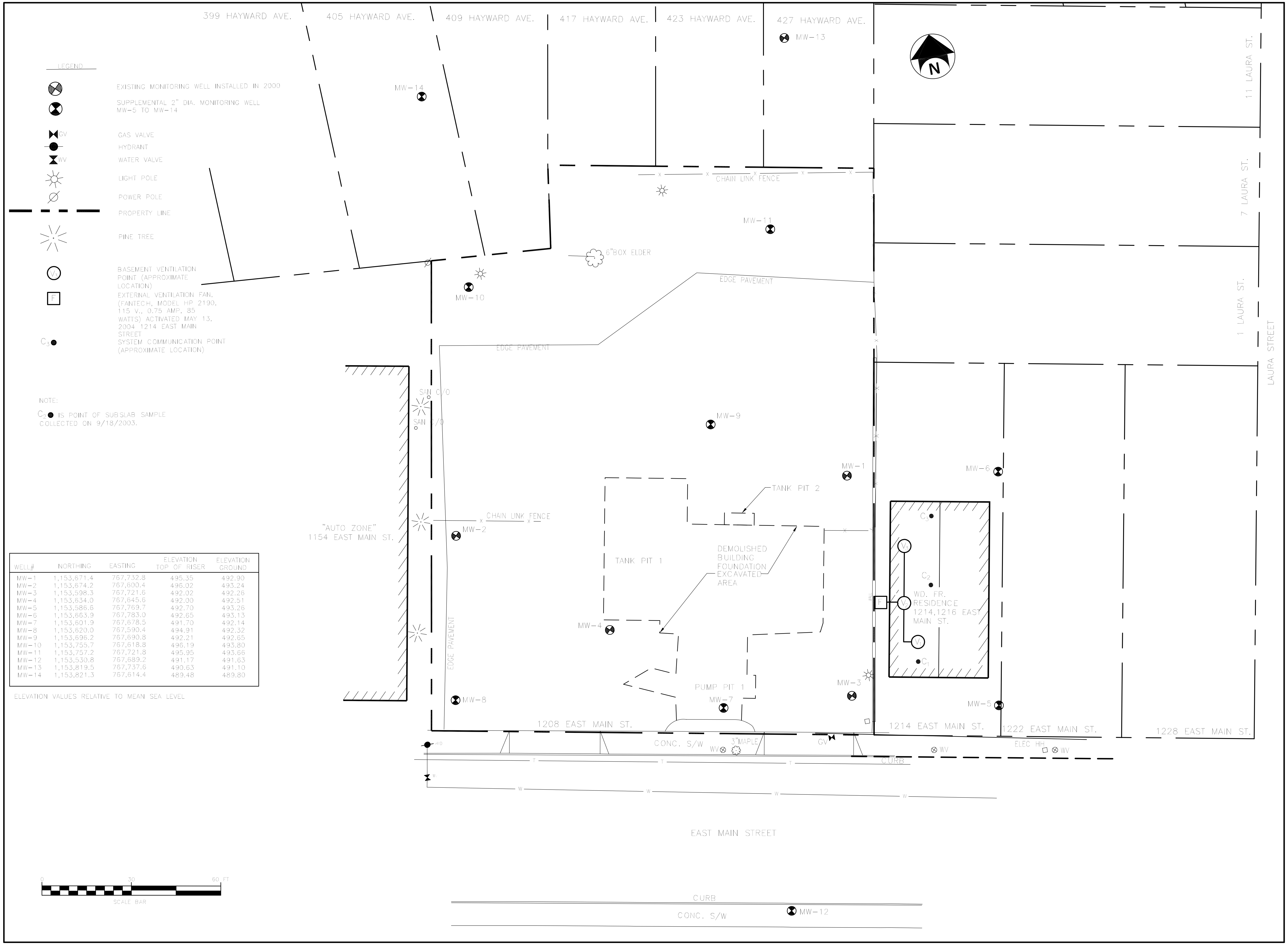
NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## 2000 TANK PIT, PUMP PIT AND ASBESTOS SAMPLE LOCATION MAP

Project Manager: GF
Designed by: TSB
Drawn by: TSB
Checked by: JM
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAINST\FIG\FIG4.DWG
Drawing Number:

# FIG 4

of



NOTE:

$C_2$● IS POINT OF SUBSLAB SAMPLE COLLECTED ON 9/18/2003.

| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |
| MW-13 | 1,153,819.5 | 767,737.6 | 490.63 | 491.10 |
| MW-14 | 1,153,821.3 | 767,614.4 | 489.48 | 489.80 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL

# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

## SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

BERGMANN
associates
Engineers / Architects / Surveyors

REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## 2004 MONITORING WELL LOCATION PLAN

Project Manager: GF
Designed by: EJJ
Drawn by: JJ
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG5.DWG
Drawing Number:

**FIG 5**

of

# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

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REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## 2000 OVERBURDEN SOILS TOTAL VOC POSTING MAP

Project Manager:
GF
Designed by:
TSB
Drawn by:
TSB
Checked by:
JM
Date Issued:
SEPTEMBER 30, 2005
Scale:
AS SHOWN

Date

Project Number:
4453.03
File Name:
I:\SUR\ENV\EMAIN\FIG\FIG6.DWG

Drawing Number:

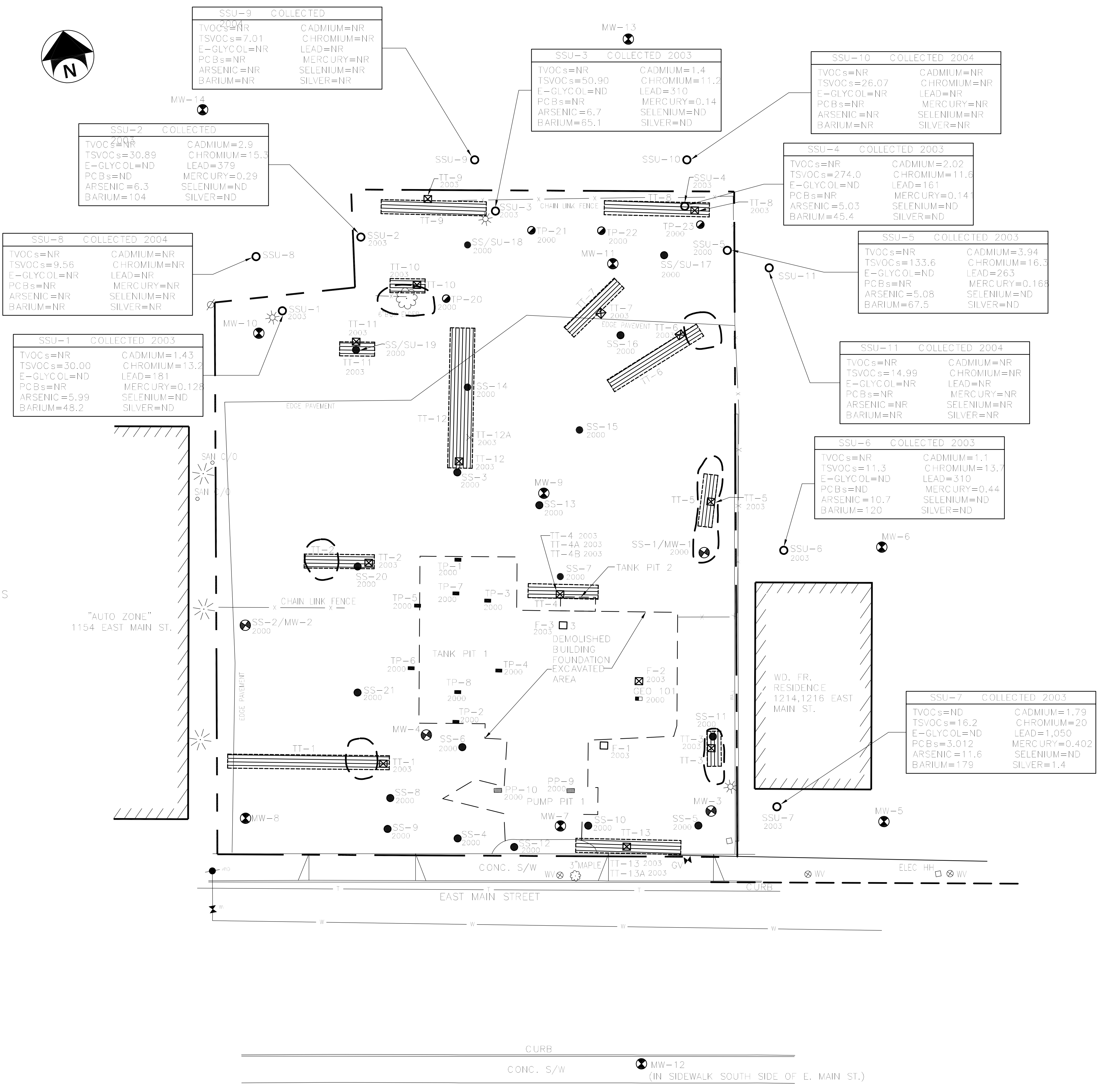
FIG 6

of

LEGEND

| | |
|---|---|
| ■ 2000 | TANK PIT SAMPLE LOCATION<br>TP-1 THROUGH TP-8 COLLECTED IN 2000 |
| ▨ 2000 | PUMP PIT SAMPLE LOCATION COLLECTED IN 2000<br>PP-9 AND PP-10 |
| ◧ | INTERIOR BORING LOCATION<br>GEO101 INSTALLED IN 2000 |
| ▤ TT | TEST PITS INSTALLED JUNE 2003 |
| ☒ TT-1 | 2003 TEST TRENCH<br>SUBSURFACE SOIL SAMPLE FROM TEST TRENCHES |
| ● | SOIL SAMPLE LOCATION SAMPLED IN 2000 |
| ⊗ | EXISTING MONITORING WELL INSTALLED IN 2000 |
| ⊗ | SUPPLEMENTAL<br>2" DIA. MONITORING WELL<br>MW-5 TO MW-12 INSTALLED 2003 & 2004 |
| ◐ | TEST PIT EXCAVATED IN 2000 |
| SU | SURFACE SAMPLE-2000 |
| SS | SUBSURFACE SAMPLE-2000 |
| SSU-1 ○ | SUPPLEMENTAL SURFACE<br>SOIL SAMPLE LOCATIONS-2003 & 2004 |
| ⋈ GV | GAS VALVE |
| ● | HYDRANT |
| ⧗ WV | WATER VALVE |
| ☼ | LIGHT POLE |
| ∅ | POWER POLE |
| — — — — | PROPERTY LINE |
| ✳ | PINE TREE |
| ◌ | SUBSURFACE METAL LOCATOR ANOMALIES<br>SURVEY CONDUCTED 5/17/00 |

ND= NOT DETECTED
NR= ANALYSIS NOT REQUIRED
TVOCs= TOTAL VOLATILE ORGANIC COMPOUNDS
TSVOCs= TOTAL SEMI-VOLATILE ORGANIC COMPOUNDS
E-GLYCOL= ETHYLENE GLYCOL
ALL RESULTS EXPRESSED AS mg/kg (PPM)



| SSU-9 COLLECTED 2004 | |
|---|---|
| TVOCs=NR | CADMIUM=NR |
| TSVOCs=7.01 | CHROMIUM=NR |
| E-GLYCOL=NR | LEAD=NR |
| PCBs=NR | MERCURY=NR |
| ARSENIC=NR | SELENIUM=NR |
| BARIUM=NR | SILVER=NR |

| SSU-2 COLLECTED 2003 | |
|---|---|
| TVOCs=NR | CADMIUM=2.9 |
| TSVOCs=30.89 | CHROMIUM=15.3 |
| E-GLYCOL=ND | LEAD=379 |
| PCBs=ND | MERCURY=0.29 |
| ARSENIC=6.3 | SELENIUM=ND |
| BARIUM=104 | SILVER=ND |

| SSU-3 COLLECTED 2003 | |
|---|---|
| TVOCs=NR | CADMIUM=1.4 |
| TSVOCs=50.90 | CHROMIUM=11.2 |
| E-GLYCOL=ND | LEAD=310 |
| PCBs=NR | MERCURY=0.14 |
| ARSENIC=6.7 | SELENIUM=ND |
| BARIUM=65.1 | SILVER=ND |

| SSU-10 COLLECTED 2004 | |
|---|---|
| TVOCs=NR | CADMIUM=NR |
| TSVOCs=26.07 | CHROMIUM=NR |
| E-GLYCOL=NR | LEAD=NR |
| PCBs=NR | MERCURY=NR |
| ARSENIC=NR | SELENIUM=NR |
| BARIUM=NR | SILVER=NR |

| SSU-4 COLLECTED 2003 | |
|---|---|
| TVOCs=NR | CADMIUM=2.02 |
| TSVOCs=274.0 | CHROMIUM=11.6 |
| E-GLYCOL=ND | LEAD=161 |
| PCBs=NR | MERCURY=0.141 |
| ARSENIC=5.03 | SELENIUM=ND |
| BARIUM=45.4 | SILVER=ND |

| SSU-8 COLLECTED 2004 | |
|---|---|
| TVOCs=NR | CADMIUM=NR |
| TSVOCs=9.56 | CHROMIUM=NR |
| E-GLYCOL=NR | LEAD=NR |
| PCBs=NR | MERCURY=NR |
| ARSENIC=NR | SELENIUM=NR |
| BARIUM=NR | SILVER=NR |

| SSU-5 COLLECTED 2003 | |
|---|---|
| TVOCs=NR | CADMIUM=3.94 |
| TSVOCs=133.6 | CHROMIUM=16.3 |
| E-GLYCOL=ND | LEAD=263 |
| PCBs=NR | MERCURY=0.168 |
| ARSENIC=5.08 | SELENIUM=ND |
| BARIUM=67.5 | SILVER=ND |

| SSU-1 COLLECTED 2003 | |
|---|---|
| TVOCs=NR | CADMIUM=1.43 |
| TSVOCs=30.00 | CHROMIUM=13.2 |
| E-GLYCOL=ND | LEAD=181 |
| PCBs=NR | MERCURY=0.128 |
| ARSENIC=5.99 | SELENIUM=ND |
| BARIUM=48.2 | SILVER=ND |

| SSU-11 COLLECTED 2004 | |
|---|---|
| TVOCs=NR | CADMIUM=NR |
| TSVOCs=14.99 | CHROMIUM=NR |
| E-GLYCOL=NR | LEAD=NR |
| PCBs=NR | MERCURY=NR |
| ARSENIC=NR | SELENIUM=NR |
| BARIUM=NR | SILVER=NR |

| SSU-6 COLLECTED 2003 | |
|---|---|
| TVOCs=NR | CADMIUM=1.1 |
| TSVOCs=11.3 | CHROMIUM=13.7 |
| E-GLYCOL=ND | LEAD=310 |
| PCBs=ND | MERCURY=0.44 |
| ARSENIC=10.7 | SELENIUM=ND |
| BARIUM=120 | SILVER=ND |

| SSU-7 COLLECTED 2003 | |
|---|---|
| TVOCs=ND | CADMIUM=1.79 |
| TSVOCs=16.2 | CHROMIUM=20 |
| E-GLYCOL=ND | LEAD=1,050 |
| PCBs=3.012 | MERCURY=0.402 |
| ARSENIC=11.6 | SELENIUM=ND |
| BARIUM=179 | SILVER=1.4 |

| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |
| MW-13 | 1,153,819.5 | 767,737.6 | 490.63 | 491.10 |
| MW-14 | 1,153,821.3 | 767,614.4 | 489.48 | 489.80 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL

0 30 60 FT
SCALE BAR

# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

## SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

BERGMANN
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REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

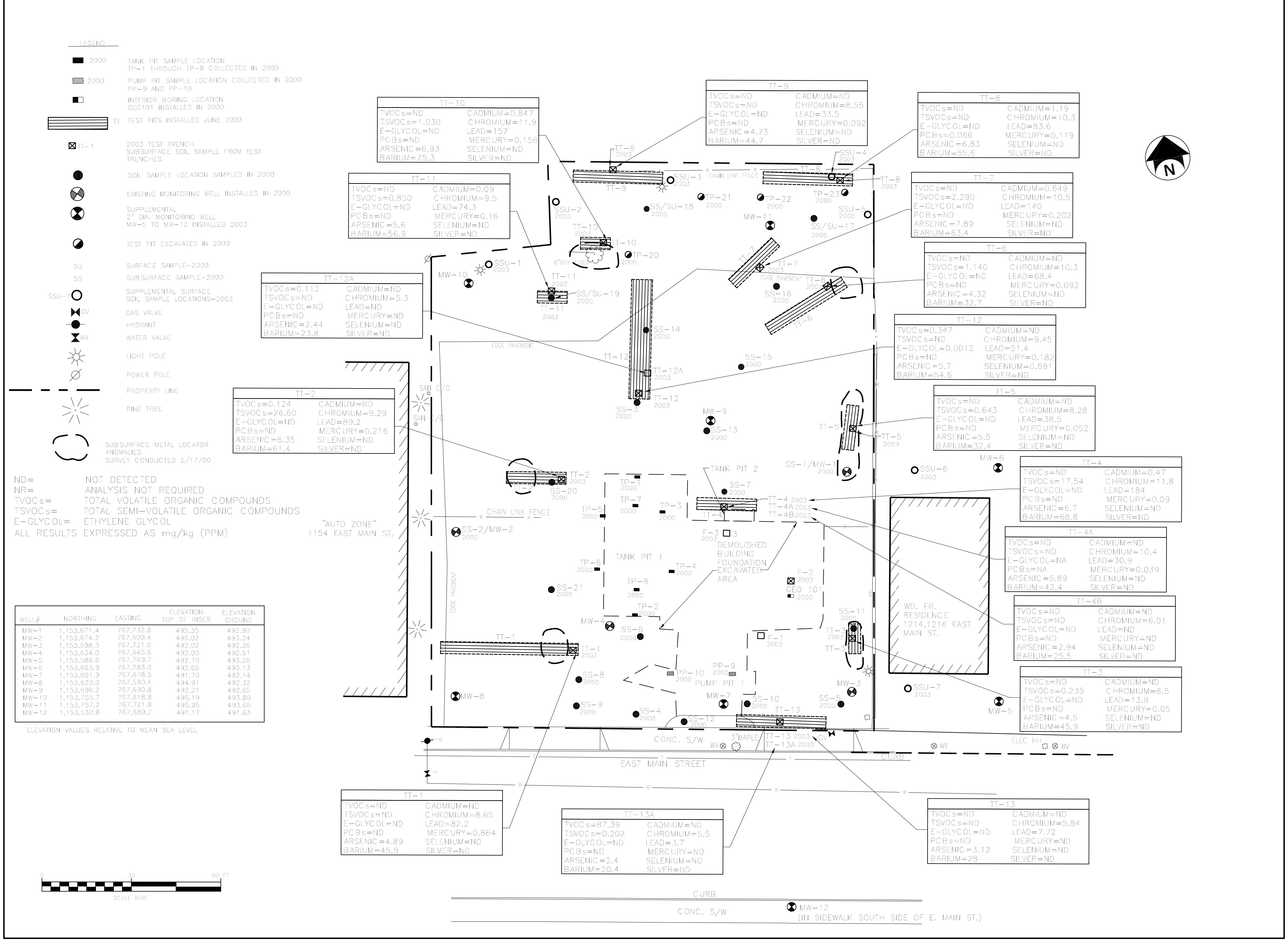
NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## 2003 & 2004 SURFACE SOIL SAMPLES ANALYSIS SUMMARY POSTINGS MAP

Project Manager: GF
Designed by: EFF
Drawn by: JJ
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG7.DWG
Drawing Number:

# FIG 7

of



LEGEND

| | |
|---|---|
| ▬ 2000 | TANK PIT SAMPLE LOCATION<br>TP-1 THROUGH TP-8 COLLECTED IN 2000 |
| ▨ 2000 | PUMP PIT SAMPLE LOCATION COLLECTED IN 2000<br>PP-9 AND PP-10 |
| ◧ | INTERIOR BORING LOCATION<br>GEO101 INSTALLED IN 2000 |
| ▤ TT | TEST PITS INSTALLED JUNE 2003 |
| ☒ TT-1 | 2003 TEST TRENCH<br>SUBSURFACE SOIL SAMPLE FROM TEST TRENCHES |
| ● | SOIL SAMPLE LOCATION SAMPLED IN 2000 |
| ⊗ | EXISTING MONITORING WELL INSTALLED IN 2000 |
| ⊗ | SUPPLEMENTAL<br>2" DIA. MONITORING WELL<br>MW-5 TO MW-12 INSTALLED 2003 |
| ◐ | TEST PIT EXCAVATED IN 2000 |
| SU | SURFACE SAMPLE-2000 |
| SS | SUBSURFACE SAMPLE-2000 |
| SSU-1 ○ | SUPPLEMENTAL SURFACE<br>SOIL SAMPLE LOCATIONS-2003 |
| ⋈ GV | GAS VALVE |
| ● | HYDRANT |
| ⧗ WV | WATER VALVE |
| ☼ | LIGHT POLE |
| ∅ | POWER POLE |
| — — — | PROPERTY LINE |
| ✳ | PINE TREE |
| ◌ | SUBSURFACE METAL LOCATOR ANOMALIES<br>SURVEY CONDUCTED 5/17/00 |

ND= NOT DETECTED
NR= ANALYSIS NOT REQUIRED
TVOCs= TOTAL VOLATILE ORGANIC COMPOUNDS
TSVOCs= TOTAL SEMI-VOLATILE ORGANIC COMPOUNDS
E-GLYCOL= ETHYLENE GLYCOL
ALL RESULTS EXPRESSED AS mg/kg (PPM)

TT-10
TVOCs=ND CADMIUM=0.847
TSVOCs=1.030 CHROMIUM=11.9
E-GLYCOL=ND LEAD=157
PCBs=ND MERCURY=0.156
ARSENIC=6.93 SELENIUM=ND
BARIUM=75.3 SILVER=ND

TT-9
TVOCs=ND CADMIUM=ND
TSVOCs=ND CHROMIUM=8.55
E-GLYCOL=ND LEAD=33.5
PCBs=ND MERCURY=0.092
ARSENIC=4.73 SELENIUM=ND
BARIUM=44.7 SILVER=ND

TT-8
TVOCs=ND CADMIUM=1.19
TSVOCs=ND CHROMIUM=10.3
E-GLYCOL=ND LEAD=83.6
PCBs=0.066 MERCURY=0.119
ARSENIC=6.83 SELENIUM=ND
BARIUM=55.6 SILVER=ND

TT-11
TVOCs=ND CADMIUM=0.09
TSVOCs=0.850 CHROMIUM=9.5
E-GLYCOL=ND LEAD=74.3
PCBs=ND MERCURY=0.16
ARSENIC=5.6 SELENIUM=ND
BARIUM=56.9 SILVER=ND

TT-7
TVOCs=ND CADMIUM=0.649
TSVOCs=2.290 CHROMIUM=10.5
E-GLYCOL=ND LEAD=140
PCBs=ND MERCURY=0.202
ARSENIC=7.89 SELENIUM=ND
BARIUM=63.4 SILVER=ND

TT-6
TVOCs=ND CADMIUM=ND
TSVOCs=1.140 CHROMIUM=10.3
E-GLYCOL=ND LEAD=68.4
PCBs=ND MERCURY=0.092
ARSENIC=4.32 SELENIUM=ND
BARIUM=32.7 SILVER=ND

TT-12A
TVOCs=0.112 CADMIUM=ND
TSVOCs=ND CHROMIUM=5.3
E-GLYCOL=ND LEAD=ND
PCBs=ND MERCURY=ND
ARSENIC=2.44 SELENIUM=ND
BARIUM=23.8 SILVER=ND

TT-12
TVOCs=0.347 CADMIUM=ND
TSVOCs=ND CHROMIUM=9.45
E-GLYCOL=0.0012 LEAD=51.4
PCBs=ND MERCURY=0.182
ARSENIC=5.7 SELENIUM=0.691
BARIUM=54.6 SILVER=ND

TT-2
TVOCs=0.124 CADMIUM=ND
TSVOCs=26.60 CHROMIUM=9.29
E-GLYCOL=ND LEAD=89.2
PCBs=ND MERCURY=0.216
ARSENIC=6.35 SELENIUM=ND
BARIUM=61.4 SILVER=ND

TT-5
TVOCs=ND CADMIUM=ND
TSVOCs=0.643 CHROMIUM=8.28
E-GLYCOL=ND LEAD=38.5
PCBs=ND MERCURY=0.052
ARSENIC=5.5 SELENIUM=ND
BARIUM=32.4 SILVER=ND

TT-4
TVOCs=ND CADMIUM=0.47
TSVOCs=17.54 CHROMIUM=11.8
E-GLYCOL=ND LEAD=184
PCBs=ND MERCURY=0.09
ARSENIC=6.7 SELENIUM=ND
BARIUM=68.8 SILVER=ND

TT-4A
TVOCs=ND CADMIUM=ND
TSVOCs=ND CHROMIUM=10.4
E-GLYCOL=NA LEAD=30.9
PCBs=NA MERCURY=0.039
ARSENIC=5.89 SELENIUM=ND
BARIUM=42.4 SILVER=ND

TT-4B
TVOCs=ND CADMIUM=ND
TSVOCs=ND CHROMIUM=6.01
E-GLYCOL=ND LEAD=ND
PCBs=ND MERCURY=ND
ARSENIC=2.94 SELENIUM=ND
BARIUM=25.5 SILVER=ND

TT-3
TVOCs=ND CADMIUM=ND
TSVOCs=0.235 CHROMIUM=8.5
E-GLYCOL=ND LEAD=13.9
PCBs=ND MERCURY=0.05
ARSENIC=4.5 SELENIUM=ND
BARIUM=45.9 SILVER=ND

TT-1
TVOCs=ND CADMIUM=ND
TSVOCs=ND CHROMIUM=8.65
E-GLYCOL=ND LEAD=82.2
PCBs=ND MERCURY=0.864
ARSENIC=4.89 SELENIUM=ND
BARIUM=45.9 SILVER=ND

TT-13A
TVOCs=87.39 CADMIUM=ND
TSVOCs=0.202 CHROMIUM=5.5
E-GLYCOL=ND LEAD=3.7
PCBs=ND MERCURY=ND
ARSENIC=2.4 SELENIUM=ND
BARIUM=20.4 SILVER=ND

TT-13
TVOCs=ND CADMIUM=ND
TSVOCs=ND CHROMIUM=5.84
E-GLYCOL=ND LEAD=7.72
PCBs=ND MERCURY=ND
ARSENIC=3.12 SELENIUM=ND
BARIUM=28 SILVER=ND

| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL

**CITY OF ROCHESTER**
1200 EAST MAIN ST.
ROCHESTER, NY
14614

## SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

BERGMANN associates
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REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
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NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## 2003 TEST TRENCH SOIL SAMPLES ANALYSIS SUMMARY POSTINGS MAP

Project Manager: GF
Designed by: EJJ
Drawn by: TSB
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG8.DWG
Drawing Number:

**FIG 8**

of

LEGEND

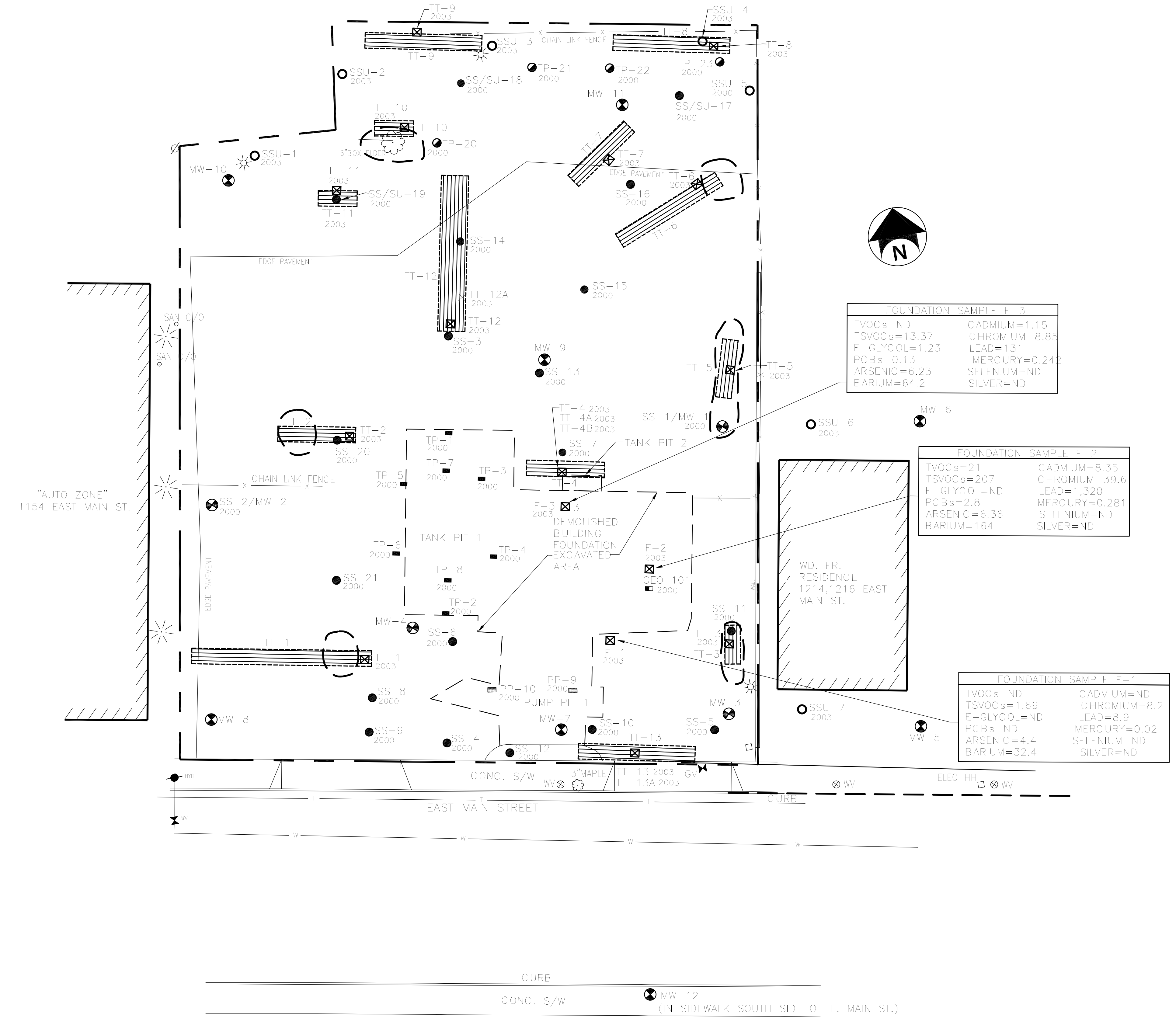
| | |
|---|---|
| ■ 2000 | TANK PIT SAMPLE LOCATION<br>TP-1 THROUGH TP-8 COLLECTED IN 2000 |
| ▨ 2000 | PUMP PIT SAMPLE LOCATION COLLECTED IN 2000<br>PP-9 AND PP-10 |
| ◧ | INTERIOR BORING LOCATION<br>GEO101 INSTALLED IN 2000 |
| ☰ TT | TEST PITS INSTALLED JUNE 2003 |
| ☒ TT-1 | 2003 TEST TRENCH<br>SUBSURFACE SOIL SAMPLE FROM TEST TRENCHES |
| ● | SOIL SAMPLE LOCATION SAMPLED IN 2000 |
| ⊗ | EXISTING MONITORING WELL INSTALLED IN 2000 |
| ⊗ | SUPPLEMENTAL<br>2" DIA. MONITORING WELL<br>MW-5 TO MW-12 INSTALLED 2003 |
| ◐ | TEST PIT EXCAVATED IN 2000 |
| SU | SURFACE SAMPLE-2000 |
| SS | SUBSURFACE SAMPLE-2000 |
| SSU-1 ○ | SUPPLEMENTAL SURFACE<br>SOIL SAMPLE LOCATIONS-2003 |
| ⋈ GV | GAS VALVE |
| ● | HYDRANT |
| ⧗ WV | WATER VALVE |
| ☼ | LIGHT POLE |
| ∅ | POWER POLE |
| — — | PROPERTY LINE |
| ✳ | PINE TREE |
| ○ | SUBSURFACE METAL LOCATOR ANOMALIES<br>SURVEY CONDUCTED 5/17/00 |

ND= NOT DETECTED
NR= ANALYSIS NOT REQUIRED
TVOCs= TOTAL VOLATILE ORGANIC COMPOUNDS
TSVOCs= TOTAL SEMI-VOLATILE ORGANIC COMPOUNDS
E-GLYCOL= ETHYLENE GLYCOL
ALL RESULTS EXPRESSED AS mg/kg (PPM)

| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL

0 30 60 FT
SCALE BAR



FOUNDATION SAMPLE F-3
TVOCs=ND
TSVOCs=13.37
E-GLYCOL=1.23
PCBs=0.13
ARSENIC=6.23
BARIUM=64.2
CADMIUM=1.15
CHROMIUM=8.85
LEAD=131
MERCURY=0.242
SELENIUM=ND
SILVER=ND

FOUNDATION SAMPLE F-2
TVOCs=21
TSVOCs=207
E-GLYCOL=ND
PCBs=2.8
ARSENIC=6.36
BARIUM=164
CADMIUM=8.35
CHROMIUM=39.6
LEAD=1,320
MERCURY=0.281
SELENIUM=ND
SILVER=ND

FOUNDATION SAMPLE F-1
TVOCs=ND
TSVOCs=1.69
E-GLYCOL=ND
PCBs=ND
ARSENIC=4.4
BARIUM=32.4
CADMIUM=ND
CHROMIUM=8.2
LEAD=8.9
MERCURY=0.02
SELENIUM=ND
SILVER=ND

# CITY OF ROCHESTER
1200 EAST MAIN ST.
ROCHESTER, NY
14614

# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

BERGMANN
associates
Engineers / Architects / Surveyors

REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## 2003 FOUNDATION SOIL SAMPLES ANALYSIS SUMMARY POSTINGS MAP

Project Manager: GF
Designed by: EJJ
Drawn by: TSB
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG9.DWG
Drawing Number:

FIG 9

of

# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

BERGMANN associates
Engineers / Architects / Surveyors

REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## 2000 GROUNDWATER TOTAL VOCs ANALYSIS SUMMARY POSTINGS MAP

Project Manager:
GF
Designed by:
TSB
Drawn by:
TSB
Checked by:
JM
Date Issued:
SEPTEMBER 30, 2005
Scale:
AS SHOWN

Date

Project Number:
4453.03
File Name:
I:\SUR\ENV\EMAIN\FIG\FIG10.DWG
Drawing Number:

**FIG 10**

of

LEGEND

- ⊗ EXISTING MONITORING WELL INSTALLED IN 2000 MW-1 TO MW-4
- ⊗ SUPPLEMENTAL 2" DIA. MONITORING WELL MW-5 TO MW-12
- ⋈ GV GAS VALVE
- ● HYDRANT
- ⧗ WV WATER VALVE
- ☼ LIGHT POLE
- ∅ POWER POLE
- — — PROPERTY LINE
- ✳ PINE TREE

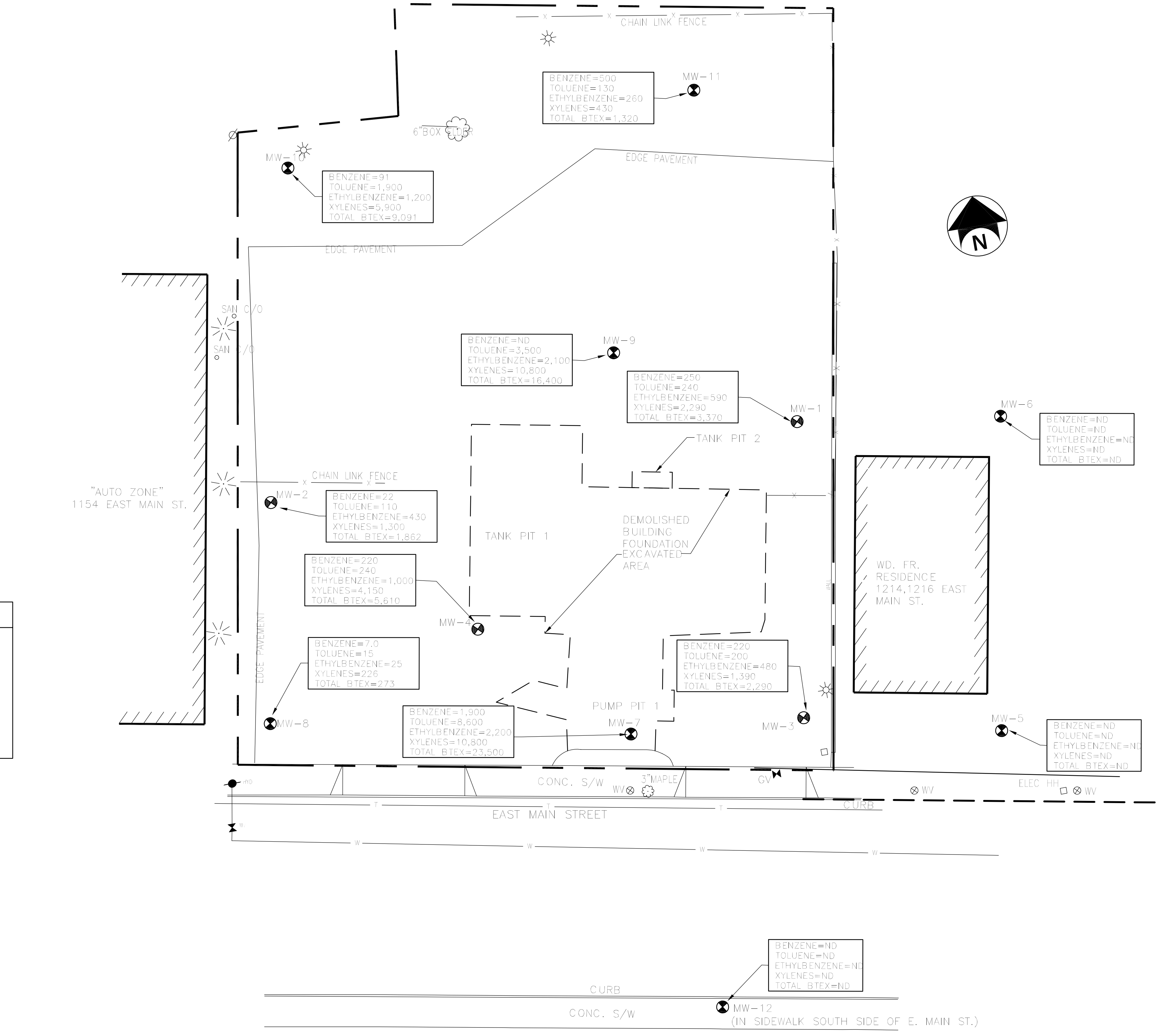
GROUNDWATER SAMPLES COLLECTED SEPT. 4-8, 2003

ALL RESULTS EXPRESSED AS MICROGRAM PER LITER = PARTS PER BILLION (PPB)

ND=NOT DETECTED

RESULTS FOR PETROLEUM VOCS ONLY

TOTAL BTEX = SUM OF DETECTED BENZENE, TOLUENE, ETHYLBENZENE AND XYLENES



| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL

0 30 60 FT

SCALE BAR

# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

BERGMANN
associates
Engineers / Architects / Surveyors

REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

# 2003 GROUNDWATER VOCs ANALYSIS SUMMARY POSTINGS MAP

Project Manager: GF
Designed by: EJJ
Drawn by: TSB
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG11.DWG
Drawing Number:

FIG 11

of

LEGEND

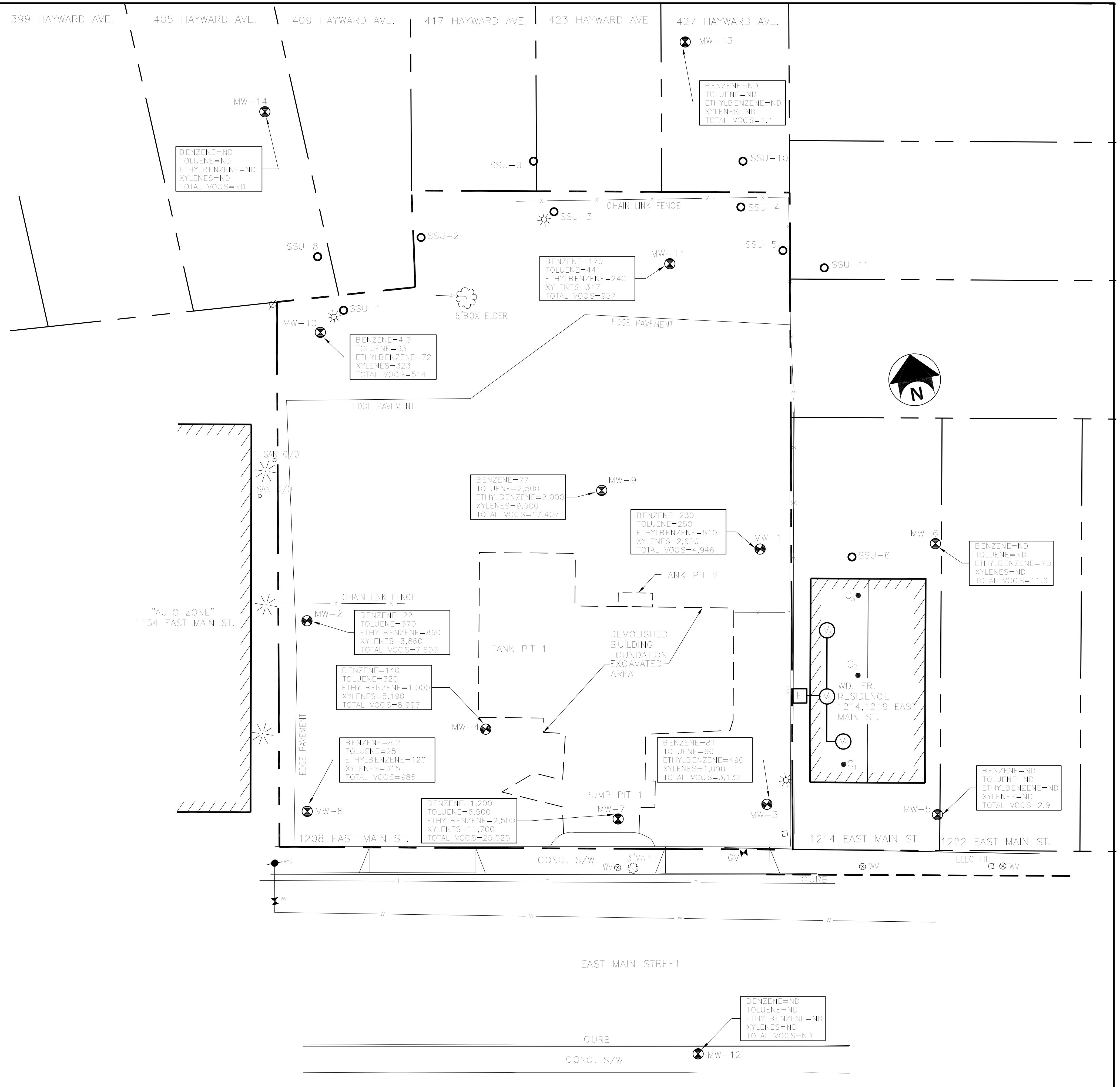
| | |
|---|---|
| ⊗ | EXISTING MONITORING WELL INSTALLED IN 2000 |
| ⊗ | SUPPLEMENTAL 2" DIA. MONITORING WELL MW-5 TO MW-14 |
| SSU-1 ○ | SUPPLEMENTAL SURFACE SOIL SAMPLE LOCATIONS, 2004 SSU8-SSU11 |
| SU | SURFACE SAMPLE |
| SS | SUBSURFACE SAMPLE |
| ⋈ GV | GAS VALVE |
| ● | HYDRANT |
| ⧗ WV | WATER VALVE |
| ☼ | LIGHT POLE |
| ∅ | POWER POLE |
| — – – — | PROPERTY LINE |
| ✳ | PINE TREE |
| (V3) | BASEMENT VENTILATION POINT (APPROXIMATE LOCATION) |
| ☐ F | EXTERNAL VENTILATION FAN, (FANTECH, MODEL HP 2190, 115 V., 0.75 AMP, 85 WATTS) ACTIVATED MAY 13, 2004 1214 EAST MAIN STREET |
| C3 ● | SYSTEM COMMUNICATION POINT (APPROXIMATE LOCATION) |
| C2 ● | IS POINT OF SUBSLAB SAMPLE COLLECTED ON 9/18/2003. |

GROUNDWATER SAMPLES COLLECTED JUNE 15-18, 2004

ALL RESULTS EXPRESSED AS MICROGRAM PER LITER = PARTS PER BILLION (PPB)

ND=NOT DETECTED

TOTAL VOCS = SUM OF ALL DETECTED VOLATILE ORGANIC COMPOUNDS



| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |
| MW-13 | 1,153,819.5 | 767,737.6 | 490.63 | 491.10 |
| MW-14 | 1,153,821.3 | 767,614.4 | 489.48 | 489.80 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL

0 30 60 FT

SCALE BAR

# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

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NOTE:

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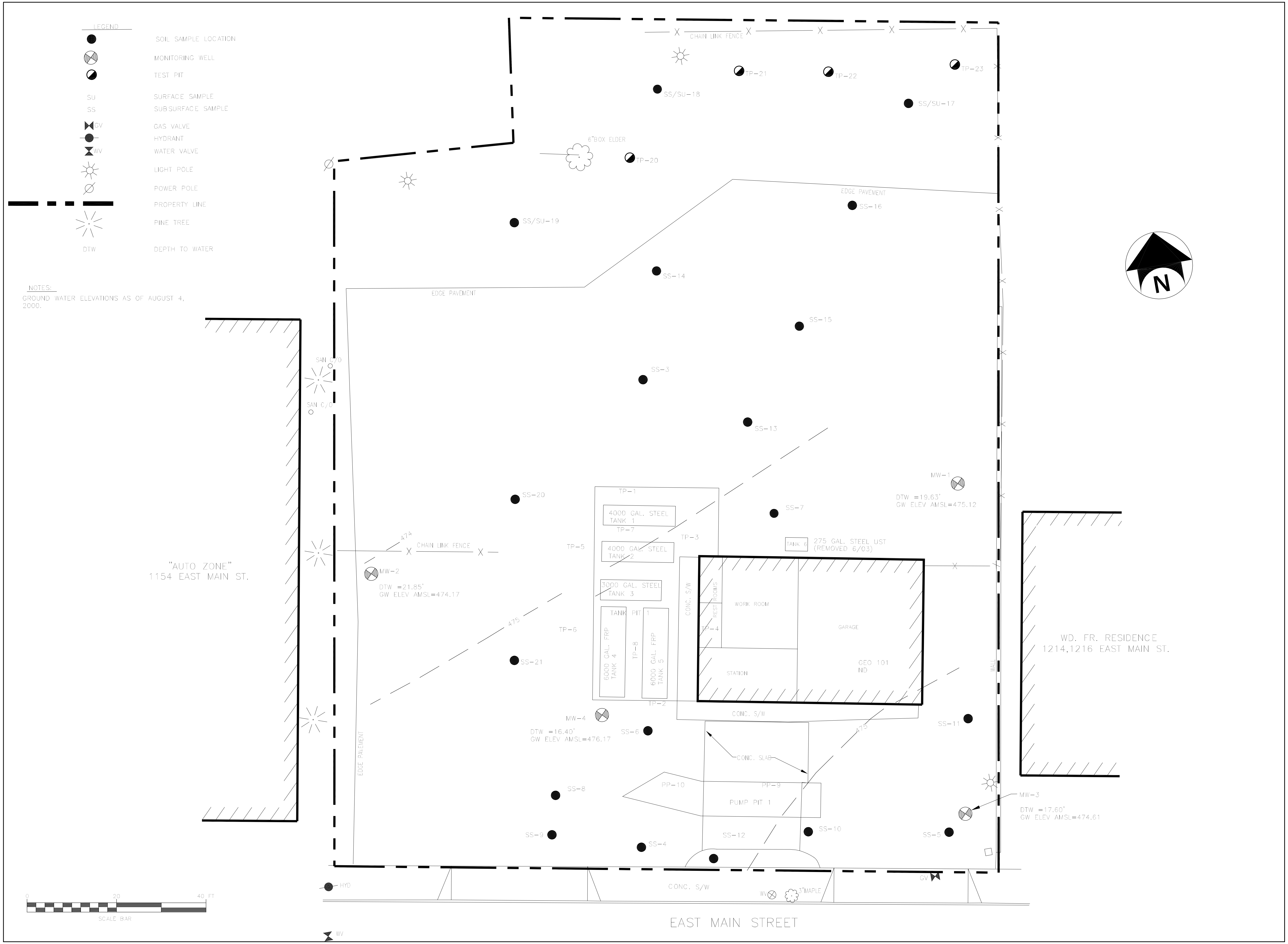
## 2004 GROUNDWATER VOCs ANALYSIS SUMMARY POSTINGS MAP

Project Manager: GF
Designed by: EJJ
Drawn by: JJ
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG12.DWG
Drawing Number:

FIG 12

of



# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
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# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

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REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## AUGUST 2000 WATER TABLE SURFACE AND GROUNDWATER FLOW MAP

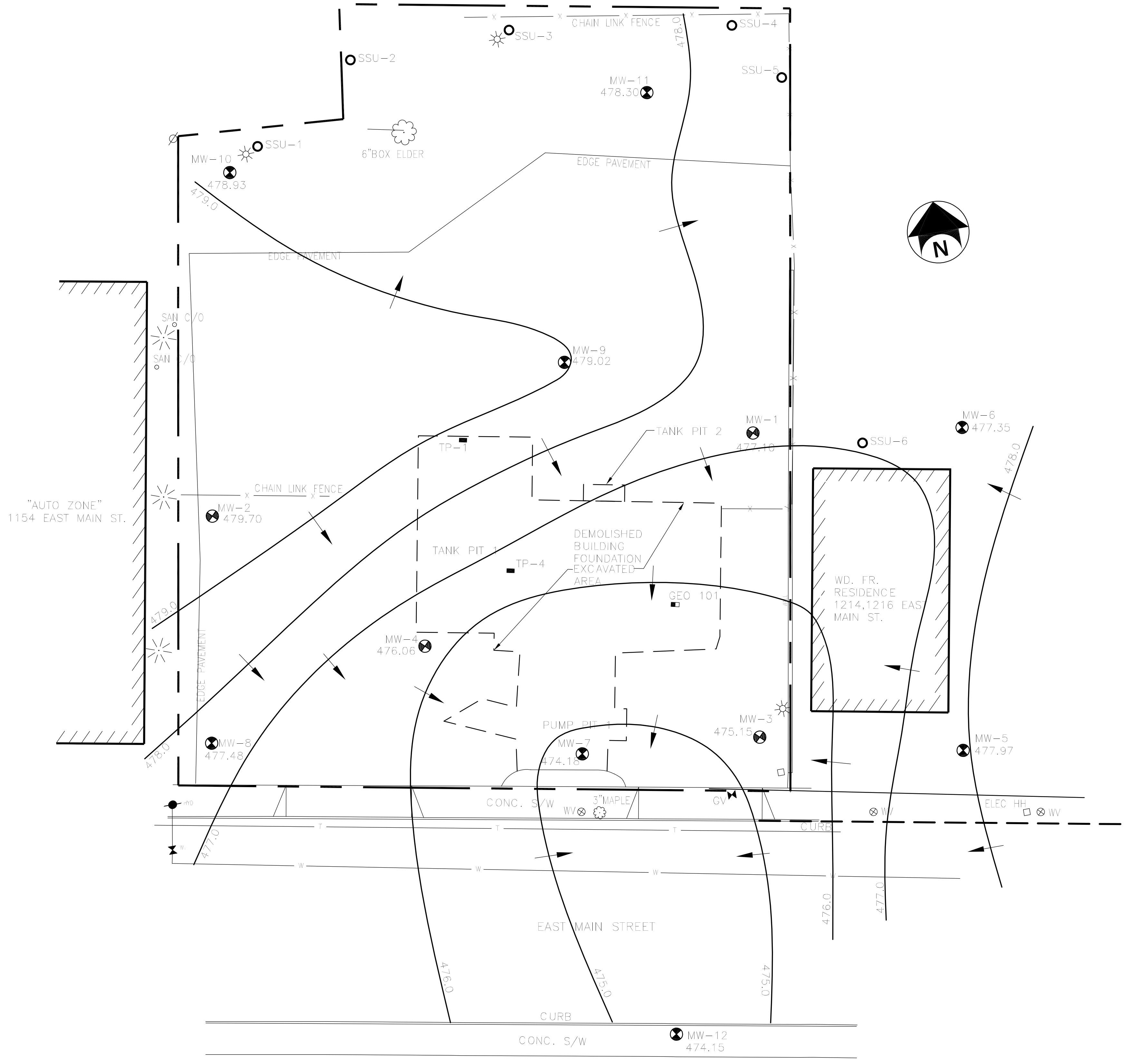
Project Manager: GF
Designed by: TSB
Drawn by: TSB
Checked by: JM
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG13.DWG
Drawing Number:

**FIG 13**

of

LEGEND

| | |
|---|---|
| ⊗ | EXISTING MONITORING WELL INSTALLED IN 2000 |
| ⊗ | SUPPLEMENTAL 2" DIA. MONITORING WELL MW-5 TO MW-12 |
| SSU-1 ○ | SUPPLEMENTAL SURFACE SOIL SAMPLE LOCATIONS |
| SU | SURFACE SAMPLE |
| SS | SUBSURFACE SAMPLE |
| ⋈ GV | GAS VALVE |
| ● | HYDRANT |
| ⧗ WV | WATER VALVE |
| ☼ | LIGHT POLE |
| ∅ | POWER POLE |
| — — — | PROPERTY LINE |
| ✳ | PINE TREE |
| 478.0 | GROUNDWATER EQUIPOTENTIAL CONTOUR, MEAN SEA LEVEL |
| ⊗ 478.93 | GROUNDWATER ELEVATION, SEPT. 4, 2003 |
| ← | GROUNDWATER FLOW DIRECTION |



| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL

0 30 60 FT

SCALE BAR

# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

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REVISIONS

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|---|---|---|---|---|

NOTE:

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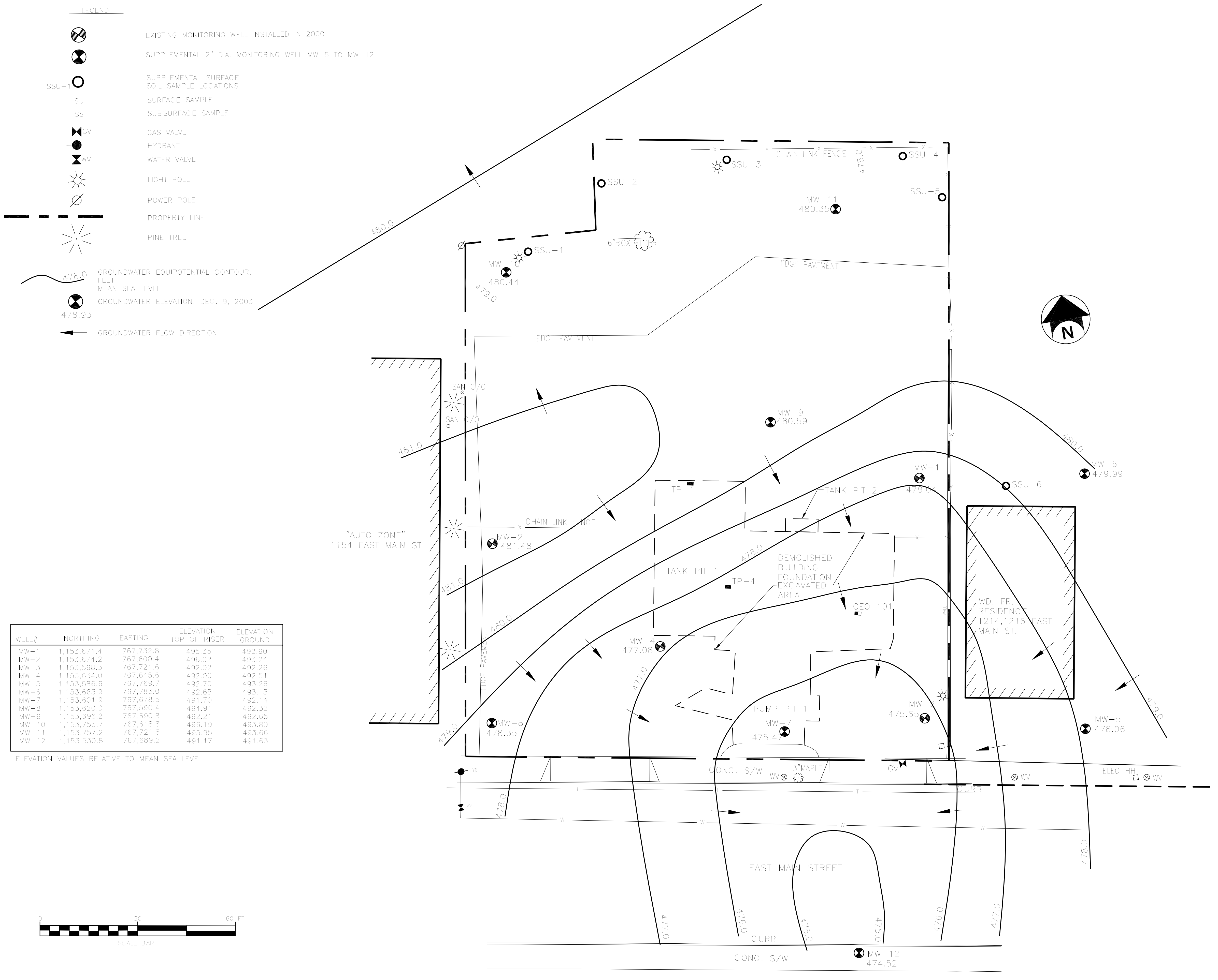
## SEPTEMBER 2003 WATER TABLE SURFACE AND GROUNDWATER FLOW MAP

Project Manager: GF
Designed by: EJJ
Drawn by: TSB
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG14.DWG
Drawing Number:

**FIG 14**

of



| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL

# CITY OF ROCHESTER

1200 EAST MAIN ST.
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# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

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| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

NOTE:
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# DECEMBER 2003 WATER TABLE SURFACE AND GROUNDWATER FLOW MAP

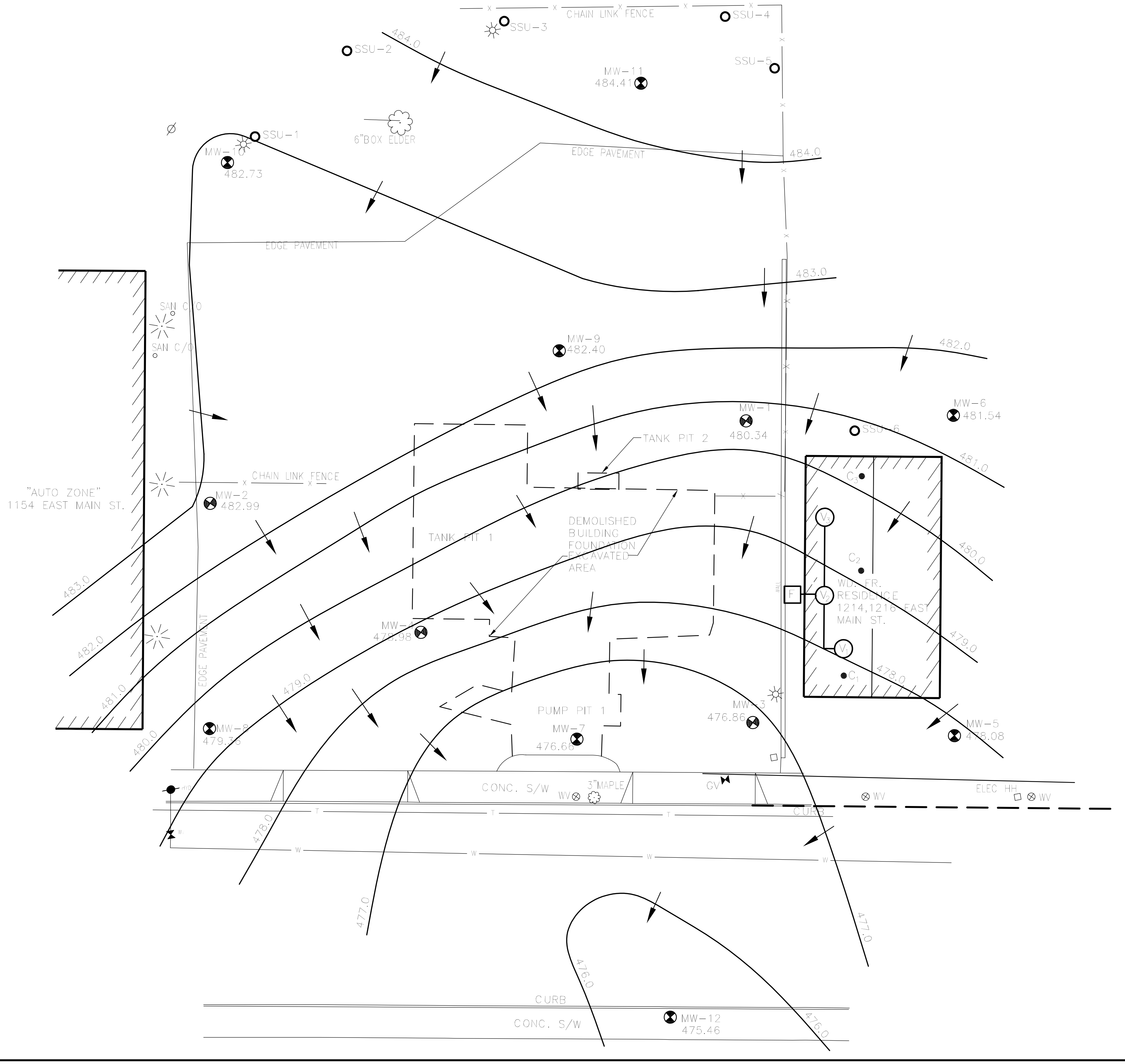
Project Manager: GF
Designed by: EJJ
Drawn by: TSB
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG15.DWG
Drawing Number:

FIG 15

of

LEGEND

- ⊗ EXISTING MONITORING WELL INSTALLED IN 2000
- ⊗ SUPPLEMENTAL 2" DIA. MONITORING WELL MW-5 TO MW-12
- SSU-1 ○ SUPPLEMENTAL SURFACE SOIL SAMPLE LOCATIONS
- SU SURFACE SAMPLE
- SS SUBSURFACE SAMPLE
- ⋈ GV GAS VALVE
- ● HYDRANT
- ⧗ WV WATER VALVE
- ☼ LIGHT POLE
- ∅ POWER POLE
- — — — PROPERTY LINE
- ✳ PINE TREE
- ∼ 478.0 GROUNDWATER EQUIPOTENTIAL CONTOUR, MEAN SEA LEVEL
- ⊗ 478.93 GROUNDWATER ELEVATION, APRIL 21, 2004
- ← GROUNDWATER FLOW DIRECTION



| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |
| MW-13 | 1,153,819.5 | 767,737.6 | 490.63 | 491.10 |
| MW-14 | 1,153,821.3 | 767,614.4 | 489.48 | 489.80 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL
ELEVATIONS RESURVEYED JUNE 4, 2004

# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
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# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

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NOTE:
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## APRIL 2004 WATER TABLE SURFACE AND GROUNDWATER FLOW MAP

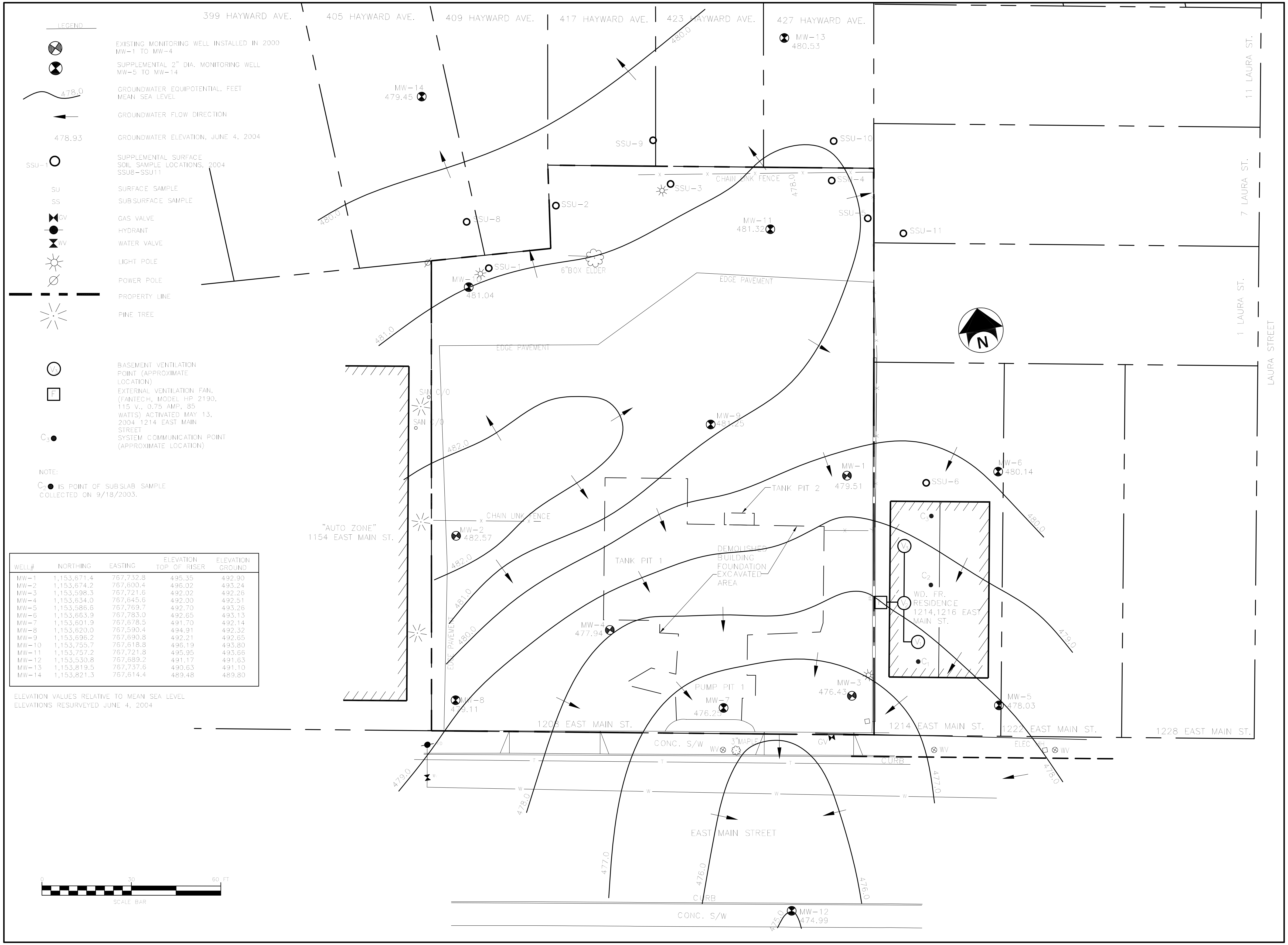
Project Manager:
GF
Designed by:
EJJ
Drawn by:
TSB
Checked by:
GF
Date Issued:
SEPTEMBER 30, 2005
Scale:
AS SHOWN

Date

Project Number:
4453.03
File Name:
I:\SUR\ENV\EMAIN\FIG\FIG16.DWG
Drawing Number:

FIG 16

of



| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |
| MW-13 | 1,153,819.5 | 767,737.6 | 490.63 | 491.10 |
| MW-14 | 1,153,821.3 | 767,614.4 | 489.48 | 489.80 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL
ELEVATIONS RESURVEYED JUNE 4, 2004

# CITY OF ROCHESTER

1200 EAST MAIN ST.
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## SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

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| NO. | DATE | DESCRIPTION | REV. | CK'D |
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NOTE:
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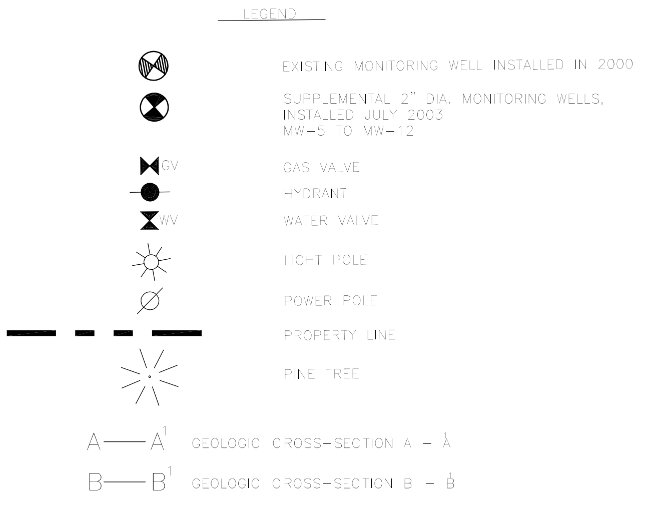
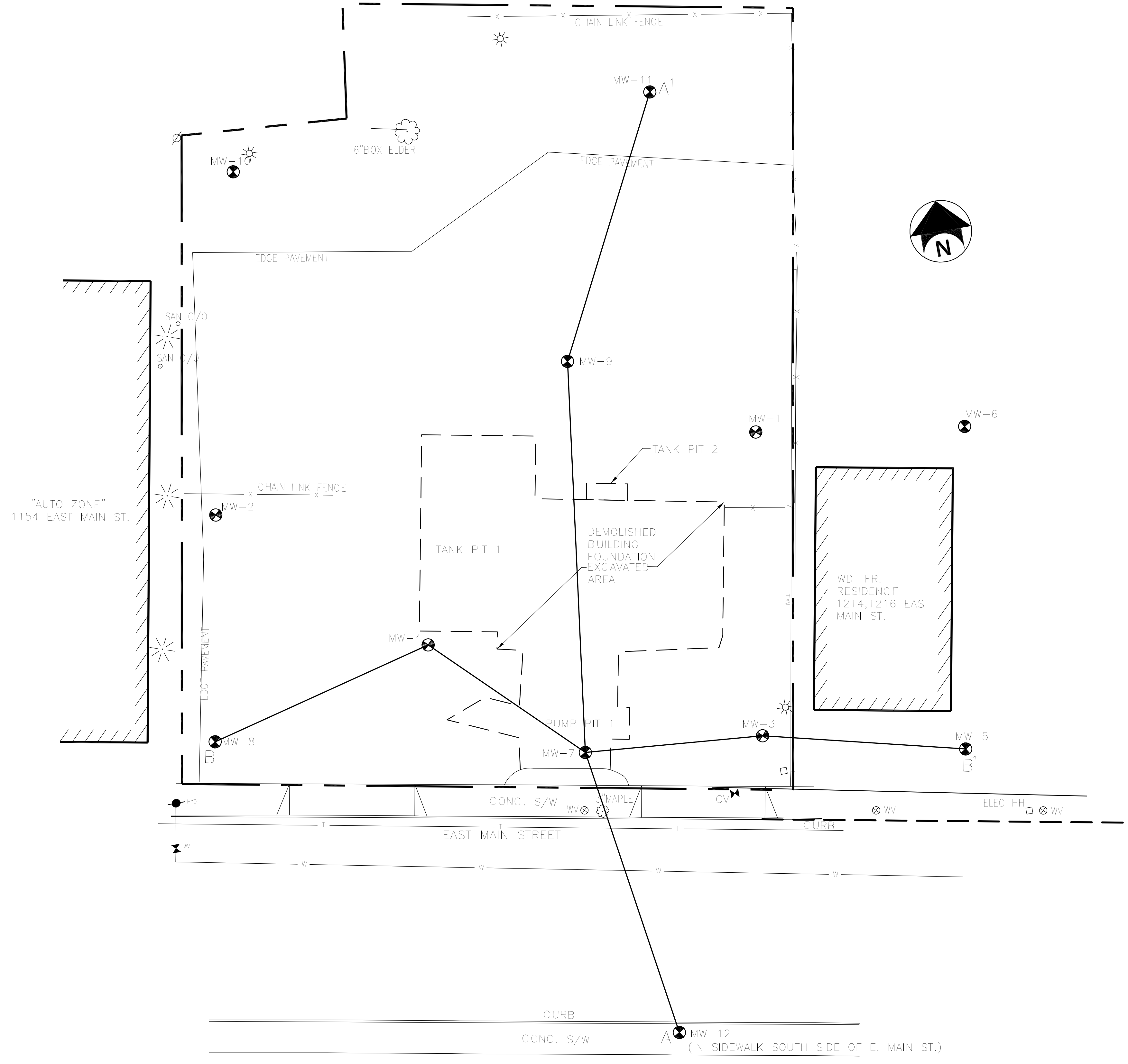
## JUNE 2004 WATER TABLE SURFACE AND GROUNDWATER FLOW MAP

Project Manager: GF
Designed by: EJJ
Drawn by: TSB
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG17.DWG
Drawing Number:

FIG 17

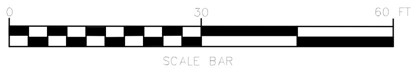
of





| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL



SCALE BAR

# CITY OF ROCHESTER

1200 EAST MAIN ST.
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# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

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REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
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NOTE:
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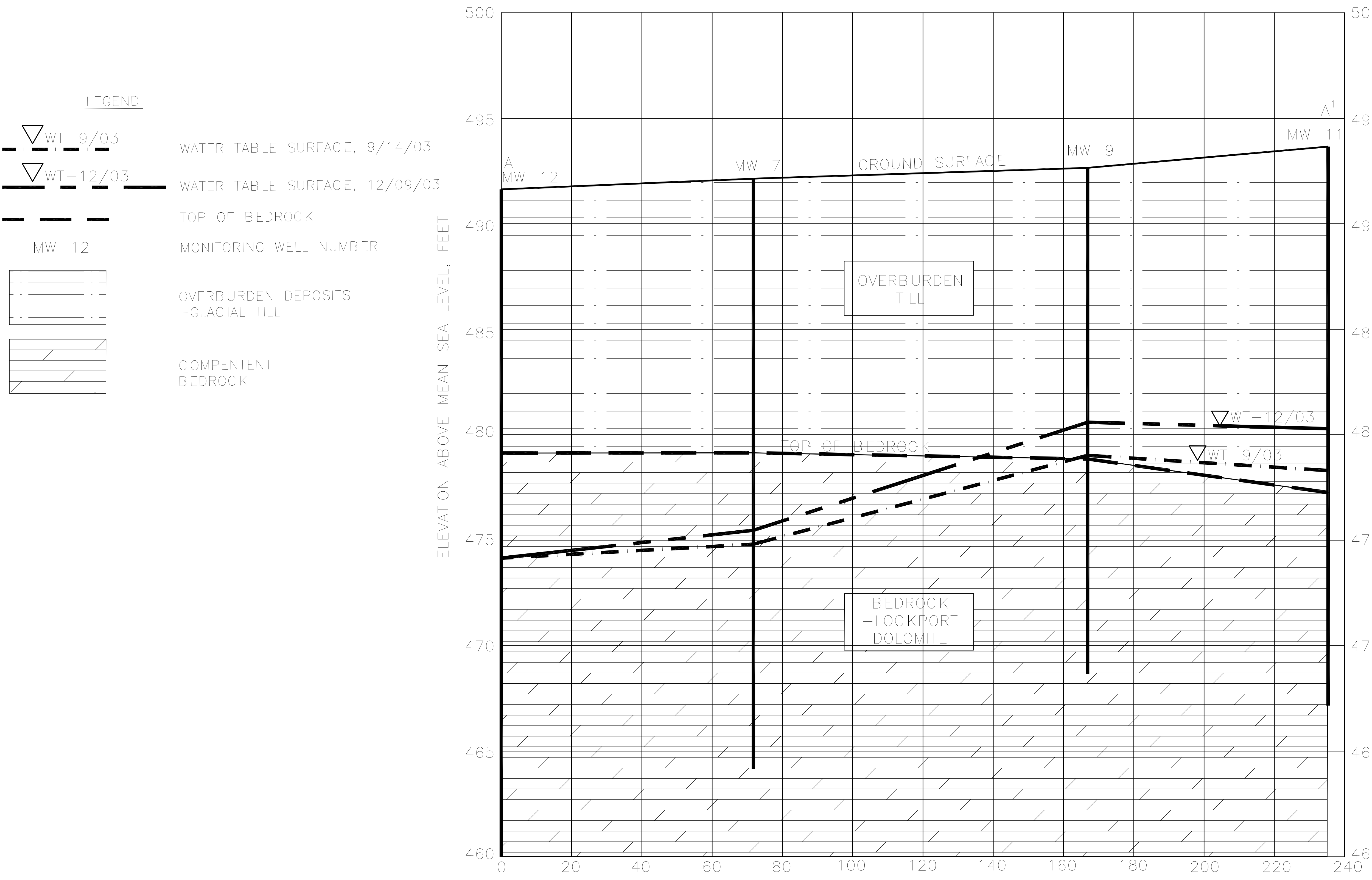
## GEOLOGIC CROSS-SECTIONS LOCATION MAP

Project Manager: GF
Designed by: EJJ
Drawn by: TSB
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG18.DWG
Drawing Number:

FIG 18

of



CROSS SECTION A – A$^1$

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

**CITY OF ROCHESTER**
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**SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT**

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REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

NOTE:
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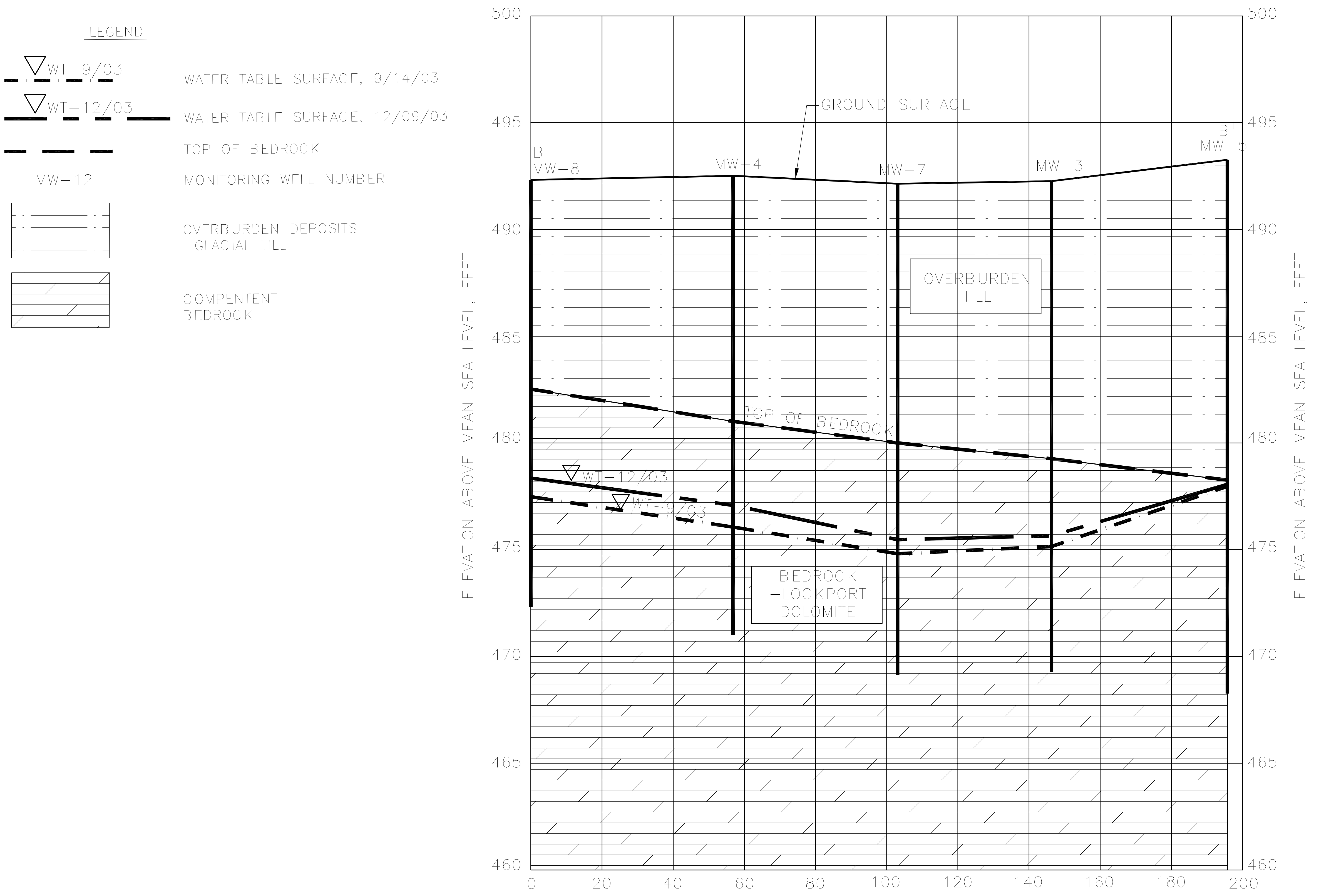
**GEOLOGIC CROSS-SECTION A - A$^1$**

Project Manager: GF
Designed by: EJJ
Drawn by: TSB
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG19.DWG
Drawing Number:

**FIG 19**

of



CROSS SECTION B - B$^1$

SCALE: 1" = 30' HORIZ.
1" = 5' VERT.

# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

## SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

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REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

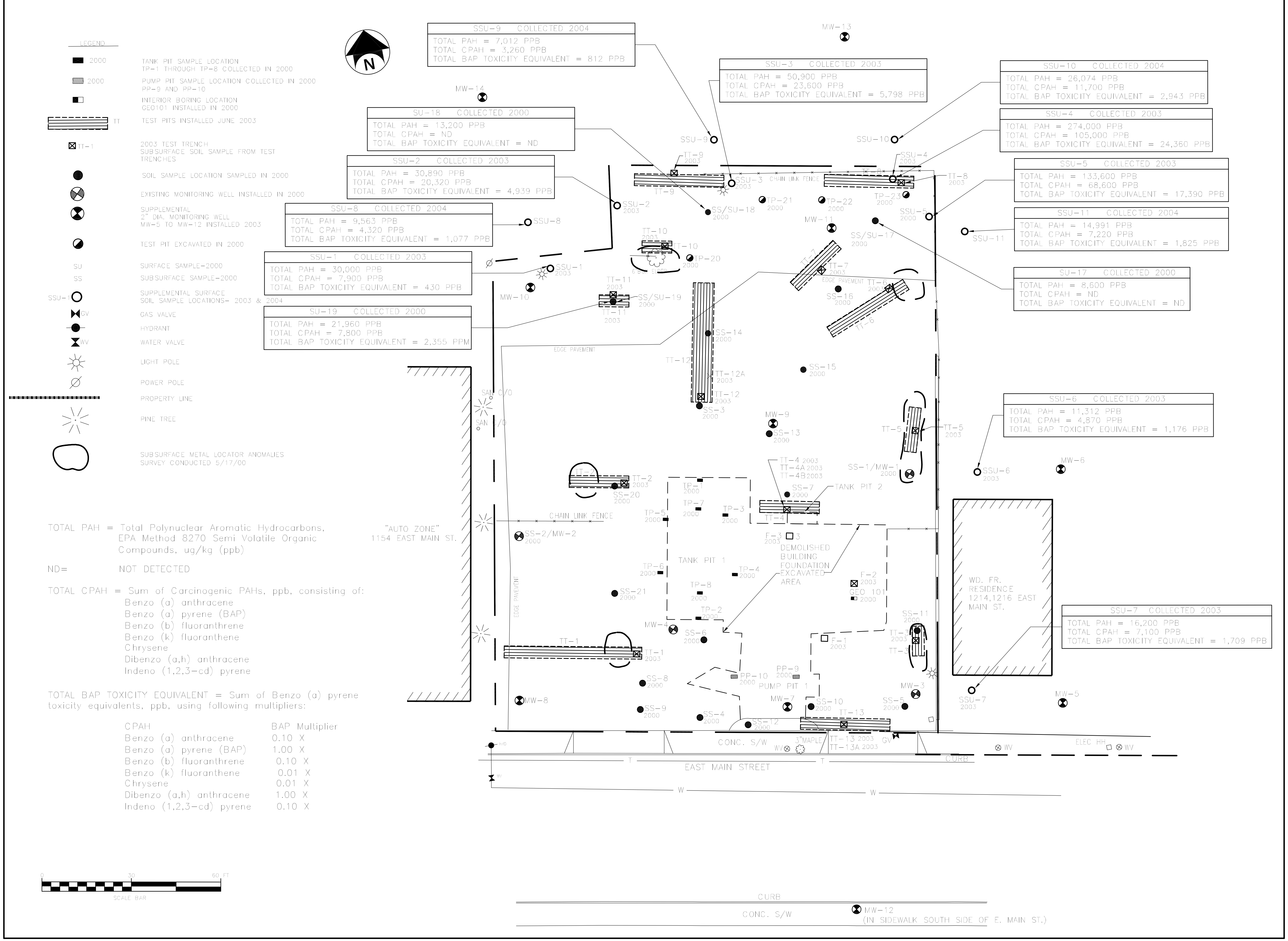
NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## GEOLOGIC CROSS-SECTION B - B$^1$

Project Manager: GF
Designed by: EJJ
Drawn by: TSB
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG20.DWG
Drawing Number:

**FIG 20**

of



LEGEND

| | |
|---|---|
| ▬ 2000 | TANK PIT SAMPLE LOCATION<br>TP-1 THROUGH TP-8 COLLECTED IN 2000 |
| ▨ 2000 | PUMP PIT SAMPLE LOCATION COLLECTED IN 2000<br>PP-9 AND PP-10 |
| ◧ | INTERIOR BORING LOCATION<br>GEO101 INSTALLED IN 2000 |
| TT | TEST PITS INSTALLED JUNE 2003 |
| ☒ TT-1 | 2003 TEST TRENCH<br>SUBSURFACE SOIL SAMPLE FROM TEST TRENCHES |
| ● | SOIL SAMPLE LOCATION SAMPLED IN 2000 |
| ⊗ | EXISTING MONITORING WELL INSTALLED IN 2000 |
| ⊗ | SUPPLEMENTAL<br>2" DIA. MONITORING WELL<br>MW-5 TO MW-12 INSTALLED 2003 |
| ◐ | TEST PIT EXCAVATED IN 2000 |
| SU | SURFACE SAMPLE-2000 |
| SS | SUBSURFACE SAMPLE-2000 |
| SSU-1 ○ | SUPPLEMENTAL SURFACE<br>SOIL SAMPLE LOCATIONS- 2003 & 2004 |
| ⋈ GV | GAS VALVE |
| ● | HYDRANT |
| ⧗ WV | WATER VALVE |
| ☼ | LIGHT POLE |
| ∅ | POWER POLE |
| ▪▪▪▪▪▪ | PROPERTY LINE |
| ✳ | PINE TREE |
| ○ | SUBSURFACE METAL LOCATOR ANOMALIES<br>SURVEY CONDUCTED 5/17/00 |

SSU-9 COLLECTED 2004
TOTAL PAH = 7,012 PPB
TOTAL CPAH = 3,260 PPB
TOTAL BAP TOXICITY EQUIVALENT = 812 PPB

SSU-3 COLLECTED 2003
TOTAL PAH = 50,900 PPB
TOTAL CPAH = 23,600 PPB
TOTAL BAP TOXICITY EQUIVALENT = 5,798 PPB

SSU-10 COLLECTED 2004
TOTAL PAH = 26,074 PPB
TOTAL CPAH = 11,700 PPB
TOTAL BAP TOXICITY EQUIVALENT = 2,943 PPB

SU-18 COLLECTED 2000
TOTAL PAH = 13,200 PPB
TOTAL CPAH = ND
TOTAL BAP TOXICITY EQUIVALENT = ND

SSU-4 COLLECTED 2003
TOTAL PAH = 274,000 PPB
TOTAL CPAH = 105,000 PPB
TOTAL BAP TOXICITY EQUIVALENT = 24,360 PPB

SSU-2 COLLECTED 2003
TOTAL PAH = 30,890 PPB
TOTAL CPAH = 20,320 PPB
TOTAL BAP TOXICITY EQUIVALENT = 4,939 PPB

SSU-5 COLLECTED 2003
TOTAL PAH = 133,600 PPB
TOTAL CPAH = 68,600 PPB
TOTAL BAP TOXICITY EQUIVALENT = 17,390 PPB

SSU-8 COLLECTED 2004
TOTAL PAH = 9,563 PPB
TOTAL CPAH = 4,320 PPB
TOTAL BAP TOXICITY EQUIVALENT = 1,077 PPB

SSU-11 COLLECTED 2004
TOTAL PAH = 14,991 PPB
TOTAL CPAH = 7,220 PPB
TOTAL BAP TOXICITY EQUIVALENT = 1,825 PPB

SSU-1 COLLECTED 2003
TOTAL PAH = 30,000 PPB
TOTAL CPAH = 7,900 PPB
TOTAL BAP TOXICITY EQUIVALENT = 430 PPB

SU-17 COLLECTED 2000
TOTAL PAH = 8,600 PPB
TOTAL CPAH = ND
TOTAL BAP TOXICITY EQUIVALENT = ND

SU-19 COLLECTED 2000
TOTAL PAH = 21,960 PPB
TOTAL CPAH = 7,800 PPB
TOTAL BAP TOXICITY EQUIVALENT = 2,355 PPM

SSU-6 COLLECTED 2003
TOTAL PAH = 11,312 PPB
TOTAL CPAH = 4,870 PPB
TOTAL BAP TOXICITY EQUIVALENT = 1,176 PPB

SSU-7 COLLECTED 2003
TOTAL PAH = 16,200 PPB
TOTAL CPAH = 7,100 PPB
TOTAL BAP TOXICITY EQUIVALENT = 1,709 PPB

TOTAL PAH = Total Polynuclear Aromatic Hydrocarbons, EPA Method 8270 Semi Volatile Organic Compounds, ug/kg (ppb)

ND= NOT DETECTED

TOTAL CPAH = Sum of Carcinogenic PAHs, ppb, consisting of:
Benzo (a) anthracene
Benzo (a) pyrene (BAP)
Benzo (b) fluoranthrene
Benzo (k) fluoranthene
Chrysene
Dibenzo (a,h) anthracene
Indeno (1,2,3-cd) pyrene

TOTAL BAP TOXICITY EQUIVALENT = Sum of Benzo (a) pyrene toxicity equivalents, ppb, using following multipliers:

| CPAH | BAP Multiplier |
|---|---|
| Benzo (a) anthracene | 0.10 X |
| Benzo (a) pyrene (BAP) | 1.00 X |
| Benzo (b) fluoranthrene | 0.10 X |
| Benzo (k) fluoranthene | 0.01 X |
| Chrysene | 0.01 X |
| Dibenzo (a,h) anthracene | 1.00 X |
| Indeno (1,2,3-cd) pyrene | 0.10 X |

# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

## SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

BERGMANN
associates
Engineers / Architects / Surveyors

REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## SURFACE SOIL SAMPLES PAH ANALYSIS SUMMARY POSTING MAP

Project Manager: GF
Designed by: EJJ
Drawn by: JJ
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG23.DWG
Drawing Number:

**FIG 23**

of

LEGEND

| | |
|---|---|
| ⊗ | EXISTING MONITORING WELL INSTALLED IN 2000 |
| ⊗ | SUPPLEMENTAL 2" DIA. MONITORING WELL MW-5 TO MW-14 |
| SSU-1 ○ | SUPPLEMENTAL SURFACE SOIL SAMPLE LOCATIONS, 2004 SSU8-SSU11 |
| SU | SURFACE SAMPLE |
| SS | SUBSURFACE SAMPLE |
| GV | GAS VALVE |
| ● | HYDRANT |
| WV | WATER VALVE |
| ☼ | LIGHT POLE |
| ∅ | POWER POLE |
| — — — | PROPERTY LINE |
| ✳ | PINE TREE |
| $V_3$ | BASEMENT VENTILATION POINT (APPROXIMATE LOCATION) |
| F | EXTERNAL VENTILATION FAN, (FANTECH, MODEL HP 2190, 115 V., 0.75 AMP, 85 WATTS) ACTIVATED MAY 13, 2004 1214 EAST MAIN STREET |
| $C_3$ ● | SYSTEM COMMUNICATION POINT (APPROXIMATE LOCATION) |

NOTE:

$C_2$ ● IS POINT OF SUBSLAB SAMPLE COLLECTED ON 9/18/2003.

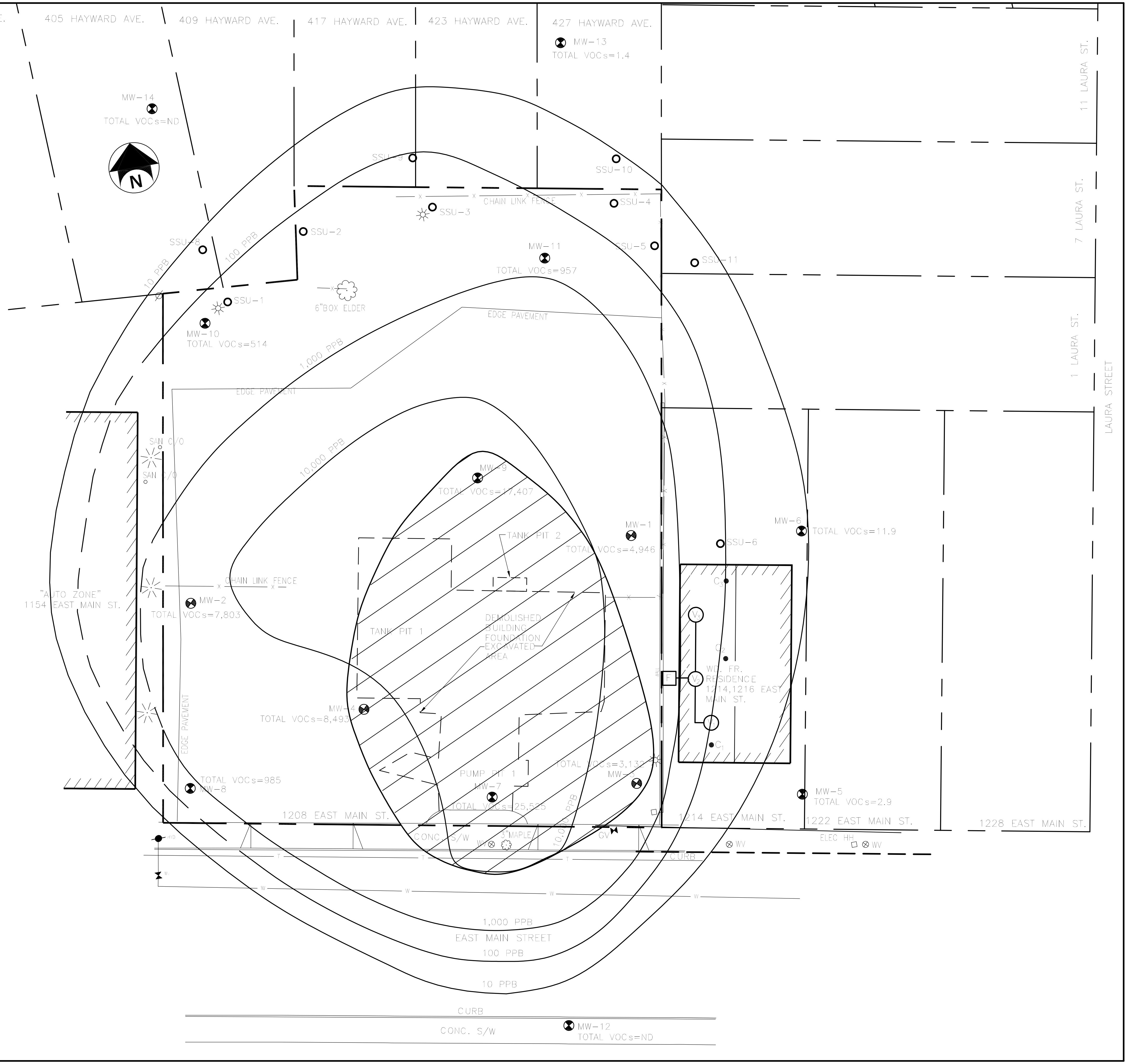
| | |
|---|---|
| 100 PPB | ISOPLETH OF TOTAL VOLATILE ORGANIC COMPOUNDS IN GROUND WATER, JUNE 2004 PARTS PER BILLION (PPB) DASHED WHERE INFERRED |
| ▨ | APPROXIMATE EXTENT OF LIGHT NON-AQUEOUS FREE PHASE PRODUCT (GASOLINE) |

| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |
| MW-13 | 1,153,819.5 | 767,737.6 | 490.63 | 491.10 |
| MW-14 | 1,153,821.3 | 767,614.4 | 489.48 | 489.80 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL

0 30 60 FT

SCALE BAR



# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

BERGMANN associates
Engineers / Architects / Surveyors

REVISIONS

| NO. | DATE | DESCRIPTION | REV. | CK'D |
|---|---|---|---|---|

NOTE:

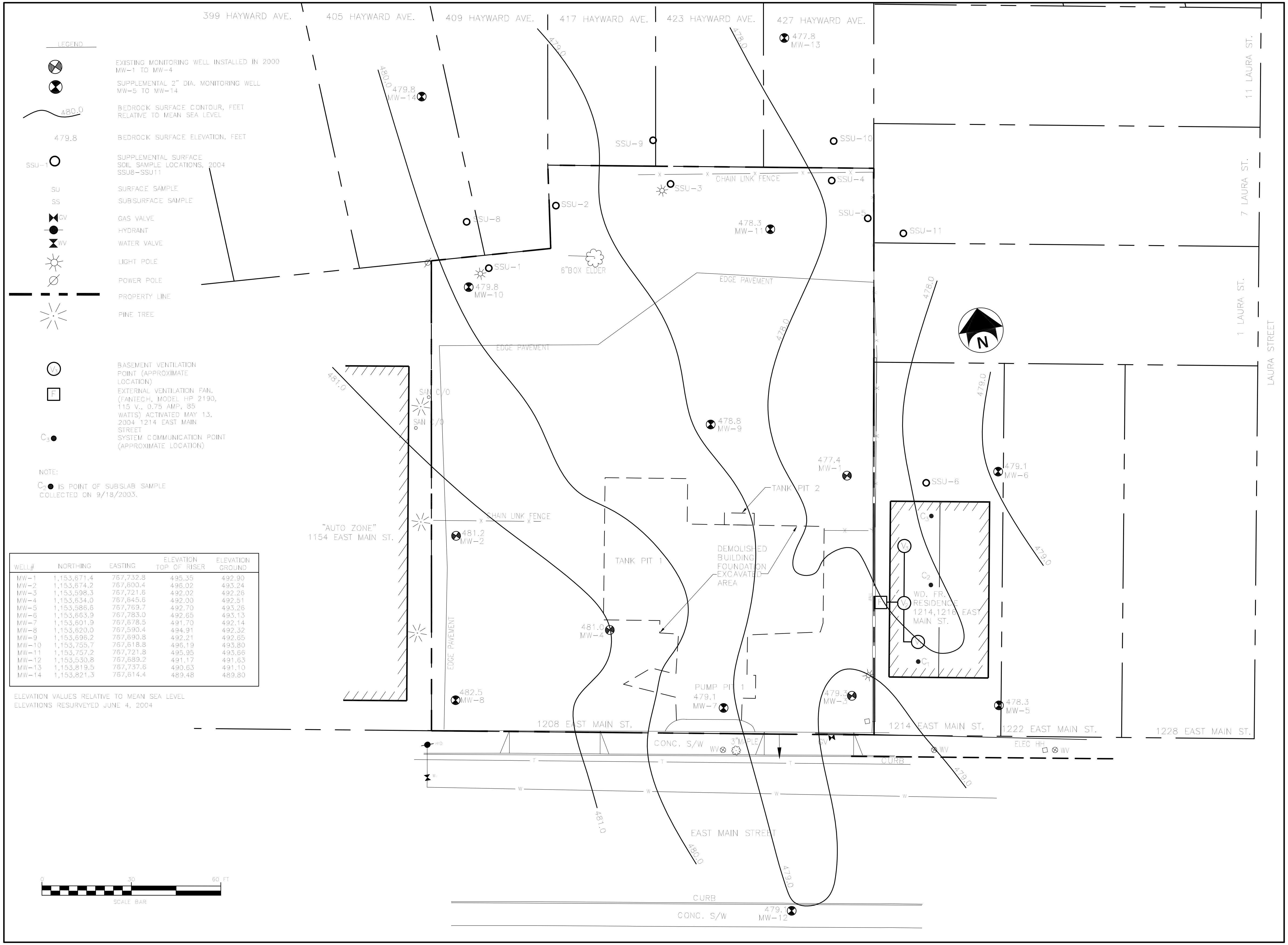
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## JUNE 2004 GROUND WATER PLUME MAP

Project Manager: GF
Designed by: EJJ
Drawn by: JJ
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG22.DWG
Drawing Number:

FIG 22

of



| WELL# | NORTHING | EASTING | ELEVATION TOP OF RISER | ELEVATION GROUND |
|---|---|---|---|---|
| MW-1 | 1,153,671.4 | 767,732.8 | 495.35 | 492.90 |
| MW-2 | 1,153,674.2 | 767,600.4 | 496.02 | 493.24 |
| MW-3 | 1,153,598.3 | 767,721.6 | 492.02 | 492.26 |
| MW-4 | 1,153,634.0 | 767,645.6 | 492.00 | 492.51 |
| MW-5 | 1,153,586.6 | 767,769.7 | 492.70 | 493.26 |
| MW-6 | 1,153,663.9 | 767,783.0 | 492.65 | 493.13 |
| MW-7 | 1,153,601.9 | 767,678.5 | 491.70 | 492.14 |
| MW-8 | 1,153,620.0 | 767,590.4 | 494.91 | 492.32 |
| MW-9 | 1,153,696.2 | 767,690.8 | 492.21 | 492.65 |
| MW-10 | 1,153,755.7 | 767,618.8 | 496.19 | 493.80 |
| MW-11 | 1,153,757.2 | 767,721.8 | 495.95 | 493.66 |
| MW-12 | 1,153,530.8 | 767,689.2 | 491.17 | 491.63 |
| MW-13 | 1,153,819.5 | 767,737.6 | 490.63 | 491.10 |
| MW-14 | 1,153,821.3 | 767,614.4 | 489.48 | 489.80 |

ELEVATION VALUES RELATIVE TO MEAN SEA LEVEL
ELEVATIONS RESURVEYED JUNE 4, 2004

# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

## SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

BERGMANN
associates
Engineers / Architects / Surveyors

| REVISIONS | | | | |
|---|---|---|---|---|
| NO. | DATE | DESCRIPTION | REV. | CK'D |

NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## BEDROCK SURFACE ELEVATION MAP

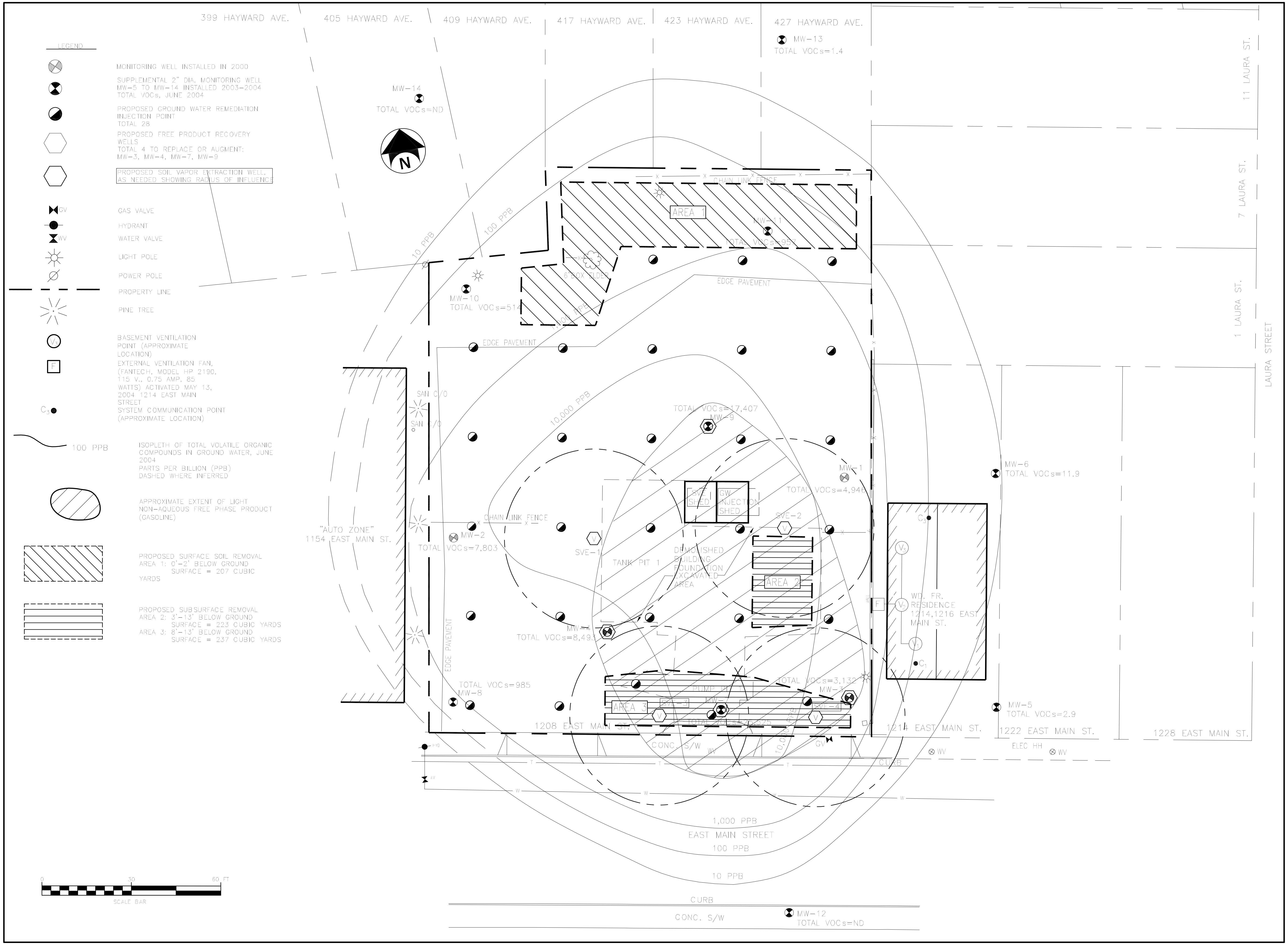
Project Manager:
GF
Designed by:
EJJ
Drawn by:
TSB
Checked by:
GF
Date Issued:
SEPTEMBER 30, 2005
Scale:
AS SHOWN

Date

Project Number:
4453.03
File Name:
I:\SUR\ENV\EMAIN\FIG\FIG21.DWG
Drawing Number:

FIG 21

of



# CITY OF ROCHESTER

1200 EAST MAIN ST.
ROCHESTER, NY
14614

# SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT

**BERGMANN**
associates
Engineers / Architects / Surveyors

| REVISIONS | | | | |
|---|---|---|---|---|
| NO. | DATE | DESCRIPTION | REV. | CK'D |

NOTE:
Unauthorized alteration or addition to this drawing is a violation of the New York State Education Law Article 145, Section 7209.

## PROPOSED REMEDIAL ACTION PLAN

Project Manager: GF
Designed by: EJJ
Drawn by: JJ
Checked by: GF
Date Issued: SEPTEMBER 30, 2005
Scale: AS SHOWN
Date
Project Number: 4453.03
File Name: I:\SUR\ENV\EMAIN\FIG\FIG24.DWG
Drawing Number:

**FIG 24**

of

# APPENDIX 1

## Disposal Records for Tank Contents, Tank Disposal and Soil Disposal, 2000 Tank Removal

## Disposal Records, 2003 Tank Disposal and 2004 Drum Disposal

# 2000 UST Removal Program
# Disposal of 700 Gallons of Tank Contents
# Industrial Oil Services, Oriskany, NY

# City of Rochester

Rochester, NY
All-America City
1998

FAX (716) 428-6010
TDD/Voice 232-3260

**Department of**
**Environmental Services**

Office of the Commissioner
Division of Environmental Quality
30 Church Street, Rm 300B
Rochester, New York 14614-1278
Tel#: (716) 428-6011

July 27, 2000

Ms. Carol Herington
New York State Department of Environmental Conservation
6274 East Avon-Lima Road
Avon, New York 14414

RECEIVED
AUG - 3 2000
SPILLS / BULK STORAGE
NYS DEC REGION 8

Re: UST Removal
PBS Facility 8-434175

Dear Ms. Herington:

As per your request, following is additional information regarding the removal of five (5) underground storage tanks from the above referenced facility.

1. Tank Removal Contractor:
MARCOR Remediation, Inc.
52 Marway Circle
Rochester, New York 14624
(716) 428-7474
Contact: Keith Hambley, Project Manager

2. Tank Waste Hauler: MARCOR Remediation

3. Date(s) of Removal: June 28 and June 29, 2000

Preliminary assessment at the time of removal indicated that contamination was present in each of the tank excavations. Approximately 200 tons of contaminated soil were excavated and are currently staged on site waiting final disposal. Approximately 700 gallons of product (gasoline) was pumped out of the tanks at the time of removal and was shipped to Industrial Oil Tank Services, Inc. on June 29, 2000. A copy of the shipping paper for the liquid is attached..

Upon completion, a copy of the final site investigation report will be forwarded to your attention for your files. We are anticipating that this report will be completed in September, 2000.

Thank you for your assistance with this project. Please feel free to contact me at 428-7474 or aspauldi@mcls.rochester.lib.ny.us should you have any questions or need further information.

Sincerely,

Anne E. Spaulding
Senior Environmental Specialist

Attachment

EEO Employer/Handicapped

**THIS MEMORANDUM** is an acknowledgement that a bill of lading has been issued and is not the Original Bill of Lading, not a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper's No. 001

(Carrier) Marcor SCAC. ____________ Carrier's No. MD-023

Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading:

at ____________, date 6/29/00 from ____________

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own road or its own water line, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and his assigns.

**TO:** (Mail or street address of consignee for purposes of notification only.)
Consignee Industrial Oil Services
Street 120 Dry Rd.
Destination Oriskany, N.Y Zip
Route:

**FROM:**
Shipper City Of Rochester
Street 1200 E. Main St.
Origin Rochester N.Y Zip

Delivering Carrier Marcor
Trailer Initial/Number 3430 AT N.Y.
U.S. DOT Hazmat Reg. Number

| No. of packages | HM | Description of articles, special marks, and exceptions | Hazard Class | I.D. Number | Packing Group | *Weight (subject to correction) | Class or rate | Labels required (or exemption) | Chec colum |
|---|---|---|---|---|---|---|---|---|---|
| 1 T.T. | | RQ, Waste Petroleum Products, ~~II~~ Flammable liquids, 3, PG III | 3 | UN1268 | III | 700 G | | Flammable Liquid | |

Remit C.O.D. to:
Address:
City: State: Zip:

**COD** AMT:
$

Charges Advanced
$

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

**C. O. D. FEE:**
Prepaid ☐
Collect ☐ $

**FREIGHT CHARGES**
☐ Prepaid ☐ Collect

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight".
Note. – where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding ____________ per ____________

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.
Per ____________

**PLACARDS REQUIRED** Flammable UN1268

**PLACARDS SUPPLIED** ☐ YES ☐ NO - FURNISHED BY CARRIER
DRIVER'S SIGNATURE:

SPECIAL INSTRUCTIONS:

SHIPPER: City Of Rochester
PER: ____________ DATE: 6/29/00

CARRIER: Marcor
PER: ____________ DATE: 6/29/00

Permanent post office address of shipper

EMERGENCY RESPONSE
TELEPHONE NUMBER: (800) 358-5923
Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (§172.604)

29-BLS-C4 (Rev. 6/95

# 2000 UST Removal Program
# Disposal of Fiberglass Reinforced Plastic Tanks
# High Acres Landfill, Perinton, NY
# NYSDEC Permit 8264400048000210

51-2890-003

High Acres Landfill and Recycling Center
ALL LOADS MUST BE TARPED OR TIED DOWN
NO EXCEPTIONS TO THE RULE!!!!!!!!!!!!!!!
HARD HATS REQUIRED ON WORKING FACE
Manifest: Advf:
Origin: Monroe County
Generator#: CUSTOMER Customer
Transporter: CUSTOMER Customer
Bill to: 5812 MARCOR-REGULAR ACCT
, NY

Date: 06/29/2000 Ticket: 84102
Time In: 10:57 Time Out: 11:03
Grid: Cell 5 Western Expansion
Profile#: NA Not A Profiled Waste
Charge#:

Truck: M53 Trailer:

FRP TANKS

Gross: 18120 PB Lbs
Tare: 15380 PB Lbs
Net: 2740

Tons: 1.37
Quantity: 0.00
Mixed %: 100.00

| Code | Description | Quantity | Type | Rate | Amount |
|---|---|---|---|---|---|
| 34 | Demolition - Cover | 1.37 | T | | |
| FUELSUR | Fuel Surcharge | | T | | |

PO:

Ticket Clerk ____ JAB Driver ________

---

51-2890-003

High Acres Landfill and Recycling Center
ALL LOADS MUST BE TARPED OR TIED DOWN
NO EXCEPTIONS TO THE RULE!!!!!!!!!!!!!!!
HARD HATS REQUIRED ON WORKING FACE
Manifest: Advf:
Origin: Monroe County
Generator#: CUSTOMER Customer
Transporter: CUSTOMER Customer
Bill to: 5812 MARCOR-REGULAR ACCT
, NY

Date: 06/29/2000 Ticket: 84140
Time In: 12:55 Time Out: 12:55
Grid: Cell 5 Western Expansion
Profile#: NA Not A Profiled Waste
Charge#:

Truck: M53 Trailer:

Gross: 20040 PB Lbs
Tare: 15380 PB Lbs
Net: 4660

Tons: 2.33
Quantity: 0.00
Mixed %: 100.00

| Code | Description | Quantity | Type | Rate | Amount |
|---|---|---|---|---|---|
| 34 | Demolition - Cover | 2.33 | T | | |
| FUELSUR | Fuel Surcharge | | T | | |

PO:

Ticket Clerk ____ JAB Dr

# 2000 UST Removal Program
Disposal of Excavated Soil
12 Separate Truckloads
412.50 Tons
Mill Seat Landfill, Riga, NY
NYSDEC Permit 826480001400010

MONROE COUNTY

County of Monroe
Dept of Enviromental Services
50 West Main Street
Rochester, NY 14614

Ticket No : 80486
Date : 8/10/00

---

Customer: M0213
Marcor Remediation Inc.

52 Marway Circle
Rochester, NY 14624

Order No :08030001
CONTAMINATED SOIL-PETROLEUM
Loads : 1
Miles : 0
Tons : 0.00

---

532 PZ7003 SILVAROLE TRACTOR
132 ADC-PETROL CONT SOIL
Q1752 6/18 700 STGII 8/10/00
Price/tn $ 16.0000

Gross : 107260 MAN WT In 8:03:49AM
Tare : 36760 Scale 2 In 8:19:08AM

Net : 70500 lb
35.250 tn

---

Weigh Master: SAS

Driver:

Remarks:

| | |
|---|---|
| Material $ | 564.00 |
| Delvry $ | 0.00 |
| Misc $ | 0.00 |
| Tax $ | 0.00 |
| Total $ | 564.00 |

Soil

MONROE COUNTY

County of Monroe
Dept of Enviromental Services
50 West Main Street
Rochester, NY 14614

Ticket No : 80489
Date : 8/10/00

Customer: M0213
Marcor Remediation Inc.

52 Marway Circle
Rochester, NY 14624

Order No :08030001
CONTAMINATED SOIL-PETROLEUM
Loads : 2
Miles : 0
Tons : 0.00

513 PD6653 SILVAROLE
132 ADC-PETROL CONT SOIL
01752 G/18 700 STGII 8/10/00
Price/tn $ 16.0000

Gross : 109420 Scale 1 In 8:05:22AM
Tare : 38800 Scale 2 In 8:27:23AM

Net : 70620 lb
35.310 tn

Weigh Master: SAS

Driver:

Remarks:

| | |
|---|---|
| Material $ | 564.96 |
| Delvry $ | 0.00 |
| Misc $ | 0.00 |
| Tax $ | 0.00 |
| Total $ | 564.96 |

Soil

MONROE COUNTY

County of Monroe
Dept of Enviromental Services
50 West Main Street
Rochester,NY 14614

Ticket No : 80502
Date : 8/10/00

Customer: M0213
Marcor Remediation Inc.

52 Marway Circle
Rochester,NY 14624

Order No :08030001
CONTAMINATED SOIL-PETROLEUM
Loads : 3
Miles : 0
Tons : 0.00

S22 PD6658 TRACTOR
132 ADC-PETROL CONT SOIL
Q1752 6/18 700 STGII 8/10/00
Price/tn $ 16.0000

Gross : 110900 MAN WT In 8:39:07AM
Tare : 36800 Scale 2 In 8:39:20AM

Net : 74100 lb
37.050 tn

Weigh Master: SAS

Driver:

Remarks: REPLACES 80493

| | | |
|---|---|---|
| Material | $ | 592.80 |
| Delvry | $ | 0.00 |
| Misc | $ | 0.00 |
| Tax | $ | 0.00 |
| Total | $ | 592.80 |

Soil

MONROE
COUNTY

County of Monroe
Dept of Enviromental Services
50 West Main Street
Rochester, NY 14614

Ticket No : 80531
Date : 8/10/00

Customer: M0213
Marcor Remediation Inc.

52 Marway Circle
Rochester, NY 14624

Order No :08030001
CONTAMINATED SOIL-PETROLEUM
Loads : 4
Miles : 0
Tons : 0.00

532 PZ7003 SILVAROLE TRACTOR
132 ADC-PETROL CONT SOIL
Q1782 6/18 700 STGII 8/10/00
Price/tn $ 16.0000

Gross : 110040 Scale 1 In 9:30:47AM
Tare : 36720 Scale 2 In 9:47:54AM

Net : 73320 lb
36.660 tn

Weigh Master: SAS

Driver:

Remarks:

Material $ 586.56
Delvry $ 0.00
Misc $ 0.00
Tax $ 0.00

Total $ 586.56

Soil

MONROE COUNTY

County of Monroe
Dept of Enviromental Services
50 West Main Street
Rochester, NY 14614

Ticket No : 80532
Date : 8/10/00

---

Customer: M0213
Marcor Remediation Inc.

52 Marway Circle
Rochester, NY 14624

Order No :08030001
CONTAMINATED SOIL-PETROLEUM
Loads : 5
Miles : 0
Tons : 0.00

---

```
S13      PD6653      SILVAROLE        Gross : 119540 Scale 1 In  9:38:20AM
132      ADC-PETROL  CONT SOIL         Tare :  38720 Scale 2 In  9:59:43AM
01852                                         ----------
Price/tn $ 16.0000                      Net :  80820  lb
                                                40.410  tn
```

---

Weigh Master: SAS

Driver:

Remarks:

| | |
|---|---|
| Material $ | 646.56 |
| Delvry $ | 0.00 |
| Misc $ | 0.00 |
| Tax $ | 0.00 |
| Total $ | 646.56 |

soil

MONROE COUNTY

County of Monroe
Dept of Enviromental Services
50 West Main Street
Rochester, NY 14614

Ticket No : 80535
Date : 8/10/00

Customer: M0213
Marcor Remediation Inc.

52 Marway Circle
Rochester, NY 14624

Order No :08030001
CONTAMINATED SOIL-PETROLEUM
Loads : 6
Miles : 0
Tons : 0.00

S22 PD6658 TRACTOR
132 ADC-PETROL CONT SOIL
01752 6/16 700 STGII 8/10/00
Price/tn $ 16.0000

Gross : 119180 Scale 1 In 9:53:15AM
Tare : 36780 Scale 2 In 10:07:57AM

Net : 82400 lb
41.200 tn

Weigh Master: SAS

Driver:

Remarks:

| | |
|---|---|
| Material $ | 659.20 |
| Delvry $ | 0.00 |
| Misc $ | 0.00 |
| Tax $ | 0.00 |
| Total $ | 659.20 |

Soil

MONROE
COUNTY

County of Monroe
Dept of Enviromental Services
50 West Main Street
Rochester, NY 14614

Ticket No : 80589
Date : 8/10/00

---

Customer: M0213
Marcor Remediation Inc.

52 Marway Circle
Rochester, NY 14624

Order No :08030001
CONTAMINATED SOIL-PETROLEUM
Loads : 7
Miles : 0
Tons : 0.00

---

513 PD6653 SILVAROLE
132 ADC-PETROL CONT SOIL
Q1752 6/18 700 STGII 8/10/00
Price/tn $ 16.0000

Gross : 111680 Scale 1 In 11:10:29AM
Tare : 38660 Scale 2 In 11:21:33AM

Net : 73020 lb
36.510 tn

---

Weigh Master: SAS

Driver:

Remarks:

| | |
|---|---|
| Material $ | 584.16 |
| Delvry $ | 0.00 |
| Misc $ | 0.00 |
| Tax $ | 0.00 |
| Total $ | 584.16 |

Soil

MONROE COUNTY

Ck 2

County of Monroe
Dept of Enviromental Services
50 West Main Street
Rochester, NY 14614

Ticket No : 80596
Date : 8/10/00

Customer: M0213
Marcor Remediation Inc.

52 Marway Circle
Rochester, NY 14624

Order No :08030001
CONTAMINATED SOIL--PETROLEUM
Loads : 8
Miles : 0
Tons : 0.00

S22 PD6658 TRACTOR
132 ADC-PETROL CONT SOIL
Q1752 G/18 700 STGII 8/10/00
Price/tn $ 16.0000

Gross : 111880 Scale 1 In 11:23:26AM
Tare : 36660 Scale 2 In 11:38:08AM

Net : 75220 lb
37.610 tn

Weigh Master: SAS

Driver:

Remarks: DELINQUENT/REFERRED TO LEGAL

|  |  |
|---|---|
| Material $ | 601.76 |
| Delvry $ | 0.00 |
| Misc $ | 0.00 |
| Tax $ | 0.00 |
| Total $ | 601.76 |

50.1

MONROE COUNTY

County of Monroe
Dept of Enviromental Services
50 West Main Street
Rochester,NY 14614

Ticket No : 80637
Date : 8/10/00

Customer: M0213
Marcor Remediation Inc.

52 Marway Circle
Rochester,NY 14624

Order No :08030001
CONTAMINATED SOIL-PETROLEUM
Loads : 9
Miles : 0
Tons : 0.00

S13 PD6653 SILVAROLE
132 ADC-PETROL CONT SOIL
Q1752 6/18 700 STGII 8/10/00
Price/tn $ 16.0000

Gross : 100700 Scale 1 In 12:26:38PM
Tare : 38580 Scale 2 In 12:37:34PM

Net : 62120 lb
31.060 tn

Weigh Master: SAS

Driver:

Remarks:

| | |
|---|---|
| Material $ | 496.96 |
| Delvry $ | 0.00 |
| Misc $ | 0.00 |
| Tax $ | 0.00 |
| Total $ | 496.96 |

Soil

MONROE
COUNTY

County of Monroe
Dept of Enviromental Services
50 West Main Street
Rochester, NY 14614

Ticket No : 80654
Date : 8/10/00

---

Customer: M0213
Marcor Remediation Inc.

52 Marway Circle
Rochester, NY 14624

Order No : 08030001
CONTAMINATED SOIL-PETROLEUM
Loads : 10
Miles : 0
Tons : 0.00

---

832 PZ7003 SILVAROLE TRACTOR
132 ADC-PETROL CONT SOIL
Q1752 G/18 700 STGII 8/10/00
Price/tn $ 16.0000

Gross : 96260 Scale 1 In 1:05:56PM
Tare : 36580 Scale 2 In 1:09:55PM

Net : 59680 lb
29.840 tn

---

Weigh Master: SAS

Driver:

Remarks:

| | |
|---|---|
| Material $ | 477.44 |
| Delvry $ | 0.00 |
| Misc $ | 0.00 |
| Tax $ | 0.00 |
| Total $ | 477.44 |

Soil

```
County of Monroe                                   MONROE
Dept of Enviromental Services
50 West Main Street                                                  Ticket No :     80648
Rochester,NY    14614                                                     Date :   8/10/00
                                                   COUNTY
---------------------------------------------------------------------------------------------
Customer:  M0213                                                Order No :080300001
Marcor Remediation Inc.                                      CONTAMINATED SOIL-PETROLEUM
                                                                     Loads :        11
52 Marway Circle                                                     Miles :         0
Rochester,NY    14624                                                 Tons :      0.00
---------------------------------------------------------------------------------------------
522      PD6658        TRACTOR           Gross : 104260 Scale 1 In 12:52:54PM
132      ADC-PETROL CONT SOIL             Tare :  36560 Scale 2 In  1:11:59PM
Q1752    G/16 700 STGII 8/10/00                  -----------
Price/tn $ 16.0000                         Net :  67700  lb
                                                  33.850  tn

---------------------------------------------------------------------------------------------
Weigh Master: SAS                                          |  Material $    541.60
-----------------------------------------------------------|    Delvry $      0.00
 Driver:                                                   |      Misc $      0.00
                                                           |       Tax $      0.00
-----------------------------------------------------------|       -----------------
 Remarks:                                                  |     Total $    541.60
                                                           |
                                                           |
                                                           |
---------------------------------------------------------------------------------------------
```

Soil

MONROE COUNTY

County of Monroe
Dept of Enviromental Services
50 West Main Street
Rochester, NY 14614

Ticket No : 80675
Date : 8/10/00

---

Customer: M0213
Marcor Remediation Inc.

52 Marway Circle
Rochester, NY 14624

Order No :08030001
CONTAMINATED SOIL-PETROLEUM
Loads : 12
Miles : 0
Tons : 0.00

6 10

---

S13 PD6653 SILVAROLE
132 ADC-PETROL CONT SOIL
01752 6/18 700 STGII 8/10/00
Price/tn $ 16.0000

Gross : 74020 Scale 1 In 1:52:11PM
Tare : 38520 Scale 2 In 2:04:59PM

Net : 35500 lb
17.750 tn

---

Weigh Master: SAS

Driver:

Remarks:

| | |
|---|---|
| Material $ | 284.00 |
| Delvry $ | 0.00 |
| Misc $ | 0.00 |
| Tax $ | 0.00 |
| Total $ | 284.00 |

Soil

# 2003 UST Removal Program
# Disposal of Tank Contents and Drums of Soil Cuttings and Rinse/Purge Water
# PennOhio
# Ashtabula, Ohio
# EPA ID # OHR000028837

**PennOhio**
**The PennOhio Corp.**

Phone: (440) 992-7906
Fax: (440) 992-9462
4813 Woodman Avenue, Ashtabula, Ohio 44004

**Profile #**__________
(completed by PennOhio)

# NON HAZARDOUS WASTE PROFILE SHEET

**Generator Information**

Company Name City of Rochester
Site Address 1200 E. Main Street City Rochester State NY Zip
Mailing Address 30 Church Street City Rochester State NY Zip 14614
Contact Anne Spaulding Title Sr. Env. Specialist Phone 585-428-7424 Fax 428-6010

**Customer Information** (If different from above)

Customer Name Capitol Environmental
Customer Address City Vienna State VA Zip 22182
Contact Leo Hicks Title Business Mgr Phone 330-427-6787 Fax -6791

**Waste Description**

Common Name of Waste Material RCRA exempt gasoline & water
Description of Waste Generating Process fuel tank removal. Material must ship on a Hazardous Materials Bill-of-Lading (DOT regulated)

**Waste Characteristics** pH 5-9

Odor (circle) none [✓ mild] strong
Describe gasoline
Number of Phases 2 Color brown
Physical state (circle) [✓ liquid] sludge solid monolith
Specific gravity 0.9-1.0 % water 50-95%
Waste quantity 1-5 drums / gallons / tons / yards per year

| Chemical Composition | % |
|---|---|
| water | 50-95% |
| gasoline | 5-50% |
| | |
| | |
| | |

**Generator Certification** circle

Is this waste hazardous as defined in 40 CFR Part 261? Yes [✓ No]
Does this waste contain PCB's or other TSCA regulated substances? Yes [✓ No]
If this waste is a used oil, have any substances been added to the used oil? Yes No
If so, what substances?
Is a detailed chemical analysis attached to this characterization form? Yes No
If not, you must attach either a statement of generator knowledge explaining the waste characteristics or include MSDS's where applicable

I certify that the above information is true and accurate and that no deliberate or willful omissions of properties exist and that all known hazards have been disclosed

Name (print) Anne E. Spaulding * Signature Anne Spaulding
Company City of Rochester Date 4/15/04

# Fax Cover Sheet

**Name:** Keith Hambley
**Organization:** SLC Environmental
**Fax:** 865-5095
**From:** Anne E. Spaulding
**Date:** March 18, 2004
**Subject:** Waste Profile Sheet-1200 East Main Street
**Pages:** 3

☐ Urgent ☐ Reply ASAP ☐ Please Comment ☑ For Your Records

Comments:

Keith,

Following please find the signed waste profile for the tank sludge located at 1200 East Main St. Please send me info. (permit, etc.) on the disposal facility. When you're ready to pick up the drums, let me know and I'll arrange to sign the manifest.

Thanks,

From the desk of...
Anne E. Spaulding
City of Rochester
Rochester,

GEM Continually Providing Better Solutions...

2665 Transport Rd.
Cleveland, OH 44115
www.gemenv.co

216-621-3694 Phone
216-902-3351 Fax
EPA I.D. #OHD004178612

Y N Submitted to NEORSD
Y N Approved by NEORSD
Y N Product For Reuse

PROFILE #

## PRICING (GEM USE ONLY)

BASE PRICE:
MAX PRICE:
SOLIDS:
OTHER:
MINIMUM DISPOSAL:
TRANSPORTATION:
DEMURRAGE:
WASHOUT:
FUEL SURCHARGE:

## GENERATOR & BILLING INFORMATION

GENERATOR: City of Rochester
USEPA I.D. #: NYR 000 121 640
ADDRESS: 1200 East Main St.
CITY: Rochester
STATE: NY ZIP: 14609
PHONE: 585-428-7474 FAX:
CONTACT NAME: Anne Spaulding
CODE #: (GEM USE ONLY)

BILL TO: Capitol Environmental
ADDRESS: 8229 Boone Blvd, Suite 310
CITY: Vienna
STATE: Va ZIP: 22182
PHONE: 703-356-3135 FAX: 703-356-4198
CONTACT NAME: Leo Hicks
E-MAIL ADDRESS: Leo.hicks@Capitol-environmental
CUSTOMER #: (GEM USE ONLY)

## MATERIAL DESCRIPTION

COMMON NAME: TANK Bottoms - Waste oil Sludge
SPECIFIC PROCESS GENERATING MATERIAL: Waste oil Tank Removal & cleaning

ANTICIPATED VOLUME: 2 ☐ GAL ☒ DRUMS ☐ LBS. ☐ OTHER PER: ☐ DAY ☐ WEEK ☐ MONTH ☐ QTR. ☐ YEAR ☒ ONE TIME

## GENERAL PROPERTIES

PHYSICAL STATE: ☐ LIQUID ___ % ☒ SOLID 50 % ☐ SLUDGE ___ %
ODOR: Mild
COLOR: Brown / Black
PUMPABLE? ☐ YES ☒ NO

## PHYSICAL PROPERTIES

| SPECIFIC GRAVITY | FLASH POINT | pH | BTU's | CHLORINE |
|---|---|---|---|---|
| ☐ <0.8 (GASOLINE) | ☐ < 100° F | ☐ ≤ 2.0 | ☐ < 5000 | ☐ < 1000 ppm |
| ☐ 0.8 - 1.0 (SOLVENTS & ALCOHOLS) | ☐ 101° F - 140° F | ☐ 2.1 - 7.0 | ☐ 5000 - 10000 | ☐ 1000 - 4000 ppm |
| ☐ 1.0 - 1.2 (WATER & GLYCOLS) | ☐ 141° F - 200° F | ☒ 7.1 - 12.4 | ☐ > 10000 | ☐ > 4000 ppm |
| ☐ >1.2 (ACIDS & CHLORINATED SOLVENTS) | ☒ > 200° F | ☐ ≥ 12.5 | | ___ % TOTAL |

## CHEMICAL COMPOSITION

| COMPONENTS | RANGE | | % | ppm | COMPONENTS | RANGE | | % | ppm |
|---|---|---|---|---|---|---|---|---|---|
| See attached | MIN | MAX | ☐ | ☐ | | MIN | MAX | ☐ | ☐ |
| | MIN | MAX | ☐ | ☐ | | MIN | MAX | ☐ | ☐ |
| | MIN | MAX | ☐ | ☐ | | MIN | MAX | ☐ | ☐ |
| | MIN | MAX | ☐ | ☐ | | MIN | MAX | ☐ | ☐ |
| | MIN | MAX | ☐ | ☐ | | MIN | MAX | ☐ | ☐ |

## REGULATORY INFORMATION

RCRA CODES
D008

D.O.T. INFORMATION
PROPER SHIPPING NAME: RQ, Hazardous Waste, Solid, NOS (D008)
HAZARD CLASS: 9 I.D.#: NA3077 P/G: III

IS THIS A PCB WASTE REGULATED BY TSCA? (RCd >50 ppm OR DERIVED FROM A >50 ppm SOURCE) ☐ Y ☒ N
IS THIS A BENZENE WASTE REGULATED BY NESHAP? ☐ Y ☒ N
DOES THIS WASTE STREAM CONTAIN USED OIL? ☒ Y ☐ N
DOES THIS USED OIL STREAM CONTAIN >1000ppm OF CHLORINE? ☐ N/A ☐ Y ☒ N IF YES, READ STATEMENT BELOW AND INITIAL IF APPLICABLE

I hereby certify and rebut the presumption that this used oil stream has been mixed with a halogenated hazardous waste listed in 40 CFR Part 281 Subpart D. I understand and acknowledge that this used oil waste stream does contain greater than 1,000 ppm of total halogens, but the halogen content is not due to mixing the used oil with spent chlorinated solvents or other hazardous halogenated wastes. Any halogenated constituent present in this used oil waste stream results from and is incident to normal use of an oil product, such as chlorinated additives which are part of the makeup of the oil product or halogenated raw ingredients used in a manufacturing process.

GENERATOR's or BROKER's INITIALS ______

## METALS

☒ LABORATORY ANALYSIS ☒ GENERATOR'S KNOWLEDGE

| RCRA CODE | TCLP LIMIT | REGULATED METAL | TCLP ppm | TOTAL ppm | OTHER | TOTAL ppm |
|---|---|---|---|---|---|---|
| D004 | 5.0 PPM | ARSENIC | | 1.59 | ANTIMONY | |
| D005 | 100.0 PPM | BARIUM | | 171 | COBALT | |
| D006 | 1.0 PPM | CADMIUM | | 1.23 | COPPER | |
| D007 | 5.0 PPM | CHROMIUM | | 9.01 | IRON | |
| [✓ D008] | 5.0 PPM | LEAD | | 5570 | NICKEL | |
| D009 | 0.2 PPM | MERCURY | | .0796 | TIN | |
| D010 | 1.0 PPM | SELENIUM | | .196 | TITANIUM | |
| D011 | 5.0 PPM | SILVER | | 1.59 | VANADIUM | |
| | | | | | ZINC | |

## ORGANICS / INORGANICS

☐ LABORATORY ANALYSIS ☐ GENERATOR'S KNOWLEDGE * Denotes Restricted Acceptance

| RCRA CODE | TCLP LIMITS | ORGANIC COMPOUNDS | TCLP ppm | TOTAL ppm |
|---|---|---|---|---|
| * D012 | 0.02 PPM | ENDRIN | | |
| * D013 | 0.4 PPM | LINDANE | | |
| * D014 | 10.0 PPM | METHOXYCHLOR | | |
| * D015 | 0.5 PPM | TOXAPHENE | | |
| * D016 | 10.0 PPM | 2,4-DICHLOROPHENOXYACETIC ACID | | |
| * D017 | 1.0 PPM | 2,4,5-TP (SILVEX) | | |
| D018 | 0.5 PPM | BENZENE | | |
| D019 | 0.5 PPM | CARBON TETRACHLORIDE | | |
| * D020 | 0.03 PPM | CHLORDANE | | |
| D021 | 100.0 PPM | CHLOROBENZENE | | |
| D022 | 6.0 PPM | CHLOROFORM | | |
| D023 | 200.0 PPM | O-CRESOL | | |
| D024 | 200.0 PPM | M-CRESOL | | |
| D025 | 200.0 PPM | P-CRESOL | | |
| D026 | 200.0 PPM | CRESOL | | |
| D027 | 7.5 PPM | 1,4-DICHLOROBENZENE | | |
| D028 | 0.5 PPM | 1,2-DICHLOROETHANE | | |
| D029 | 0.7 PPM | 1,1-DICHLOROETHYLENE | | |
| D030 | 0.13 PPM | 2,4-DINITROTOLUENE | | |
| * D031 | 0.008 PPM | HEPTACHLOR | | |
| D032 | 0.13 PPM | HEXACHLOROBENZENE | | |
| D033 | 0.5 PPM | HEXACHLOROBUTADIENE | | |
| D034 | 3.0 PPM | HEXACHLOROETHANE | | |
| D035 | 200.0 PPM | METHYL ETHYL KETONE | | |
| D036 | 2.0 PPM | NITROBENZENE | | |
| D037 | 100.0 PPM | PENTACHLOROPHENOL | | |
| D038 | 5.0 PPM | PYRIDINE | | |
| D039 | 0.7 PPM | TETRACHLOROETHYLENE | | |
| D040 | 0.5 PPM | TRICHLOROETHYLENE | | |
| D041 | 400.0 PPM | 2,4,5-TRICHLOROPHENOL | | |
| D042 | 2.0 PPM | 2,4,6-TRICHLOROPHENOL | | |
| D043 | 0.2 PPM | VINYL CHLORIDE | | |

| OTHER ORGANICS | TOTAL ppm |
|---|---|
| METHANOL | |
| ETHANOL | |
| ISOPROPANOL | |
| ISOBUTANOL | |
| THF | |
| ETHYL ACETATE | |
| N-BUTANOL | |
| MIBK | |
| bis (2-ETHYLHEXYL) | |
| CARBAZOLE | |
| FLUORANTHENE | |
| N-OCTADECANE | |
| N-DECANE | |
| PHENOL | |
| PCB's | |
| **INORGANICS** | |
| PHOSPHATE | |
| SULFIDES | |
| SULFUR | |
| CYANIDE | |
| AMMONIA | |
| FLUORIDES | |

## HAZARDOUS CHARACTERISTICS

CONTAINS: ☐ ASBESTOS ___ % ☐ HERBICIDES / PESTICIDES ___ % OR / IS ☐ RADIOACTIVE ☐ BIOLOGICAL / INFECTIOUS

REACTIVE?
☐ Y ☒ N (IF YES): ☐ EXPLOSIVE ☐ PYROPHORIC ☐ FUMING ☐ SHOCK SENSITIVE ☐ AIR REACTIVE ☐ WATER REACTIVE

## CERTIFICATION

I hereby certify that the information contained within this profile is complete and accurate. There has been no deliberate omissions or falsification of information pertaining to the composition, properties, and hazards associated with this waste, and all known or suspected hazards have been disclosed. I understand that all disposal pricing is based upon information provided in this waste profile, and that discrepancies in this waste stream may result in price adjustments.

| GENERATOR/BROKER AUTHORIZED SIGNATURE | NAME (PLEASE PRINT) | TITLE | DATE |
|---|---|---|---|
| Anne E Spaulding | Anne E Spaulding | Sr. Env. Specialist | 3/18/04 |

## NOTES (REP USE ONLY)

VER 2.0

**PennOhio**
The PennOhio Corporation

**Phone: 440-992-7906**
Fax: 440-992-9462
4813 Woodman Avenue, Ashtabula, Ohio 44004

**Profile #**____________
(Completed by PennOhio)

# Non Hazardous Waste Profile Sheet

Generator Information

Company Name City of Rochester

Site Address 1200 East Main Street City: Rochester State NY Zip

Mailing Address 30 Church Street City Rochester State NY Zip 14614

Contact Anne Spaulding Title Phone 585-428-7474 Fax 585-428-6010

Customer Information (if different from above)

Customer Name: Capitol Environmental Services, Inc.

Customer Address: 8229 Boone Blvd., Suite 310 City: Vienna State: VA Zip: 22182

Contact: Leo Hicks Title: Business Manager Phone: 330-427-6782 Fax: 330-427-6791

Waste Description

1 drum of PPE and absorbent pads

Common Name of Waste material Non-DOT, Non-RCRA regulated material

Description of Waste Generating Process PPE and absorbent pads generated during waste oil tank excavation

Waste Characteristics: pH 5-7

Odor (circle) **None X** Mild Strong

Describe

Number of Phases 1 Color White/black/gray

Physical state (circle) Liquid Sludge **X Solid** Monolith

Specific gravity % water 0

Waste Quanity 1 **drum** / gallons / tons / yards per One Time

| Chemical Composition | % |
|---|---|
| PPE, Pads, Debris | 100 |

Generator Certification

| | Circle | | |
|---|---|---|---|
| Is this waste hazardous as defined in 40 CFR part 261 ? | Yes | No | X |
| Does this waste contain PCB's or other TSCA regulated substance? | Yes | No | X |
| If this waste is a used oil, have any substances been added to the used oil ? | Yes | No | |
| If so what substance? | | | |
| Is a detailed chemical analysis attached to this characterization form ? | Yes | No | X |

If no, you must attach either a statement of generator knowledge explaining the waste characteristics
Or include MSDS's where applicable.

I certify that the above information is true and accurate and that no deliberate or willful omissions of properties exist and that all known Hazards have been disclosed.

Name (print) Anne Spaulding Signature Anne Spaulding

Company City of Rochester Date 3/3/04

**PennOhio**
The PennOhio Corporation

**Phone: 440-992-7906**
Fax: 440-992-9462
4813 Woodman Avenue, Ashtabula, Ohio 44004

**Profile #**________
(Completed by PennOhio)

# Non Hazardous Waste Profile Sheet

Generator Information

Company Name______City of Rochester

Site
Address_1200 East Main Street______________City: Rochester______________State____NY______________Zip________

Mailing
Address_____30 Church
Street________________City___Rochester______________State__________NY_________Zip_____14614

Contact_______Anne Spaulding______Title________________Phone_585-428-7474__________Fax_585-428-6010

Customer Information (if different from above)

Customer Name:_Capitol Environmental Services, Inc.
Customer
Address:_ 8229 Boone Blvd., Suite 310 _________City:_Vienna______________State: VA______________Zip:____22182

Contact:____Leo Hicks______________Title:_Business Manager______________Phone: 330-427-6782_______Fax:_330-427-6791

Waste Description

6 drums of Petroleum contaminated soil (PCS)

Common Name of Waste material _______Non-DOT, Non-RCRA regulated material

Description of Waste Generating Process___Waste soil generated during waste oil tank excavation

Waste Characteristics: pH____5-7________

Odor (circle) None **Mild** X Strong

Describe____Petroleum______________

Number of Phases______1_____ Color__White/black/gray___

Physical state (circle) Liquid Sludge X **Solid** Monolith

Specific gravity____________ % water____0________

Waste Quanity__________6___**drums** / gallons / tons / yards per_One Time__________

| Chemical Composition | % |
|---|---|
| soil | 98 |
| Petroleum | 1 |
| other | 1 |
| | |
| | |

Generator Certification

Circle

| | | | |
|---|---|---|---|
| Is this waste hazardous as defined in 40 CFR part 261 ? | Yes | No | X |
| Does this waste contain PCB's or other TSCA regulated substance? | Yes | No | X |
| If this waste is a used oil, have any substances been added to the used oil ? | Yes | No | |
| If so what substance?________________ | | | |
| Is a detailed chemical analysis attached to this characterization form ? | Yes | No | X |

If no, you must attach either a statement of generator knowledge explaining the waste characteristics
Or include MSDS's where applicable.

I certify that the above information is true and accurate and that no deliberate or willful omissions of properties exist and that all known Hazards have been disclosed.

Name (print) Anne E. Spaulding Signature Anne Spaulding

Company City of Rochester Date 3/3/04

**PennOhio**
The PennOhio Corporation

**Phone: 440-992-7906**
Fax: 440-992-9462
4813 Woodman Avenue, Ashtabula, Ohio 44004

**Profile #**__________
(Completed by PennOhio)

# Non Hazardous Waste Profile Sheet

Generator Information

Company Name City of Rochester

Site Address 1200 East Main Street City: Rochester State NY Zip

Mailing Address 30 Church Street City Rochester State NY Zip 14614

Contact Anne Spaulding Title Phone 585-428-7474 Fax 585-428-6010

Customer Information (if different from above)

Customer Name: Capitol Environmental Services, Inc.

Customer Address: 8229 Boone Blvd., Suite 310 City: Vienna State: VA Zip: 22182

Contact: Leo Hicks Title: Business Manager Phone: 330-427-6782 Fax: 330-427-6791

Waste Description

6 drums of Purge water

Common Name of Waste material Non-DOT, Non-RCRA regulated material

Description of Waste Generating Process Water generated during monitoring well development

Waste Characteristics: pH 5-7

Odor (circle) None X Mild Strong

Describe Petroleum

Number of Phases 1 Color White/black/gray

Physical state (circle) Liquid X Sludge Solid Monolith

Specific gravity ______ % water 0

Waste Quanity 6 **drums** / gallons / tons / yards per One Time

| Chemical Composition | % |
|---|---|
| water | 99 |
| solids | 1 |
| | |
| | |
| | |

Generator Certification

| | Circle | | |
|---|---|---|---|
| Is this waste hazardous as defined in 40 CFR part 261 ? | Yes | No | X |
| Does this waste contain PCB's or other TSCA regulated substance? | Yes | No | X |
| If this waste is a used oil, have any substances been added to the used oil ? | Yes | No | |
| If so what substance? | | | |
| Is a detailed chemical analysis attached to this characterization form ? | Yes | No | X |

If no, you must attach either a statement of generator knowledge explaining the waste characteristics Or include MSDS's where applicable.

I certify that the above information is true and accurate and that no deliberate or willful omissions of properties exist and that all known Hazards have been disclosed.

Name (print) Anne E Spaulding Signature Anne E Spaulding

Company City of Rochester Date 3/3/04

# NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NYRD00121640

Manifest Document No. 41604

2. Page 1 of 1

3. Generator's Name and Mailing Address

City of Rochester
30 Church St., Rochester, NY 14614

Site. 1200 East Main St.
Rochester, NY

4. Generator's Phone (585) 428-7474 Attn: ~~Ken Hambley~~ Anne Spaulding

5. Transporter 1 Company Name: Tonawanda Tank Transport Services, Inc.

6. US EPA ID Number: NYD097644801

A. Transporter's Phone: 716 873-9703

7. Transporter 2 Company Name:

8. US EPA ID Number:

B. Transporter's Phone:

9. Designated Facility Name and Site Address

Penn Ohio
4813 Woodman Avenue
Ashtabula, OH 44004

10. US EPA ID Number: OHR000028837

C. Facility's Phone: 440 992-7908

| 11. Waste Shipping Name and Description | 12. Containers | | 13. Total Quantity | 14. Unit Wt/Vol |
|---|---|---|---|---|
| | No. | Type | | |
| a. Non DOT, Non RCRA Regulated Material (Purge Water) | 006 | DM | 800 | G |
| b. Non DOT, Non RCRA Regulated Material (PCS Soil) | 006 | DM | 500 | P |
| c. Non DOT, Non RCRA Regulated Material (PPE/Absorbants) | [illegible] | DM | 400 | P |
| d. | | | | |

D. Additional Descriptions for Materials Listed Above

A: App# 040308-3
B: App# 040308-4
C: App# 040308-5

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

Emergency Contact: Capitol Environmental (302) 652-8999 Job#CAN-LHIC

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name [illegible] Signature [illegible] Month 04 Day 21 Year 04

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name Lee Krawczuk Signature [illegible] Month 04 Day 21 Year 04

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name Signature Month Day Year

GENERATOR · TRANSPORTER · FACILITY

**THIS MEMORANDUM** is an acknowledgement that a bill of lading has been issued and is not the Original Bill of Lading, not a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper's No. 42104

(Carrier) Tonawanda Tank Transport Services, Inc. SCAC. ______ Carrier's No. ______

Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading:

at ______, date ______ from ______

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own road or its own water line, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and his assigns.

**TO:** (Mail or street address of consignee for purposes of notification only.)

Consignee General Environmental Mgmt.

Street 2727 Transport Road

Destination Cleveland, OH Zip 44115

Route:

**FROM:**

Shipper City of Rochester

Street 1200 East Main Street

Origin Rochester, NY Zip 14614

Delivering Carrier Tonawanda Tank Transport Services, Inc.

Trailer Initial/Number

U.S. DOT Hazmat Reg. Number

| No. of packages | HM | Description of articles, special marks, and exceptions | Hazard Class | I.D. Number | Packing Group | *Weight (subject to correction) | Class or rate | Labels required (or exemption) | Check column |
|---|---|---|---|---|---|---|---|---|---|
| 2 | X | Environmentally Hazardous Substance, Oil,<br>ERG171<br>Appl# 32325-NO-5 | 9 | NA3082 | III | 800 lbs | | | |

Invoice: Capitol Environmental Services, Inc.
15C Trolley Square
Wilmington, DE 19806

Remit C.O.D. to:
Address:
City: State: Zip:

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight".
Note. – where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding ______ per ______

COD AMT: $

Charges Advanced $ ______

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

C. O. D. FEE:
Prepaid ☐
Collect ☐ $

FREIGHT CHARGES
☐ Prepaid ☐ Collect

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Per ______

PLACARDS REQUIRED NO

PLACARDS SUPPLIED ☐ YES ☐ NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE:

SPECIAL INSTRUCTIONS:

SHIPPER: City of Rochester
PER: ______ DATE: 4/2/04

Permanent post office address of shipper

CARRIER: Tonawanda Tank Transport Services, Inc.
PER: Lee Kraut Jr DATE: 4/2/04

EMERGENCY RESPONSE TELEPHONE NUMBER: (302) 652-8999

Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (§172.604).

9-BLS-C4 (Rev. 6/95)

# TONAWANDA TANK TRANSPORT SERVICE, INC.

1140 MILITARY ROAD
P.O. BOX H
BUFFALO, NY 14217
(716) 873-9703

3990 U.S. ROUTE 42
MASON, OH 45040
(513) 398-6997

DATE 04 / 21 / 04

**PICK UP**

**SHIPPER**

NAME CITY OF ROCHESTER
STREET 1200 EAST MAIN ST
CITY ROCHESTER STATE NY ZIP CODE
CONTACT NAME
SCHEDULED TIME 09:30 AM
ADDITIONAL INFORMATION

**DELIVERY**

**CONSIGNEE**

NAME G E M
STREET 2700 TRANSPORT
CITY CLEVELAND STATE OH. ZIP CODE
CONTACT NAME
SCHEDULED TIME THURS 01 00 PM
ADDITIONAL INFORMATION

| | | | |
|---|---|---|---|
| PURCHASE ORDER NO. 20404044 | WORK ORDER NUMBER | MANIFEST NUMBER M21591 | PRODUCT CODE |
| LOAD NUMBER 104041265 | TRACTOR NUMBER 71 | TRAILER NUMBER 539 | DRIVER'S NAME KRAWCZYK |

| TYPE (CIRCLE ONE) | MATERIAL DESCRIPTION | QUANTITY |
|---|---|---|
| TANK (S/S) (R/L)<br>VAC<br>DUMP<br>[✓ VAN]<br>ROLL-OFF<br>FLATBED | As Per Manifest | 1 Total |

**PICK UP**

ARRIVAL TIME 9:15 [✓ AM] PM RELEASE TIME 10:30 [✓ AM] PM

TRAILER EMPTY UPON ARRIVAL ☐ YES ☒ NO
(If not, explain below)

DIP MEASUREMENT (Tankers Only) ______ INCHES

COMMENTS: (EXPLAIN ALL DELAYS)

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

X
SHIPPERS SIGNATURE

**DELIVERY**

DRIVER ______ DATE ______

ARRIVAL TIME ______ AM PM RELEASE TIME ______ AM PM

TRAILER EMPTY UPON DEPARTURE ☐ YES ☐ NO
(If not, explain below)

COMMENTS: (EXPLAIN ALL DELAYS)

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

X
CONSIGNEE'S SIGNATURE

**OFFICE USE ONLY**

TRIP ______
TOLLS ______
DEMURRAGE ______
LAYOVER ______
VAC ______
MISC ______ TOTAL: ______

**ACCOUNTING**

DRIVER'S # ______
______ FREIGHT ______
______ TOLLS ______
______ DEMURRAGE ______
______ MISC. ______
______ TOTAL ______

WHITE-BILLING COPY YELLOW-TON. TANK COPY PINK-ACCOUNTING COPY GREEN-DRIVER COPY BLUE-TSDF COPY GOLD-GENERATOR COPY

**THIS MEMORANDUM** is an acknowledgement that a bill of lading has been issued and is not the Original Bill of Lading, not a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper's No. [illegible]

(Carrier) **Tonawanda Tank Transport Services, Inc.** SCAC. ______ Carrier's No. ______

Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading:

at ______, date ______ from ______

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own road or its own water line, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and his assigns.

**TO:** (Mail or street address of consignee for purposes of notification only.)

Consignee **Penn Ohio**
Street **4813 Woodman Avenue**
Destination **Ashtabula, OH** Zip **44004**
Route:

**FROM:**

Shipper **City of Rochester**
Street **1200 East Main Street**
Origin **Rochester, NY** Zip **14614**

Delivering Carrier **Tonawanda Tank Transport Services, Inc.**

Trailer Initial/Number

U.S. DOT Hazmat Reg. Number

| No. of packages | HM | Description of articles, special marks, and exceptions | Hazard Class | I.D. Number | Packing Group | *Weight (subject to correction) | Class or rate | Labels required (or exemption) | Check column |
|---|---|---|---|---|---|---|---|---|---|
| | X | **Gasoline** | 3 | UN1203 | II | [illegible] | | | |
| | | **ERG128** | | | | | | | |
| | | **Appt# 04016-01** | | | | | | | |
| | | **Invoice: Capitol Environmental Services, Inc.**<br>**15C Trolley Square**<br>**Wilmington, DE 19806** | | | | | | | |

Remit C.O.D. to:
Address:
City: State: Zip:

*If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight". Note. – where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding ______ per ______

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Per ______

**COD** AMT:
$

Charges Advanced
$

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

**C. O. D. FEE:**
Prepaid ☐
Collect ☐ $

**FREIGHT CHARGES**
☐ Prepaid ☐ Collect

**PLACARDS REQUIRED** **NO**

**PLACARDS SUPPLIED** ☐ YES ☐ NO - FURNISHED BY CARRIER
DRIVER'S SIGNATURE:

SPECIAL INSTRUCTIONS:

SHIPPER: **City of Rochester**
PER: ______ DATE: [illegible]

Permanent post office address of shipper

CARRIER: **Tonawanda Tank Transport Services, Inc.**
PER: [illegible] DATE: [illegible]
~~EMERGENCY RESPONSE~~
TELEPHONE NUMBER: **(302 )652-8600**
Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (§172.604).

9-BLS-C4 (Rev. 6/95)

# TONAWANDA TANK TRANSPORT SERVICE, INC.

1140 MILITARY ROAD
P.O. BOX H
BUFFALO, NY 14217
(716) 873-9703

3990 U.S. ROUTE 42
MASON, OH 45040
(513) 398-6997

DATE [illegible] / 31 / 04

## PICK UP

**SHIPPER**

NAME CITY OF ROCHESTER
STREET 1200 EAST MAIN ST
CITY ROCHESTER STATE NY. ZIP CODE
CONTACT NAME
SCHEDULED TIME 09:30 AM
ADDITIONAL INFORMATION

## DELIVERY

**CONSIGNEE**

NAME PENN OHIO
STREET
CITY ASHTABULA STATE OH. ZIP CODE
CONTACT NAME
SCHEDULED TIME THURS 11:00 AM
ADDITIONAL INFORMATION

PURCHASE ORDER NO. 20404044
WORK ORDER NUMBER
MANIFEST NUMBER 41606 154204
PRODUCT CODE
LOAD NUMBER 104041362
TRACTOR NUMBER 71
TRAILER NUMBER 539
DRIVER'S NAME KRAWCZYK

TYPE (CIRCLE ONE)
TANK (S/S) (R/L)
VAC
DUMP
[✓ VAN]
ROLL-OFF
FLATBED

MATERIAL DESCRIPTION
As Per Manifests

QUANTITY
14 Total

## PICK UP

ARRIVAL TIME 9:15 [✓ AM] PM RELEASE TIME 10:30 AM PM
TRAILER EMPTY UPON ARRIVAL ☐ YES ☒ NO
(If not, explain below)
DIP MEASUREMENT (Tankers Only)______ INCHES
COMMENTS: (EXPLAIN ALL DELAYS)

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

X
SHIPPERS SIGNATURE

## DELIVERY

DRIVER ______ DATE ______
ARRIVAL TIME ______ AM PM RELEASE TIME ______ AM PM
TRAILER EMPTY UPON DEPARTURE ☐ YES ☐ NO
(If not, explain below)
COMMENTS: (EXPLAIN ALL DELAYS)

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

X
CONSIGNEE'S SIGNATURE

## OFFICE USE ONLY

**DRIVER**

TRIP
TOLLS
DEMURRAGE
LAYOVER
VAC
MISC
TOTAL:

**ACCOUNTING**

DRIVER'S #
FREIGHT
TOLLS
DEMURRAGE
MISC.
TOTAL

WHITE-BILLING COPY YELLOW-TON. TANK COPY PINK-ACCOUNTING COPY GREEN-DRIVER COPY BLUE-TSDF COPY GOLD-GENERATOR COPY

# INVOICE

**SLC Environmental Services**
295 Mill Street
Lockport, New York 14094
Ph. (716)433-0776
Fax (716)433-0802

SLC Invoice Number: 7977

Date: 8/6/2004

TO:
Bergmann Associates
200 First Federal Plaza
Rochester, NY 14614
Attn: Jim Marschner

SHIP TO or PROJECT LOCATION:
1200 East Main Street
Rochester, NY

| PM | OFFICE | JOB NO. | CLIENT PO | START | FINISH | TERMS |
|---|---|---|---|---|---|---|
| KRH | Rochester | J03-050 | 4453.02 | | | NET 30 |

| QTY | UNIT | DESCRIPTION | PRICE | TOTAL |
|---|---|---|---|---|
| 12.00 | Drums | Non Hazardous Water/Soil | $ 125.00 ✓ | $ 1,500.00 |
| 1.00 | Drums | Gas and Water | $ 195.00 ✓ | $ 195.00 |
| 2.00 | Drums | D008 Hazardous | $ 355.00 ✓ | $ 710.00 |
| 1.00 | Drums | PPE, Pads, Etc. | $ 125.00 ✓ | $ 125.00 |

Vendor No. 5715
Invoice No.
A/P Code
Project Dept No. 445303
G/L Code 410
Approved $ 2,738.73

9/9/04

4453.02-3
invoice

OK TO PAY

Copy
...rksheet Only 6AF
...ise to

RECEIVED
...ASSOCIATES

| | |
|---|---|
| SUBTOTAL | $ 2,530.00 |
| Monroe Co. SALES TAX RATE | 8.25% |
| SALES TAX | $ 208.73 |
| TOTAL DUE | $ 2,738.73 |

# APPENDIX 2

## 2002 Asbestos Abatement Records and Field Reports

Corporate Office
8 Cairn Street
Rochester, New York 14611
TEL (716) 527-8000 • (800) 458-8745
FAX (716) 783-1464 • E-mail: aac@aac-contracting.com

A.A.C. Contracting, Inc.
*A Full Service Environmental Remediation Company*

December 6, 2002 Fax #: 442-1017

Mr. Jim Marschner

Re: Asbestos removal

Dear Mr. Marschner:

This is to inform you that the asbestos abatement project at the 1200 East Main street location has been completed per our contract. All work was performed in accordance with EPA, OSHA, DEC & NYS-DOL rules and regulations.

If you have any questions or require additional information, please call me at anytime.

Sincerely,

Rich VerValin
Service Manager

**LOZIER ENVIRONMENTAL CONSULTING, INC.**
688 WINTON ROAD NORTH, ROCHESTER, NEW YORK 14609
PHONE 585-654-9080 FAX 585-654-9662

## FACSIMILE TRANSMITTAL SHEET

TO: Rick

FROM:

COMPANY: AAC

DATE: 12-4-02

FAX NUMBER:

TOTAL NO. OF PAGES INCLUDING COVER: 3

RE: 1200 E. Main

Visuals Passed

**LOZIER ENVIRONMENTAL CONSULTING, INC.**
688 NORTH WINTON ROAD • ROCHESTER, NEW YORK 14609
PHONE (585) 654-9080 • FAX (585) 654-9662

# AIR MONITORING

CLIENT: AAC
LAB NO: 2324 [✓ PCM] TEM
LOCATION: Roch.
ADDRESS: 1200 E Main
JOB SIZE/TYPE: Lg panel mastic
WORK AREA: main FL

BACKGROUND PRE-AIR WIP [✓ FINAL] ENV

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE NUMBER | I1 | I2 | I3 | I4 | I5 | O6 | O7 | O8 | O9 | O10 | | B1 | B2 |
| LAB ID NUMBER | 2324 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | 11 | 12 |
| SAMPLE LOCATION | I1 | I2 | I3 | I4 | I5 | O6 | O7 | O8 | O9 | O10 | | ↓ | ↓ |
| ROTOMETER NUMBER | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | |
| STARTING FLOW RATE | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | N/A | N/A |
| ENDING FLOW RATE | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | | |
| AVE. FLOW RATE (L/MIN) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | | |
| START TIME | 8 15 | 8 15 | 8 16 | 8 16 | 8 17 | 8 18 | 8 18 | 8 19 | 8 20 | 8 21 | | | |
| STOP TIME | 10 15 | 10 15 | 10 16 | 10 16 | 10 17 | 10 18 | 10 18 | 10 19 | 10 20 | 10 20 | | | |
| DURATION (MIN) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | | | |
| SAMPLE VOLUME (LITERS) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | | | |
| FIBERS/100 FIELDS | 3.5 | 15 | 11 | 9.5 | 4 | 16 | 10.5 | 7.5 | 16 | 14.5 | | 0 | 0 |
| FIBERS/CC | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | | |

SAMPLED BY: Tom White
DATE SAMPLED: 12/04/02

TRANSPORTED TO: Lozier Environmental Consulting, Inc.
RECEIVED BY:
ANALYST:
DATE: 12/4/02
TIME: 1 15
DATE: 12/4/02
CASSETTE LOT NO.: 02045108

**LOZIER ENVIRONMENTAL CONSULTING, INC.**
688 NORTH WINTON ROAD • ROCHESTER, NEW YORK 14609
PHONE (585) 654-9080 • FAX (585) 654-9662

# AIR MONITORING

**CLIENT:** AAC
**LAB NO:** 2323 [✓ PCM] TEM
**LOCATION:** Roch.
**ADDRESS:** 1200 E. Main
**JOB SIZE/TYPE:** Sm Roof
**WORK AREA:** Roof

BACKGROUND PRE-AIR WIP [✓ FINAL] ENV

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE NUMBER | I1 | I2 | I3 | 04 | 05 | 06 | | B1 | B2 | | | | |
| LAB ID NUMBER | 2323 1 | 2 | 3 | 4 | 5 | 6 | | 7 | 8 | | | | |
| SAMPLE LOCATION | I1 | I2 | I3 | 04 | 05 | 06 | | ↓ | ↓ | | | | |
| ROTOMETER NUMBER | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | | |
| STARTING FLOW RATE | 10 | 10 | 10 | 10 | 10 | 10 | | N/A | N/A | | | | |
| ENDING FLOW RATE | 10 | 10 | 10 | 10 | 10 | 10 | | | | | | | |
| AVE. FLOW RATE (L/MIN) | 10 | 10 | 10 | 10 | 10 | 10 | | | | | | | |
| START TIME | $10^{30}$ | $10^{31}$ | $10^{33}$ | $10^{34}$ | $10^{34}$ | $10^{35}$ | | | | | | | |
| STOP TIME | $12^{30}$ | $12^{31}$ | $12^{33}$ | $12^{34}$ | $12^{34}$ | $12^{35}$ | | | | | | | |
| DURATION (MIN) | 120 | 120 | 120 | 120 | 120 | 120 | | | | | | | |
| SAMPLE VOLUME (LITERS) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | | | | | | | |
| FIBERS/100 FIELDS | 6 | 3.5 | 10 | 2 | 4.5 | 4 | | 0 | 0 | | | | |
| FIBERS/CC | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | | | | | | |

**SAMPLED BY:** Tom White
**DATE SAMPLED:** 12/04/02
**TRANSPORTED TO:** Lozier Environmental Consulting, Inc.
**RECEIVED BY:**
**ANALYST:**
**DATE:** 12/4/02
**TIME:** 1 15
**DATE:** 12/4/02
**CASSETTE LOT NO.:** 02045108

WATTS ENGINEERS
3826 Main Street, Buffalo, NY 14226 Phone: (716) 836-1540 Fax: (716) 836-2402

# ASBESTOS PROJECT MONITORING FIELD REPORT

PROJECT: Rochester Brownfields
DATE: 12/4/02
ADDRESS: 1200 East Main Street Rochester
WATTS PROJECT #: 99095

OWNER/CLIENT: Bergman
WORK AREA: Roof
TYPE/PHASE OF WORK: work in progress
WORK METHODS: NYCR 56
CONTRACTOR: ACC Contracting Inc.
CONTRACTOR'S SUPERVISOR: Tilben Johnson
AIR MONITORING FIRM: ACC
SAMPLING TECH:
PROJECT MONITOR: Jerry Grady watts
AIR SAMPLES TAKEN: B P W F

Paperwork on-site: Yes See Below
Number of workers: 5
Sign-in log completed: [✓ Yes] See Below
Critical barriers/containment OK: [✓ Yes] See Below
Warning signs posted: [✓ Yes] See Below
Neg. Pressure OK [✓ Yes] See Below
Waste container OK: Yes See Below
High air results reviewed: [✓ NA] See Below
Decontamination units OK: [✓ Yes] See Below

Comments:

0900- ARRIVE on site met with Tilben Johnson From ACC
- ACC Removed 3 window From the back of the building on 12/3/02
- ACC also Removed mastic under wall board - East side of building

- checked waste and personal decons Along with paper work

0900- WORKERS Removing snow on Roof to Locate to Remove gray Roofing tar

1000- WORKERS Removing gray Roofing tar

1100 - off-site
- work preformed in accordance with NYCR 56

Jerry Grady
Signature - Watts Engineers

H:\Office\Stanform\\Forms\Project Field Rpt.wpd

Page 1 of 1

# A.A.C. CONTRACTING, INC.

*A FULL SERVICE ENVIRONMENTAL REMEDIATION COMPANY*

**CORPORATE OFFICE:** 8 Cairn Street, Rochester, NY 14611
Telephone No. (585) 527-8000; (800) 458-8745 Fax No. (585) 783-1464
Email Address: aac@aac-contracting.com
**Branch Offices** - Buffalo, NY (716) 875-9000

| | | | |
|---|---|---|---|
| **To:** | Jim Marschner | **Fax:** | 232-4652 |
| **Company:** | Bergmann | **Phone:** | 232-5135 |
| **From:** | Rich VerValin | **Date:** | 12-05-02 |
| **Re:** | 1200 east main street | **Pages:** | 4 |

☐ Urgent x For Review ☐ Please Comment ☐ Please Reply x Please Recycle

Jim, This letter and final air test results should be all you need to get your demo permit.

Corporate Office
8 Cairn Street
Rochester, New York 14611
TEL (716) 527-8000 • (800) 458-8745
FAX (716) 783-1464 • E-mail: aac@aac-contracting.com
A.A.C. Contracting, Inc.
*A Full Service Environmental Remediation Company*

December 6, 2002 Fax #: 442-1017

Mr. Jim Marschner

Re: Asbestos removal

Dear Mr. Marschner:

This is to inform you that the asbestos abatement project at the 1200 East Main street location has been completed per our contract. All work was performed in accordance with EPA, OSHA, DEC & NYS-DOL rules and regulations.

If you have any questions or require additional information, please call me at anytime.

Sincerely,

Rich VerValin
Service Manager

**LOZIER ENVIRONMENTAL CONSULTING, INC.**

688 WINTON ROAD NORTH, ROCHESTER, NEW YORK 14609

PHONE 585-654-9080 FAX 585-654-9662

## FACSIMILE TRANSMITTAL SHEET

TO: Rick

FROM:

COMPANY: AAC

DATE: 12-4-02

FAX NUMBER:

TOTAL NO. OF PAGES INCLUDING COVER: 3

RE: 1200 E. Main

Visuals Passed

**LOZIER ENVIRONMENTAL CONSULTING, INC.**
688 NORTH WINTON ROAD • ROCHESTER, NEW YORK 14609
PHONE (585) 654-9080 • FAX (585) 654-9662

# AIR MONITORING

CLIENT: AAC
LAB NO: 2324 [✓ PCM] TEM
LOCATION: Roch.
ADDRESS: 1200 E Main
JOB SIZE/TYPE: Lg panel mastic
WORK AREA: Main FL

BACKGROUND PRE-AIR WIP [✓ FINAL] ENV

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE NUMBER | I1 | I2 | I3 | I4 | I5 | O6 | O7 | O8 | O9 | O10 | | B1 | B2 |
| LAB ID NUMBER | 2324 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | 11 | 12 |
| SAMPLE LOCATION | I1 | I2 | I3 | I4 | I5 | O6 | O7 | O8 | O9 | O10 | | ↓ | ↓ |
| ROTOMETER NUMBER | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | |
| STARTING FLOW RATE | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | N/A | N/A |
| ENDING FLOW RATE | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | | |
| AVE. FLOW RATE (L/MIN) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | | | |
| START TIME | $8^{15}$ | $8^{15}$ | $8^{16}$ | $8^{16}$ | $8^{17}$ | $8^{18}$ | $8^{18}$ | $8^{19}$ | $8^{20}$ | $8^{20}$ | | | |
| STOP TIME | $10^{15}$ | $10^{15}$ | $10^{16}$ | $10^{16}$ | $10^{17}$ | $10^{18}$ | $10^{18}$ | $10^{19}$ | $10^{20}$ | $10^{20}$ | | | |
| DURATION (MIN) | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | | | |
| SAMPLE VOLUME (LITERS) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | | | |
| FIBERS/100 FIELDS | 3.5 | 15 | 11 | 9.5 | 4 | 16 | 10.5 | 7.5 | 16 | 14.5 | | 0 | 0 |
| FIBERS/CC | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | | |

SAMPLED BY: Tom White
DATE SAMPLED: 12/04/02

TRANSPORTED TO: Lozier Environmental Consulting, Inc.
RECEIVED BY:
ANALYST:
DATE: 12/4/02
DATE: 12/4/02
TIME: $1^{15}$
CASSETTE LOT NO.: 02045108

# LOZIER ENVIRONMENTAL CONSULTING, INC.

688 NORTH WINTON ROAD • ROCHESTER, NEW YORK 14609
PHONE (585) 654-9080 • FAX (585) 654-9662

## AIR MONITORING

**LAB NO:** 2323 [✓ PCM] TEM

**CLIENT:** AAC

**LOCATION:** Roch.

**ADDRESS:** 1200 E. main

**JOB SIZE/TYPE:** Sm Roof

**WORK AREA:** Roof

BACKGROUND PRE-AIR WIP [✓ FINAL] ENV

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE NUMBER | I1 | I2 | I3 | 04 | 05 | 06 | | B1 | B2 | | | | |
| LAB ID NUMBER | 2323 1 | 2 | 3 | 4 | 5 | 6 | | 7 | 8 | | | | |
| SAMPLE LOCATION | I1 | I2 | I3 | 04 | 05 | 06 | | ↓ | ↓ | | | | |
| ROTOMETER NUMBER | 4 | 4 | 4 | 4 | 4 | 4 | | ↓ | ↓ | | | | |
| STARTING FLOW RATE | 10 | 10 | 10 | 10 | 10 | 10 | | N/A | N/A | | | | |
| ENDING FLOW RATE | 10 | 10 | 10 | 10 | 10 | 10 | | | | | | | |
| AVE. FLOW RATE (L/MIN) | 10 | 10 | 10 | 10 | 10 | 10 | | | | | | | |
| START TIME | 10 30 | 10 31 | 10 33 | 10 34 | 10 34 | 10 35 | | | | | | | |
| STOP TIME | 12 30 | 12 31 | 12 33 | 12 34 | 12 34 | 12 35 | | | | | | | |
| DURATION (MIN) | 120 | 120 | 120 | 120 | 120 | 120 | | | | | | | |
| SAMPLE VOLUME (LITERS) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | | | | | | | |
| FIBERS/100 FIELDS | 6 | 3.5 | 10 | 2 | 4.5 | 4 | | 0 | 0 | | | | |
| FIBERS/CC | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | | | | | | | |

**SAMPLED BY:** Tom White

**DATE SAMPLED:** 12/04/02

**TRANSPORTED TO:** Lozier Environmental Consulting, Inc.

**RECEIVED BY:**

**ANALYST:**

**DATE:** 12/4/02 **TIME:** 1 15

**DATE:** 12/4/02

**CASSETTE LOT NO.:** 02045108

WATTS ENGINEERS
3826 Main Street, Buffalo, NY 14226 Phone: (716) 836-1540 Fax: (716) 836-2402

# ASBESTOS PROJECT MONITORING FIELD REPORT

PROJECT: Rochester Brownfields DATE: 12/4/02
ADDRESS: 1200 East Main Street Rochester WATTS PROJECT #: 990 95

OWNER/CLIENT: Bergman WORK AREA: Roof
TYPE/PHASE OF WORK: work in progress WORK METHODS: NYCR 56
CONTRACTOR: ACC Contracting Inc. CONTRACTOR'S SUPERVISOR: Tilben Johnson
AIR MONITORING FIRM: ACC SAMPLING TECH:
PROJECT MONITOR: Jerry Grady watts AIR SAMPLES TAKEN: B P W F

Paperwork on-site: Yes See Below Number of workers: 5 Sign-in log completed: [✓ Yes] See Below
Critical barriers/containment OK: [✓ Yes] See Below Warning signs posted: [✓ Yes] See Below Neg. Pressure OK [✓ Yes] See Below
Waste container OK: Yes See Below High air results reviewed: [✓ NA] See Below Decontamination units OK: [✓ Yes] See Below

Comments:

0900- Arrive on site met with Tilben Johnson From ACC
- ACC Removed 3 window From the back of the building on 12/3/02
- ACC also Removed mastic under wall board - East side of building

- checked waste and personal decons Along with paper work

0900- workers removing snow on Roof to locate to remove gray roofing tar

1000- workers removing gray roofing tar

1100 - off-site
- work preformed in accordance with NYCR 56

Jerry Grady
Signature - Watts Engineers

September 20, 2000

Mr. Gary A. Flisnik
Bergmann Associates
200 First Federal Plaza
28 East Main Street
Rochester, New York 14614

**RE: 1200 East Main Street, Rochester, NY**
**Asbestos-Containing Material**

Dear Mr. Flisnik:

Watts Engineers has reviewed the asbestos testing data obtained from Fisher Associates with respect to the above-referenced building. According to field documentation, laboratory reports, and direct communication with Mitch Smith of Fisher Associates, the following items have been identified as asbestos-containing material (ACM) in the quantities listed:

- Window glazing compound on windows at rear of building Approx. 14 linear feet
- Window caulk on windows at rear of building Approx. 8 linear feet
- Gray roofing tar sealant along perimeter of rolled roofing and at base of the dividing wall in the middle of the roof Approx. 100 square feet
- White glue under lime green "Formica" wall board on walls inside the building Approx. 352 square feet

All site work was performed by Fisher Associates. The field data sheets, laboratory reports, and a record of communication are attached herein.

Options for abatement are as follows:

I. Window Glazing/Window Caulk and Wall Board Glue

All asbestos abatement in New York State must be performed in accordance with New York State Department of Labor (NYSDOL) Industrial Code Rule 56 (ICR 56). ICR 56 does not offer any specific relief for glazing, caulking, and wall glues or mastics from the full requirements of work area preparation. Therefore, without relief, full containment would be required. Full containment includes the following work practices: two layers of plastic sheeting on floors, walls, and ceilings; hard wall barriers to cover any openings greater than 32 square feet; HEPA-filtered negative pressure ventilation equipment; three

12-hour settling periods; attached personnel and waste decontamination enclosures; double-bagging of waste; and other measures designed for occupied interior spaces. In order to employ a more practical abatement strategy, a site-specific variance petition should be submitted to NYSDOL to address these materials. The variance petition requires a fee of $350.00 and would seek approval for the following work practices:

A. Exterior Glazing and Caulk

1. No containment whatsoever on the outside and, therefore, no negative pressure ventilation equipment;
2. Seal all windows to be removed on the inside with plastic sheeting, and drop cloth in work area;
3. Remote decons;
4. Wrapping of waste in plastic sheeting; and
5. Fewer and shorter waiting periods.

B. Interior Wall Panel Glue

1. Plastic sheeting only over openings from the work area to non-work areas and on the floor;
2. Remote decons; and
3. Fewer and shorter waiting periods.

All other provisions of ICR 56 will be in effect including area air sampling.

II Gray Roofing Tar Sealant

NYSDOL, as a result of repeated variance petitions to address roofing materials more realistically, has issued an "Applicable Variance" (AV) for built-up roofing, flashing, and roof coatings (AV 119) . AV 119 can be utilized on this project and does not require a separate petition or fee. Work practices allowed under AV 119 include:

a. No containment whatsoever on the roof;
b. Seal all openings on the roof and floor below within 25 feet of the removal operations;
c. Remote decons;
d. Transport of removed roofing material directly from the roof to a dumpster through a chute;
e. One single two-hour waiting period; and
f. No area air sampling whatsoever.

All other provisions of ICR 56 will be in effect.

<u>Cost estimates for abatement of identified ACM are as follow</u>:

A. Exterior Glazing and Caulk
Approx. 22 lf on an estimated 5 windows @ $200.00/window $1,000.00

B. Interior Wall Panel Glue
Approx. 352 sf @ $10.00/sf $3,520.00

C. Gray Roofing Tar Sealant
Approx. 100 sf @ $10.00/sf $1,000.00

The estimates do not include the NYSDOL-required area air sampling which must be provided by a third party. Area air sampling typically adds approximately 15% to the price of abatement or, in this case, an additional $1,000.00±. Estimates are approximate and based on past experience, discussions with persons knowledgeable of the industry, and size of the project. Factors that may affect pricing in the future include time of bid period, revisions to applicable regulations, and changes in prevailing wage rates.

This letter and its attachments constititute the asbestos abatement report we agreed to provide for the 1200 E. Main Street remedial alternatives project. Should you have any questions or need additional information, please do not hesitate to contact me at (716) 836-2320, ext. 118, or Virginia Ursitti at ext. 131.

Sincerely,

**EDWARD O. WATTS, P. E., P. C.**

Kevin R. O'Connor
Senior Environmental Consultant

c: V. Ursitti (Watts)

ltrrpt095.doc

# APPENDIX 3

## 2003 Building Demolition Records and Daily Field Reports

| | |
|---|---|
| Proj. No. | 4453.02 |
| Original | J.M. |
| Enclosure | J.M. |
| Copies to | Acct. File |
| | GRO |

**SESSLER WRECKING**

Division of
L. M. SESSLER EXCAVATING & WRECKING, INC.
1257 NYS ROUTE 96
WATERLOO, NEW YORK 13165

(315) 539-8222
FAX (315) 539-3967

February 4, 2003

Bergmann Associates
200 First Federal Plaza
28 East Main Street
Rochester, NY 14614

ATTN: Jim Marschner

RE: Project Number: 4453.02
Building Demolition at 1200 East Main Street, Rochester, NY

## BILLING STATEMENT

| | | | | |
|---|---|---|---|---|
| **Contract Price:** | | | | **$9,600.00** |
| Contract 100% Complete | | | | |
| **Total Original Contract:** | | | | **$9,600.00** |
| **Additional Trucking & Disposal Charges:** | | | | |
| **Trucking:** | | | | |
| 1/15/2003 | Packer | 7.5 hours | $70.00 per hour | $525.00 |
| | Dump Trailers | 6.0 hours | $70.00 per hour | $420.00 |
| | Dump Trailers | 6.0 hours | $70.00 per hour | $420.00 |
| 1/16/2003 | Dump Trailers | 2.5 hours | $70.00 per hour | $175.00 |
| | | | **Total Trucking** | **$1,540.00** |
| **Disposal:** | | | | |
| | Landfill Costs | | | $1,452.57 |
| | 10% Overhead and Profit | | | $145.26 |
| | | | **Total Disposal** | **$1,597.83** |
| | | | **Total Trucking & Disposal Costs** | **$3,137.83** |
| **TOTAL AMOUNT DUE THIS BILLING STATEMENT:** | | | | **$12,737.83** |

========

Gary Fleis

4453.02
2/7/03

FEB 05 2003

SPECIALISTS IN DEMOLITION OF BUILDINGS – BRIDGES – STACKS & MASSIVE CONCRETE

WASTE MANAGEMENT OF NY
HIGH ACRES LANDFILL
425 PERINTON PKWY
FAIRPORT, NY 14450-9104
(585) 223-6132
(585) 223-6898 (FAX)

# INVOICE

LD
Acct No: 300-0000435-2277-0
Invoice No: 0019401-2277-1
01/19/2003
Page: 0001-0001

300-0000435-2277-0
SESSLER WRECKING
1257 ROUTE 96 N
WATERLOO NY 13165

| Ticket | Description | Quantity | Rate | Extended |
|---|---|---|---|---|
| 309398 | 01/15/2003 VEH#:SESSLE | | | |
| | CONSTR. & DEMO MATERIAL (LF) | 16.17 TON | 40.00 | 646.80 |
| | FUEL SURCHARGE | | | 4.20 |
| | Ticket Total | | | 651.00 |
| 309452 | 01/15/2003 VEH#:SESSLE | | | |
| | CONSTR. & DEMO MATERIAL (LF) | 19.91 TON | 40.00 | 796.40 |
| | FUEL SURCHARGE | | | 5.17 |
| | Ticket Total | | | 801.57 |
| | Total of current charges | | | 1,452.57 |
| | Balance from previous billing | | | |
| 09/23/2001 | DEBIT-3P C&D (C) | | | 1,522.35 |
| 09/23/2001 | DEBIT-3P C&D (C) | | | 879.00 |
| 11/30/2001 | Payment - Thank you | | | 984.60 |
| 10/17/2001 | Payment - Thank you | | | 1,863.60- |
| 11/30/2001 | Payment - Thank you | | | 1,069.71- |
| 11/30/2001 | Payment - Thank you | | | 5.45- |
| 10/17/2001 | Payment - Thank you | | | 6.10- |
| | | | | 441.09- |
| | Total Due | | | $1,452.57 |

ALL LOADS MUST BE TARPED OR TIED DOWN.
HARD HATS AND HIGH VISIBILITY VEST MUST BE WORN AT THE LANDFILL WORKING FACE.

| Current | 12/31/2002 | 11/30/2002 | 10/31/2002 | 09/30/2002 |
|---|---|---|---|---|
| 1,452.57 | | | | |

✓ 02031
5800
Dum

MAKE COPY
FOR JEFF'S FILE
PLEASE

**NET 10 DAYS**
**BILLING CALL: (585) 223-6132 PAYMENTS CALL: (585) 254-7574 EXT. 269**

> TO ENSURE PROPER CREDIT, PLEASE INCLUDE YOUR ACCOUNT NUMBER ON YOUR CHECK AND RETURN THE BOTTOM PORTION WITH YOUR PAYMENT IN THE ENCLOSED ENVELOPE

(585) 223-6132
(585) 223-6898 (FAX)

WASTE MANAGEMENT OF NY
HIGH ACRES LANDFILL
425 PERINTON PKWY
FAIRPORT, NY 14450-9104
Return Service Requested

IF PAYING BY CREDIT CARD, FILL OUT BELOW.

| | | |
|---|---|---|
| CARD NUMBER | AMOUNT PAID | CHECK CARD USING FOR PAYMENT<br>VISA ☐ MasterCard ☐ |
| SIGNATURE | EXP. DATE | |

| ACCOUNT# | INVOICE DATE | INVOICE NUMBER | CHECK NO. |
|---|---|---|---|
| 300-0000435-2277-0 | 01/19/2003 | 0019401-2277-1 | |
| CURRENT | TOTAL DUE | AMOUNT ENCLOSED | |
| 1,452.57 | 1,452.57 | | |

227730000004350001940100000145257000001452 57 1

300-0000435-2277-0
SESSLER WRECKING
1257 ROUTE 96 N
WATERLOO NY 13165

Remit To:
HIGH ACRES LANDFILL
WASTE MANAGEMENT OF NY
PO BOX 60448
ROCHESTER, NY 14606-0448

P 000023 98-03020-0001-0001 *P2277LLD (2277 TR) 2277PT00.151 DD&C
2003020005 (QESP)00:T000:000001:001:1000:::

WM HIGH ACRES LANDFILL
ALL LOADS MUST BE TARPED OR TIED DOWN
FINES IMPOSED FOR UNSAFE ACTS
HARD HATS & HIGH VIZ VESTS REQUIRED

TICKET: 309398
DATE: 01/15/2003
TIME: 09:56 - 10:31

CUSTOMER: 9663 / SESSLER WRECKING

P.O.:

GENERATOR: NA / Non App
ORIGIN: MC / MONROE COUNTY
TRUCK: SESSLER107
LICENSE:
MANIFEST:
ROUTE: NA / Non App
COUNTY: NY / NEW YORK
PROFILE #: NA / Non App
COMMENT:

GROSS: 87260 LBS
TARE: 54920 LBS
NET: 32340 LBS

GRID: CELL 7A

| WASTE | NET/TONS | UNIT |
|---|---|---|
| 06 / Demolition - Landfill | 16.17 | T |
| FUELSUR / Fuel Surcharge | | T |

Driver: ______________________ Weighmaster: ______________________

IN: SABRINA MARVIN B: NYFAIR01PC OUT: Paula Schweizer B: NYFAIR01PC

---

WM HIGH ACRES LANDFILL
ALL LOADS MUST BE TARPED OR TIED DOWN
FINES IMPOSED FOR UNSAFE ACTS
HARD HATS & HIGH VIZ VESTS REQUIRED

TICKET: 309452
DATE: 01/15/2003
TIME: 12:23 - 12:50

CUSTOMER: 9663 / SESSLER WRECKING

P.O.:

GENERATOR: NA / Non App
ORIGIN: MC / MONROE COUNTY
TRUCK: SESSLER
LICENSE:
MANIFEST:
ROUTE: NA / Non App
COUNTY: NY / NEW YORK
PROFILE #: NA / Non App
COMMENT:

GROSS: 94680 LBS
TARE: 54860 LBS
NET: 39820 LBS

GRID: CELL 7A

| WASTE | NET/TONS | UNIT |
|---|---|---|
| 06 / Demolition - Landfill | 19.91 | T |
| FUELSUR / Fuel Surcharge | | T |

Driver: ______________________ Weighmaster: ______________________

IN: SABRINA MARVIN B: NYFAIR01PC OUT: Paula Schweizer B: NYFAIR01PC

# DAILY FIELD REPORT

Date: 15 January 2003

Day of Week:

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|

F.R. No.: 001

Sheet No. 1 of 2

JOB
**City of Rochester**
**1200 East Main Street**
**Rochester, NY**

Activities
**Building Demolition**

| If pertinent to the Construction Operation | | |
|---|---|---|
| | AM | PM |
| Weather | Partly Cloudy | Partly Cloudy |
| Temperature | 20's | 20's |

DESCRIPTION OF WORK PERFORMED AND INSPECTED
Specify for Each Operation:

*Contractor Activities*

- 0730 Sessler Wrecking onsite to begin the demolition of the former Pick and Pay building.
- Set up and began to remove all wooden enclosures on the building.
- Began to identify the internal and external locations of the buildings disconnected utilities.
- Began the demolition of the building. Waste material was separated into C&D and Masonite piles.
- C&D material was hauled by Sessler to Mill Seat Landfill
- Masonry was hauled to Sessler's facility for crushing.
- Identified 2 Floor Slabs in the building. One 4 inch and one 8 inch.
- Uncovered a potential lift or pit area in the mid/eastern section of the building. There was no piston physically seen.
- Some piping in the area of the possible building bays. No signs of staining around pipe work or the location of the floor drain in the eastern section of the building
- Continue waste hauling and floor and foundation removal on Thursday the 16th of January. Start at 7:30 am.

*Bergmann Activities*

- J. Marschner onsite at 0715.
- Reviewed with Sessler the site and locations of the monitoring wells in the Demo area.
- Asked Sessler personnel to watch for and assist in identifying unknown utilities beneath the floor slab.
- Photographed the demolition of the building.
- Observed the building area for drains, pits or other potential previously unidentified apparatus/items.
- Interfaced with the visitors listed below.
- Identified an area of a former pit of lift pit, Piston did not appear to be present. Materials were surrounded by a cinderblock wall and the soils with in were discolored and blackened.
- Photographed the pit area in question.
- All activities ended and contractors off site at 1530.

| ITEM NO. | FS | ES | INTERIM QUANT. | FINAL QUANT. | QUANT. CHK. | DESCRIPTION OF WORK | COMPUTER | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | ENT | CHK |
| | | | | | | | | |

The work described was incorporated
into this project and was inspected by:

Signature
Jim Marschner

☐ Reverse side used for additional remarks and sketches.

Reviewed by:
☐ Engineer-in-Charge
☐ Resident Engineer

Date

Fax cc's:

BERGMANN
associates

*Remarks, Extra Work, Visitors, Comments, Work Stoppages, etc.*

*Site Visitors*

Bill Redden – City Of Rochester, Building Construction Inspection/Demolition.

- Bill was onsite for approx. 5 minutes. 1045 – 1050 Hrs.
- Ok with site activities.
- Wanted to see who was contracted to do the demo. Was happy to find out Sessler was doing the site work.
- No problems.

Richard Bianchi – Monroe County Pure Waters.

- Instructed Sessler on how to plug the sewer connection.
- Wanted to see the plug before backfilled.

| MANPOWER | | | | | | EQUIPMENT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | Prime | Sub | Sub | Sub | Sub | Type | Prime | Sub | Sub | Sub | Sub |
| Foreman - | 1 | | | | | Komatsu Track Wrecker | 1 | | | | |
| Operators - | 1 | | | | | Rolloff waste haulers | 3 | | | | |
| Laborers - | 1 | | | | | Support Vechiles | 2 | | | | |
| Trucking - | 3 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Fax cc's:

## DAILY FIELD REPORT

Date: 16 January 2003

JOB
**City of Rochester**
**1200 East Main Street**
**Rochester, NY**

Activities
**Building Demolition**

Day of Week:

| | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |

F.R. No.: 002

Sheet No. 1 of 2

| If pertinent to the Construction Operation | | |
|---|---|---|
| | AM | PM |
| Weather | Partly Sunny | Partly Sunny |
| Temperature | 20's | 20's |

DESCRIPTION OF WORK PERFORMED AND INSPECTED
Specify for Each Operation:

*Contractor Activities*

- 0730 Sessler Wrecking onsite to continue the demolition of the former Pick and Pay building.
- Continued masonry hauling to Sessler's facility for crushing.
- Continued removal of the floor slabs and building foundation. Grading and smoothing soils to finish the site work.
- Rich Bianchi of Monroe County Pure Waters indicated that the sewer pipe was to be plugged at the property line to the south. It was agreed that the pipe would be plugged on the north side of the side walk. This entailed additional digging by Sessler to complete this task.
- Plugged the sewer pipe as directed by Rich Bianchi of Monroe County Pure Waters.
- One partial load of waste remains.
- Complete waste hauling and remove equipment Thursday the 17th of January. Start at 7:30 am.

*Bergmann Activities*

- J. Marschner onsite at 0730.
- Continued photographing the demolition of the building.
- Observed the building area for drains, pits or other potential previously unidentified apparatus/items.
- Interfaced with the visitors listed below..
- All activities ended and contractors off site at 1330.
- J. Marschner staked the southern building corners, area of the sewer plug and the area of discolored soils.
- J. Marschner offsite at 1400.

| ITEM NO. | FS | ES | INTERIM QUANT. | FINAL QUANT. | QUANT. CHK. | DESCRIPTION OF WORK | COMPUTER | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | ENT | CHK |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

The work described was incorporated
into this project and was inspected by:

Signature
Jim Marschner
☐ Reverse side used for additional remarks and sketches.

Reviewed by:
☐ Engineer-in-Charge
☐ Resident Engineer

Date

BERGMANN
associates

Fax cc's:

*Remarks, Extra Work, Visitors, Comments, Work Stoppages, etc.*

*Site Visitors*

Richard Bianchi – Monroe County Pure Waters.

- Instructed Sessler on how to plug the sewer connection and that it must be done at the property line.
- Wanted to see the plug before backfilled.
- Ok'ed the plug and morter placement. Off site after completed.

| MANPOWER | | | | | | EQUIPMENT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | Prime | Sub | Sub | Sub | Sub | Type | Prime | Sub | Sub | Sub | Sub |
| Foreman - | | | | | | Komatsu Track Wrecker | 1 | | | | |
| Operators - | 1 | | | | | Rolloff waste haulers | 3 | | | | |
| Laborers - | | | | | | Support Vechiles | 1 | | | | |
| Trucking - | 3 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Fax cc's:

# DAILY FIELD REPORT

Date: 17 January 2003

Day of Week:

| | | | | | | |
|---|---|---|---|---|---|---|
| S | M | T | W | T | F | S |

F.R. No.: 003

Sheet No. 1 of 2

JOB
**City of Rochester**
**1200 East Main Street**
**Rochester, NY**

Activities
**Building Demolition**

| If pertinent to the Construction Operation | | |
|---|---|---|
| | AM | PM |
| Weather | Cloudy<br>Snowing | Cloudy<br>Snowing |
| Temperature | Teen's | Teen's |

DESCRIPTION OF WORK PERFORMED AND INSPECTED
Specify for Each Operation:

*Contractor Activities*

- 0730 Hrs. Sessler Wrecking onsite to complete the demolition of the former Pick and Pay building.
- Completed masonary loading and hauling to Sessler's facility for crushing.
- Graded and smoothing existing soils to finish the site work.
- Removing equipment from site.

*Bergmann Activities*

- J. Marschner onsite at 0730 Hrs.
- Observed the above activities.
- J. Marschner offsite at 0845 Hrs.

| ITEM NO. | FS | ES | INTERIM QUANT. | FINAL QUANT. | QUANT. CHK. | DESCRIPTION OF WORK | COMPUTER | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | ENT | CHK |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

The work described was incorporated
into this project and was inspected by:

Signature
Jim Marschner

☐ Reverse side used for additional remarks and sketches.

Reviewed by:

☐ Engineer-in-Charge
☐ Resident Engineer

Date

BERGMANN
associates

Fax cc's:

*Remarks, Extra Work, Visitors, Comments, Work Stoppages, etc.*

*Site Visitors*

None.

| MANPOWER | | | | | | EQUIPMENT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | Prime | Sub | Sub | Sub | Sub | Type | Prime | Sub | Sub | Sub | Sub |
| Foreman - | | | | | | Komatsu Track Wrecker | 1 | | | | |
| Operators - | 1 | | | | | Rolloff waste haulers | 1 | | | | |
| Laborers - | 2 | | | | | Support Vechiles | 1 | | | | |
| Trucking - | 1 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Fax cc's:

## DAILY FIELD REPORT

Date: 15 January 2003

Day of Week:

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|

F.R. No.: 001

Sheet No. 1 of 2

JOB
**City of Rochester**
**1200 East Main Street**
**Rochester, NY**

Activities
**Building Demolition**

| If pertinent to the Construction Operation | | |
|---|---|---|
| | AM | PM |
| Weather | Partly Cloudy | Partly Cloudy |
| Temperature | 20's | 20's |

DESCRIPTION OF WORK PERFORMED AND INSPECTED
Specify for Each Operation:

*Contractor Activities*

- 0730 Sessler Wrecking onsite to begin the demolition of the former Pick and Pay building.
- Set up and began to remove all wooden enclosures on the building.
- Began to identify the internal and external locations of the buildings disconnected utilities.
- Began the demolition of the building. Waste material was separated into C&D and Masonite piles.
- C&D material was hauled by Sessler to Mill Seat Landfill
- Masonry was hauled to Sessler's facility for crushing.
- Identified 2 Floor Slabs in the building. One 4 inch and one 8 inch.
- Uncovered a potential lift or pit area in the mid/eastern section of the building. There was no piston physically seen.
- Some piping in the area of the possible building bays. No signs of staining around pipe work or the location of the floor drain in the eastern section of the building
- Continue waste hauling and floor and foundation removal on Thursday the 16th of January. Start at 7:30 am.

*Bergmann Activities*

- J. Marschner onsite at 0715.
- Reviewed with Sessler the site and locations of the monitoring wells in the Demo area.
- Asked Sessler personnel to watch for and assist in identifying unknown utilities beneath the floor slab.
- Photographed the demolition of the building.
- Observed the building area for drains, pits or other potential previously unidentified apparatus/items.
- Interfaced with the visitors listed below.
- Identified an area of a former pit of lift pit, Piston did not appear to be present. Materials were surrounded by a cinderblock wall and the soils with in were discolored and blackened.
- Photographed the pit area in question.
- All activities ended and contractors off site at 1530.

| ITEM NO. | FS | ES | INTERIM QUANT. | FINAL QUANT. | QUANT. CHK. | DESCRIPTION OF WORK | COMPUTER | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | ENT | CHK |
| | | | | | | | | |

The work described was incorporated
into this project and was inspected by:

Signature
Jim Marschner

☐ Reverse side used for additional remarks and sketches.

Reviewed by:

☐ Engineer-in-Charge
☐ Resident Engineer

Date

Fax cc's:

*Remarks, Extra Work, Visitors, Comments, Work Stoppages, etc.*

*Site Visitors*

Bill Redden – City Of Rochester, Building Construction Inspection/Demolition.

- Bill was onsite for approx. 5 minutes. 1045 – 1050 Hrs.
- Ok with site activities.
- Wanted to see who was contracted to do the demo. Was happy to find out Sessler was doing the site work.
- No problems.

Richard Bianchi – Monroe County Pure Waters.

- Instructed Sessler on how to plug the sewer connection.
- Wanted to see the plug before backfilled.

| MANPOWER | | | | | | EQUIPMENT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | Prime | Sub | Sub | Sub | Sub | Type | Prime | Sub | Sub | Sub | Sub |
| Foreman - | 1 | | | | | Komatsu Track Wrecker | 1 | | | | |
| Operators - | 1 | | | | | Rolloff waste haulers | 3 | | | | |
| Laborers - | 1 | | | | | Support Vechiles | 2 | | | | |
| Trucking | 3 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Fax cc's: ____________ ____________

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# DAILY FIELD REPORT

Date: 16 January 2003

Day of Week: S M T W T F S

F.R. No.: 002

Sheet No. 1 of 2

JOB
**City of Rochester**
**1200 East Main Street**
**Rochester, NY**

Activities
**Building Demolition**

| If pertinent to the Construction Operation | AM | PM |
|---|---|---|
| Weather | Partly Sunny | Partly Sunny |
| Temperature | 20's | 20's |

DESCRIPTION OF WORK PERFORMED AND INSPECTED
Specify for Each Operation:

*Contractor Activities*

- 0730 Sessler Wrecking onsite to continue the demolition of the former Pick and Pay building.
- Continued masonry hauling to Sessler's facility for crushing.
- Continued removal of the floor slabs and building foundation. Grading and smoothing soils to finish the site work.
- Rich Bianchi of Monroe County Pure Waters indicated that the sewer pipe was to be plugged at the property line to the south. It was agreed that the pipe would be plugged on the north side of the side walk. This entailed additional digging by Sessler to complete this task.
- Plugged the sewer pipe as directed by Rich Bianchi of Monroe County Pure Waters.
- One partial load of waste remains.
- Complete waste hauling and remove equipment Thursday the 17th of January. Start at 7:30 am.

*Bergmann Activities*

- J. Marschner onsite at 0730.
- Continued photographing the demolition of the building.
- Observed the building area for drains, pits or other potential previously unidentified apparatus/items.
- Interfaced with the visitors listed below..
- All activities ended and contractors off site at 1330.
- J. Marschner staked the southern building corners, area of the sewer plug and the area of discolored soils.
- J. Marschner offsite at 1400.

| ITEM NO. | FS | ES | INTERIM QUANT. | FINAL QUANT. | QUANT. CHK. | DESCRIPTION OF WORK | COMPUTER | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | ENT | CHK |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

The work described was incorporated
into this project and was inspected by:

Signature
Jim Marschner
☐ Reverse side used for additional remarks and sketches.

Reviewed by: ____________
☐ Engineer-in-Charge
☐ Resident Engineer

Date

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associates

Fax cc's:

*Remarks, Extra Work, Visitors, Comments, Work Stoppages, etc.*

*Site Visitors*

Richard Bianchi – Monroe County Pure Waters.

- Instructed Sessler on how to plug the sewer connection and that it must be done at the property line.
- Wanted to see the plug before backfilled.
- Ok'ed the plug and morter placement. Off site after completed.

| MANPOWER | | | | | | EQUIPMENT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | Prime | Sub | Sub | Sub | Sub | Type | Prime | Sub | Sub | Sub | Sub |
| Foreman - | | | | | | Komatsu Track Wrecker | 1 | | | | |
| Operators - | 1 | | | | | Rolloff waste haulers | 3 | | | | |
| Laborers - | | | | | | Support Vechiles | 1 | | | | |
| Trucking | 3 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Fax cc's: ________ ________
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# DAILY FIELD REPORT

Date: 17 January 2003

Day of Week: S M T W T F S

F.R. No.: 003

Sheet No. 1 of 2

JOB
**City of Rochester**
**1200 East Main Street**
**Rochester, NY**

Activities
**Building Demolition**

| If pertinent to the Construction Operation | AM | PM |
|---|---|---|
| Weather | Cloudy<br>Snowing | Cloudy<br>Snowing |
| Temperature | Teen's | Teen's |

DESCRIPTION OF WORK PERFORMED AND INSPECTED
Specify for Each Operation:

*Contractor Activities*

- 0730 Hrs. Sessler Wrecking onsite to complete the demolition of the former Pick and Pay building.
- Completed masonary loading and hauling to Sessler's facility for crushing.
- Graded and smoothing existing soils to finish the site work.
- Removing equipment from site.

*Bergmann Activities*

- J. Marschner onsite at 0730 Hrs.
- Observed the above activities.
- J. Marschner offsite at 0845 Hrs.

| ITEM NO. | FS | ES | INTERIM QUANT. | FINAL QUANT. | QUANT. CHK. | DESCRIPTION OF WORK | COMPUTER | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | ENT | CHK |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

The work described was incorporated
into this project and was inspected by:

Signature
Jim Marschner

☐ Reverse side used for additional remarks and sketches.

Reviewed by:

☐ Engineer-in-Charge
☐ Resident Engineer

Date

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associates

Fax cc's:

*Remarks, Extra Work, Visitors, Comments, Work Stoppages, etc.*

*Site Visitors*

| MANPOWER | | | | | | EQUIPMENT | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | Prime | Sub | Sub | Sub | Sub | Type | Prime | Sub | Sub | Sub | Sub |
| Foreman - | | | | | | Komatsu Track Wrecker | 1 | | | | |
| Operators - | 1 | | | | | Rolloff waste haulers | 1 | | | | |
| Laborers - | 2 | | | | | Support Vechiles | 1 | | | | |
| Trucking | 1 | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Fax cc's:

# APPENDIX 4

# 2003 Test Trench and Field Screening Logs

**TT-1**
Location Number

# Test Trench Log

By: E. Jones Date: 06/18/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
45 x 4 x 3 = 540 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample | | Field Screening | | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| | | No. | Depth (Ft) | PPM | Odor | | |
| -0.5 | | | | | | | |
| 0 | 0.3 | | 0.0 | ND | | Asphalt | Collected soil sample |
| 0.5 | 0.7 | | | | | Subbase | from the east end |
| 1 | | | 1.0 | ND | | Native soil encountered at 1.0 feet below grade. | of this trench. |
| 1.5 | | | | | | | |
| 2 | | | 2.0 | ND | | Brown SILT trace sand with gravel and bolders. | No odors |
| 2.5 | | | | ND | | | or detected VOCs |
| 3 | | | 3.0 | ND | | | in this test trench. |
| 3.5 | | | | | | Bottom of excavation at 3.0 feet. | |
| 4 | | | | | | Continued excavation 45 feet to the west, near the fence. | |
| 4.5 | | | | | | | |
| 5 | | | | | | Found 1/2 inch dia. steel electrical conduit with 2 wires inside. | |
| 5.5 | | | | | | Feed wire for light pole previously at southeast | |
| 6 | | | | | | corner of the property. The steel conduit was the | |
| 6.5 | | | | | | source of the metal detector anomaly at this location. | |
| 7 | | | | | | | |
| 7.5 | | | | | | Also encountered a 1/4 inch dia. copper line in the trench. | |
| 8 | | | | | | May have been for an pneumatic air line. | |
| 8.5 | | | | | | | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | | | | |
| 13.5 | | | | | | | |
| 14 | | | | | | | |
| 14.5 | | | | | | | |
| 15 | | | | | | | |

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**TT-2**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/17/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
20.0 x 4 x 6.0 = 480 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample No. | Sample Depth (Ft) | Field Screening PPM | Field Screening Odor | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| -0.5 | | | | | | | |
| 0 | 0.2 | | | ND | | Asphalt | |
| 0.5 | | | | | | Brown gravely SILT trace sand. Damp | |
| 1 | | | | | | | |
| 1.5 | 1.7 | | | | | | Sampled 1.7 to 2.8'. |
| 2 | | | 1.7 | | | Brown SILT trace sand some gravel | Slight weathered |
| 2.5 | 2.8 | | 2.8 | 0.2 | | | petro odor. |
| 3 | | | | | | Gray m to f Sand. | |
| 3.5 | | | | | | | |
| 4 | | | | | | | |
| 4.5 | | | | ND | | | |
| 5 | 5.0 | | | | | | |
| 5.5 | | | | | | Brown Silt trace sand with gravel and bolders. Damp to moist | |
| 6 | | | | | | Bottom of excavation at 6.0 feet. | |
| 6.5 | | | | | | | |
| 7 | | | | | | | |
| 7.5 | | | | | | | |
| 8 | | | | | | | |
| 8.5 | | | | | | | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | | | | |
| 13.5 | | | | | | | |
| 14 | | | | | | | |
| 14.5 | | | | | | | |
| 15 | | | | | | | |

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**TT-3**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/17/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
10.0 x 4 x 5 = 200 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample No. | Sample Depth (Ft) | Field Screening PPM | Field Screening Odor | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| -0.5 | | | | | | | |
| 0 | 0.3 | | 0.0 | ND | | Asphalt | |
| 0.5 | 0.7 | | | | | Subbase | Sampled 0.0 to 3.0'. |
| 1 | | | | | | | South Mid wall |
| 1.5 | | | | | | | |
| 2 | | | | | | Brown SILT trace sand with gravel and bolders. | |
| 2.5 | | | 3.0 | ND | | | |
| 3 | | | | | | | |
| 3.5 | | | | | | | |
| 4 | | | | | | | |
| 4.5 | | | | | | | |
| 5 | 5.0 | | | | | | |
| 5.5 | | | | | | Bottom of excavation at 5.0 feet. | |
| 6 | | | | | | | |
| 6.5 | | | | | | | |
| 7 | | | | | | Found metal electrical conduit with 2 wires inside. | |
| 7.5 | | | | | | Feed wire for light pole on property? | |
| 8 | | | | | | | |
| 8.5 | | | | | | | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | | | | |
| 13.5 | | | | | | | |
| 14 | | | | | | | |
| 14.5 | | | | | | | |
| 15 | | | | | | | |

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**TT-4**
Location Number

By: J. Marschner Date: 06/17-20/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
5 x 4 x 10.0 = 200 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample | | Field Screening | | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| | | No. | Depth (Ft) | PPM | Odor | | |
| -0.5 | | | | | | | |
| 0 | 0.3 | | | ND | | Asphalt | |
| 0.5 | | | | | | Subbase 0.3 feet | |
| 1 | | | | | | Fill material, re-worked sand and gravel-type fill. | |
| 1.5 | | | | | | | |
| 2 | | | | | | | |
| 2.5 | 2.8 | | | ND | | Top of 275 gallon buried UST at 2.8 feet. | |
| 3 | | | | | | Tank Found in TP Location approx. 2.8 feet below surface. | |
| 3.5 | | | | | | Top port and stand pipe heads south into former building location. | |
| 4 | | | | | | Tank is oval, 58 Inches long | Sample TT-4 from |
| 4.5 | | | | | | | pit bottom, 5 - 5.5 ft. |
| 5 | | | | | | Bottom of UST pit at 5 feet below grade. Sample TT-4A | Sample TT-4A @ 5.0 ft. |
| 5.5 | 5.0 | | | | | collected from residual UST Pit soil at 5.0 feet 5.0 ft | Sidewalls of test trench |
| 6 | | | | | | No evidence of staining or contamination at 5.0 ft. | Native soil beneath UST |
| 6.5 | | | | | | Sample TT-4 collected from beneath the UST, | at 5.0 feet |
| 7 | | | | | | from 5.0' to 5.5' below grade. No staining or odor. | |
| 7.5 | | | | | | Continued excavation of test trench TT-4 after removal | |
| 8 | | | | | | of the 275 gallon UST. No evidence of staining | |
| 8.5 | | | | | | Black, oily-like layer encountered at 8.0 feet below grade: | |
| 9 | | | | | | Weathered petroleum odor. Sampled 8' - 9' feet for TT-4B | Sample TT-4B from |
| 9.5 | | | | | | No VOCs field screening, but oily odor. | black-oil layer, 8'-9' |
| 10 | | | | | | Bottom of excavation at 10 feet, near top of rock 10 ft | |
| 10.5 | | | | | | Approximate Top of bedrock. | |
| 11 | | | | | | | |
| 11.5 | | | | | | Notes: | |
| 12 | | | | | | 1. Digging stopped to make arraignments to handle tank. | |
| 12.5 | | | | | | 2. Tank appears in poor shape with pitting and holes. | |
| 13 | | | | | | 3. Water in tank to 2.6' | |
| 13.5 | | | | | | 4. Sludge on bottom of UST ~3 to 4 inches. | |
| 14 | | | | | | 5. Collected 3 soil samples for laboratory analysis. | |
| 14.5 | | | | | | 6. The 275 gallon UST was removed on June 20, 2003 | |
| 15 | | | | | | 7. Bob Long (NYSDEC) onsite and Fire Marshall on-site during UST removal | |

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**TT-5**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/17/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
13 x 4 x 3.0 = 156 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth | Strat | Sample | | Field Screening | | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| (Ft) | Change | No. | Depth (Ft) | PPM | Odor | | |
| -0.5 | | | | | | | |
| 0 | | | 0.3 | ND | | Dark bown to gray SILT trace sand little gravel. | |
| 0.5 | | | | | | Damp. | Sampled 0.3 to 1.7'. |
| 1 | | | | | | | East Mid wall |
| 1.5 | 1.7 | | 1.7 | | | -Fill- | |
| 2 | | | | | | | |
| 2.5 | | | | | | Native Soil. | No Metal Encountered |
| 3 | | | | ND | | | other than small amount |
| 3.5 | | | | | | Bottom of excavation at 3.0 feet | of wire. |
| 4 | | | | | | | |
| 4.5 | | | | | | | |
| 5 | | | | | | | |
| 5.5 | | | | | | | |
| 6 | | | | | | | |
| 6.5 | | | | | | | |
| 7 | | | | | | | |
| 7.5 | | | | | | | |
| 8 | | | | | | | |
| 8.5 | | | | | | | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | | | | |
| 13.5 | | | | | | | |
| 14 | | | | | | | |
| 14.5 | | | | | | | |
| 15 | | | | | | | |

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**TT-6**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/17/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
30 x 4.0 x 14.6 = 1,752 CUFT
(L) (W) (D) Pit Size:

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample No. | Sample Depth (Ft) | Field Screening PPM | Field Screening Odor | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| -0.5 | | | | | | | |
| 0 | | | 1.0 | | | Dark bown to gray SILT trace sand little gravel and bolders. | |
| 0.5 | | | | | | Damp. | Sampled 0.0 to 2.0'. |
| 1 | 1.3 | | | ND | | -Fill- | South Mid wall |
| 1.5 | | | | | | | |
| 2 | | | 2.0 | | | | No Metal Encountered |
| 2.5 | | | | | | | other than a metal |
| 3 | | | | | | | pail handle. |
| 3.5 | | | | | | | |
| 4 | | | | | | | |
| 4.5 | | | | | | | |
| 5 | | | | | | | |
| 5.5 | | | | ND | | Brown SILT trace sand with gravel and bolders. | |
| 6 | | | | | | Damp to moist | |
| 6.5 | | | | | | | |
| 7 | | | | | | | |
| 7.5 | | | | | | | |
| 8 | | | | | | | |
| 8.5 | | | | | | | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | ND | | Groundwater at top of rock. | |
| 13.5 | | | | | | Top of Rock @ 14.6 feet | |
| 14 | | | | | | Excavated trench until top of rock encountered. | |
| 14.5 | | | | | | Trench backfilled after sampling. | |
| 15 | | | | | | | |

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**TT-7**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/16/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
20 x 4 x 13.0 = 1,040 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample No. | Sample Depth (Ft) | Field Screening PPM | Field Screening Odor | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| -0.5 | | | | | | | |
| 0 | | | | ND | | Dark bown to gray SILT trace sand and gravel with | |
| 0.5 | | | | | | rootlets. Some brick and wood. | Sampled 2.5 to 3.0'. |
| 1 | | | | | | Dry to Damp. | South Mid wall |
| 1.5 | | | | | | | |
| 2 | | | | | | | |
| 2.5 | | | 2.5 | | | | |
| 3 | | | 3.0 | ND | | ~2.8' small clod of soil with petro odor. | |
| 3.5 | 3.5 | | | | | -Fill- | |
| 4 | | | | | | | |
| 4.5 | | | | | | | |
| 5 | | | | | | | |
| 5.5 | | | | ND | | Brown SILT trace fine sand with gravel. Damp to moist | |
| 6 | | | | | | | |
| 6.5 | | | | | | | |
| 7 | | | | | | | |
| 7.5 | | | | | | | |
| 8 | | | | | | | |
| 8.5 | | | | | | | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | ND | | Groundwater at top of rock. | |
| 13.5 | | | | | | Top of Rock @ 13.0 feet | |
| 14 | | | | | | | |
| 14.5 | | | | | | | |
| 15 | | | | | | | |

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**TT-8**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/16/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
30 x 4 x 13.5 = 1620 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample |  | Field Screening |  | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
|  |  | No. | Depth (Ft) | PPM | Odor |  |  |
| -0.5 |  |  |  |  |  |  |  |
| 0 |  |  | 0.0 | ND |  | Bown to gray SILTsome sand and gravel |  |
| 0.5 |  |  |  |  |  | organic & roots. Damp | Sampled 0 to 3.0'. |
| 1 |  |  |  |  |  |  | North Wall |
| 1.5 | 1.5 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 2.5 |  |  |  |  |  |  |  |
| 3 |  |  | 3.0 |  |  |  |  |
| 3.5 |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |
| 4.5 |  |  |  | ND |  | Brown SILT trace sand with gravel & bolders. Moist |  |
| 5 |  |  |  |  |  |  |  |
| 5.5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |
| 6.5 |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |
| 7.5 |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |
| 8.5 |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |
| 9.5 |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |
| 10.5 |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |
| 11.5 |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |
| 12.5 |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |
| 13.5 |  |  |  | ND |  | Redish sandstone. Wet on top of rock. |  |
| 14 |  |  |  |  |  | Top of Rock @ 13.5 feet |  |
| 14.5 |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |

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**TT-9**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/16/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
30 x 4 x 14.6 = 1752 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample No. | Sample Depth (Ft) | Field Screening PPM | Field Screening Odor | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| -0.5 | | | | | | | |
| 0 | | | | ND | | Bown to gray SILTsome sand and gravel | |
| 0.5 | | | | | | organic & roots, brick and occasional glass fragments. | Sampled 1 to 3.4'. |
| 1 | | | | | | Damp. | around drum location |
| 1.5 | | | 1.0 | | | | |
| 2 | | | | ND | | Drum found at 2.0', damaged and soil inside. | |
| 2.5 | | | | | | No PID readings or staining. | |
| 3 | 3.4 | | 3.4 | | | -Fill- | |
| 3.5 | | | | | | | |
| 4 | | | | | | | |
| 4.5 | | | | | | Brown SILT trace sand with gravel & bolders. Moist | |
| 5 | | | | | | | |
| 5.5 | | | | ND | | | |
| 6 | | | | | | | |
| 6.5 | | | | | | | |
| 7 | | | | | | | |
| 7.5 | | | | | | | |
| 8 | | | | | | | |
| 8.5 | | | | | | | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | | | | |
| 13.5 | | | | | | | |
| 14 | | | | | | | |
| 14.5 | | | | ND | | Groundwater at approx. 14.3 feet. | |
| 15 | | | | | | Top of Rock @ 14.6 feet | |

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**TT-10**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/16/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
12 x 4 x 4.5 = 216 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample |  | Field Screening |  | Sample Description<br>(Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
|  |  | No. | Depth (Ft) | PPM | Odor |  |  |
| -0.5 |  |  |  |  |  |  |  |
| 0 |  |  | 0.0 | ND |  | Dark bown to gray SILT trace sand and gravel with |  |
| 0.5 |  |  |  |  |  | some brick and metal doors. | Sampled 0.0 to 3.5'. |
| 1 |  |  |  |  |  | Dry to Damp. | South Mid wall |
| 1.5 |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  | Metal doors appear to be from heating unit. |  |
| 2.5 |  |  |  |  |  | doors are the source of the metal |  |
| 3 |  |  |  | ND |  | detector anomaly |  |
| 3.5 |  |  | 3.5 |  |  | -Fill- |  |
| 4 |  |  |  |  |  |  |  |
| 4.5 |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  | Top of native soil at 4.5 feet. |  |
| 5.5 |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |
| 6.5 |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |
| 7.5 |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |
| 8.5 |  |  |  |  |  |  |  |
| 9 |  |  |  |  |  |  |  |
| 9.5 |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |
| 10.5 |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |
| 11.5 |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |
| 12.5 |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |
| 13.5 |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |
| 14.5 |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |

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TT-11
Location Number

# Test Trench Log

By: J. Marschner Date: 06/16/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
10 x 4 x 14.6 = 584 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample No. | Sample Depth (Ft) | Field Screening PPM | Field Screening Odor | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| -0.5 | | | | | | | |
| 0 | | | 0.0 | ND | | Bown SILTsome sand with rootlets and gravel layer. | |
| 0.5 | | | | | | Dry to Damp. | Sampled 3 to 4.5'. |
| 1 | | | | | | | South Mid wall |
| 1.5 | | | | | | | |
| 2 | | | | ND | | | |
| 2.5 | | | | | | | |
| 3 | | | | | | | |
| 3.5 | | | | | | | |
| 4 | | | 4.0 | | | | |
| 4.5 | 4.5 | | | | | -Fill- | |
| 5 | | | | | | | |
| 5.5 | | | | ND | | Brown SILT trace fine sand with gravel. Damp to moist | |
| 6 | | | | | | | |
| 6.5 | | | | | | | |
| 7 | | | | | | | |
| 7.5 | | | | | | | |
| 8 | | | | | | | |
| 8.5 | | | | | | | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | | | | |
| 13.5 | | | | | | | |
| 14 | | | | | | | |
| 14.5 | | | | ND | | Groundwater at top of rock. | |
| 15 | | | | | | Top of Rock @ 14.6 feet | |

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**TT-12**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/17/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
40 x 4 x 14.2 = 2,272 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample | | Field Screening | | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| | | No. | Depth (Ft) | PPM | Odor | | |
| -0.5 | | | | | | | |
| 0 | | | | | | Soil/Asphalt Cover | |
| 0.5 | 1 | | | ND | | Brown to gray SILT some sand and gravel. Dry to Damp. | Sampled 1.0 to 2.4'. |
| 1 | | | | | | | for first sample, TT-12 |
| 1.5 | | | | | | Dark gray to black SILT, some sand. Damp | |
| 2 | | | | ND | | With wood, tires, pipe Tee and bricks. | No Metal Encountered |
| 2.5 | 2.4 | | | | | | other than a metal |
| 3 | | | | | | | pail handle. |
| 3.5 | | | | | | | |
| 4 | | | | ND | | Brown Silt, trace sand with gravel and bolders. | |
| 4.5 | | | | | | Damp to moist. | |
| 5 | | | | | | | |
| 5.5 | | | | | | | |
| 6 | | | | | | | |
| 6.5 | | | | | | | |
| 7 | | | | | | | |
| 7.5 | | | | | | | |
| 8 | | | | | | | |
| 8.5 | | | | | | | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | Collected 2nd soil sample, |
| 11.5 | | | | | | | sample TT-12A, of |
| 12 | | | | | | | wet material south end |
| 12.5 | | | | | | | of trench, at bottom. |
| 13 | | | | | | | Sheen on groundwater |
| 13.5 | | | | | | | south end of excavation. |
| 14 | 14.2 | | | 0.2 | | Groundwater at top of rock. | |
| 14.5 | | | | | | Top of Rock @ 14.2 feet | |
| 15 | | | | | | | |

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**TT-13**
Location Number

# Test Trench Log

By: E.Jones Date: 06/18/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
20 x 4 x 11 = 880 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample No. | Sample Depth (Ft) | Field Screening PPM | Field Screening Odor | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| -0.5 | 0.3 | | | | | | |
| 0 | 0.7 | | | | | Weathered Asphalt Cover | |
| 0.5 | | | | ND | | | |
| 1 | | | | | | | |
| 1.5 | | | | | | | |
| 2 | | | | ND | | Fill consisting of re-worked Brown Silt, Sand | No Metal Encountered |
| 2.5 | | | | | | and gravel | in Test Trench |
| 3 | | | | | | | |
| 3.5 | | | | | | | |
| 4 | | | | ND | | | |
| 4.5 | | | | | | Encountered old sewer lateral in the fill at 5.0 feet | |
| 5 | 5' | | | ND | | fill ends about 5 feet below grade. | Sampled at 5' |
| 5.5 | | | | | | No odor, No VOCs along sewer lateral pipe | for first sample, TT-13 |
| 6 | | | | | | Brown Silt, trace sand with gravel and bolders | by sewer lateral pipe |
| 6.5 | | | | | | Damp to moist. | |
| 7 | | | | 48 PPM | | Begin to obtain measurable VOCs in soil samples at 8.0 feet | |
| 7.5 | | | | | | | |
| 8 | | | | 48 PPM | | | Collected 2nd soil sample, |
| 8.5 | | | | | | | sample TT-13A, |
| 9 | | | | | | | from oily texture soil |
| 9.5 | | | | | | | at 8.0 feet |
| 10 | | | | | | Grey, discolored soil at 10' 6". | |
| 10.5 | | | | | | Oily texture and weathered gasoline odor noticed. | |
| 11 | | | | | | Bottom of excavation at 11' | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | | | | |
| 13.5 | | | | | | | |
| 14 | | | | | | | |
| 14.5 | | | | | | | |
| 15 | | | | | | | |

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**Foundation #1**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/18/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
5 x 4 x 10.0 = 200 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample No. | Sample Depth (Ft) | Field Screening PPM | Field Screening Odor | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| -0.5 | | | | | | | |
| 0 | 0.2 | | | ND | | Asphalt and concrete pad. | |
| 0.5 | 0.6 | | | | | Subbase | |
| 1 | | | | | | Brown SILT, trace sand and gravel with large rock. | |
| 1.5 | 1.6 | | | | | Damp to moist. | |
| 2 | | | | | | | |
| 2.5 | | | | | | | |
| 3 | | | | | | | |
| 3.5 | | | 3.5 | ND | | | Sampled 3.5'. |
| 4 | | | | | | | By pipe in south east |
| 4.5 | | | | | | | corner |
| 5 | | | | | | | |
| 5.5 | | | | | | Bottom of excavation at 5.4 feet. | |
| 6 | | | | | | | |
| 6.5 | | | | | | | |
| 7 | | | | | | Pipe found in foundation area. | |
| 7.5 | | | | | | Former line to pump island? No odors or residues. | |
| 8 | | | | | | | |
| 8.5 | | | | | | | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | | | | |
| 13.5 | | | | | | | |
| 14 | | | | | | | |
| 14.5 | | | | | | | |
| 15 | | | | | | | |

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**Foundation #2**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/18/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:
USGS Quad.: Location: 1200 E. Main Street Weather:

Pit Size:
10 x 4 x 5.4 = 216 CUFT
(L) (W) (D)

General Soil and Geologic Setting Information
USDA Soil Series/Phase: Slope:
Parent Material/Bedrock: Vegetation:
Physiography: Moisture Status:

| Depth (Ft) | Strat Change | Sample No. | Sample Depth (Ft) | Field Screening PPM | Field Screening Odor | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| -0.5 | | | | | | | |
| 0 | | | | ND | | Former Floor Slab at lift pit area. | |
| 0.5 | | | | | | Subbase | Sampled 3.0'. |
| 1 | 1 | | | | | | |
| 1.5 | | | | | | Brown SILT, trace sand and gravel with large rock. | |
| 2 | | | | | | Damp to moist. | |
| 2.5 | | | | ND | | | |
| 3 | | | 3.0 | | | Dark Gray stained SILT. | |
| 3.5 | | | | | | Majority of stained soil was located on the lift pit pad | |
| 4 | | | | | | within the cinder blocks. | |
| 4.5 | | | | | | | |
| 5 | | | | | | | |
| 5.5 | | | | | | Excavation stopped at 5.0 feet. | |
| 6 | | | | | | | |
| 6.5 | | | | | | | |
| 7 | | | | | | Removed cinder blocks and lift pit pad (2'X6'). | |
| 7.5 | | | | | | | |
| 8 | | | | | | Removed dark gray stained soil. | |
| 8.5 | | | | | | Placed on and covered with plastic. | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | | | | |
| 13.5 | | | | | | | |
| 14 | | | | | | | |
| 14.5 | | | | | | | |
| 15 | | | | | | | |

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**Foundation #3**
Location Number

# Test Trench Log

By: J. Marschner Date: 06/18/03 Project: City of Rochester Project No.: 4453.02
Contractor: SLC Environmental Services Elevation:________
USGS Quad.:________ Location: 1200 E. Main Street Weather:________

Pit Size:
__x__x__=__ CUFT
(L) (W) (D)

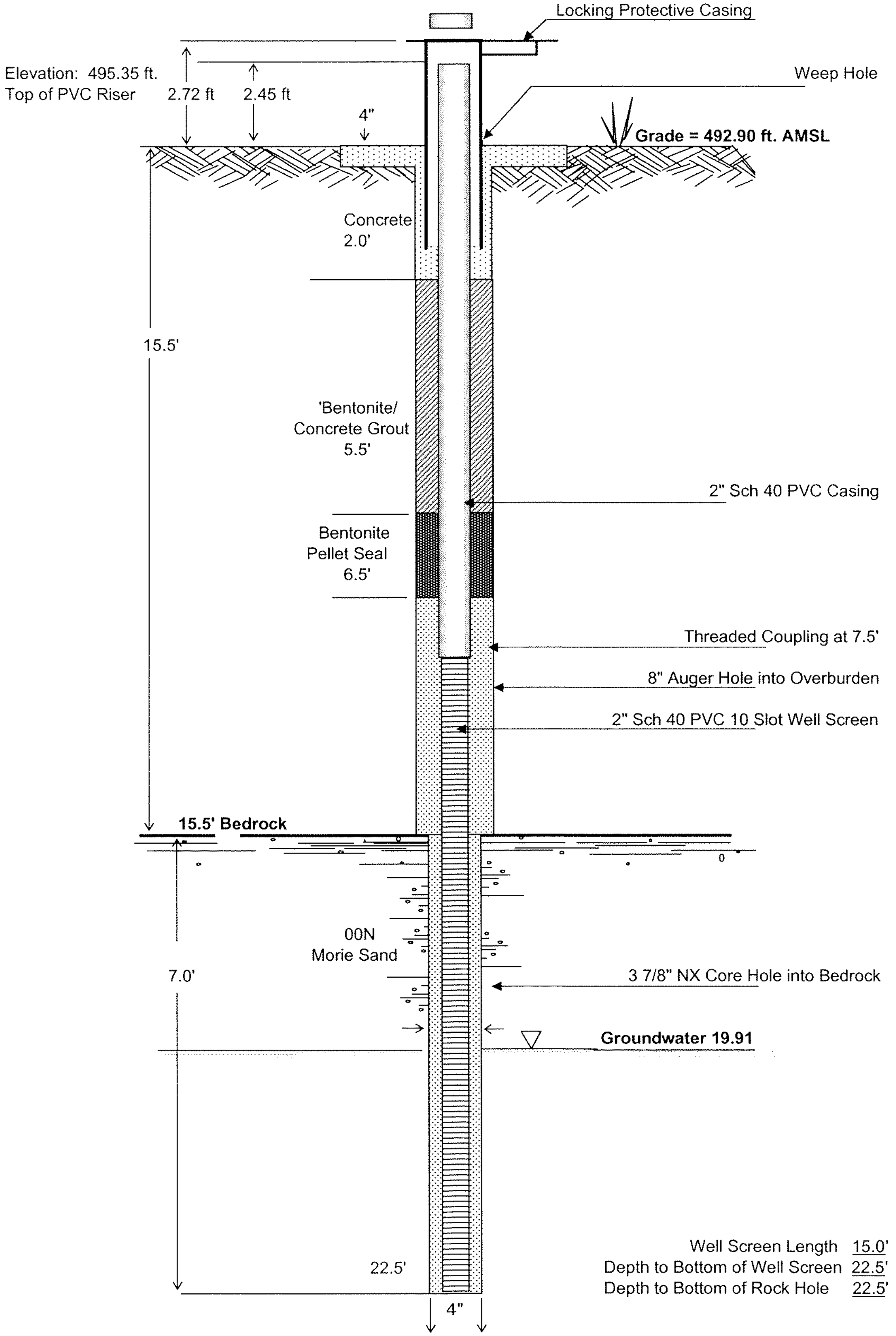
General Soil and Geologic Setting Information
USDA Soil Series/Phase:________ Slope:________
Parent Material/Bedrock:________ Vegetation:________
Physiography:________ Moisture Status:________

| Depth (Ft) | Strat Change | Sample | | Field Screening | | Sample Description (Color, texture, structure, consistency, root depth, pores/voids, horizon boundary, percent/size/angularity of course fragments) | Stratigraphic Log |
|---|---|---|---|---|---|---|---|
| | | No. | Depth (Ft) | PPM | Odor | | |
| -0.5 | | | | | | | |
| 0 | | | | | | | |
| 0.5 | | | | | | Fill with brick and blocks | |
| 1 | 1 | | | | | | |
| 1.5 | | | | ND | | | |
| 2 | | | | | | | |
| 2.5 | | | | | | | |
| 3 | | | | | | | |
| 3.5 | | | | ND | | Brown SILT, trace sand with gravel & rocks. | |
| 4 | | | 4.0 | | | | Sampled ~4.0'. |
| 4.5 | | | | | | | |
| 5 | | | | | | | |
| 5.5 | 5.5 | | | | | | |
| 6 | | | | | | Excavation stopped at 5.5 feet. | |
| 6.5 | | | | | | | |
| 7 | | | | | | | |
| 7.5 | | | | | | | |
| 8 | | | | | | | |
| 8.5 | | | | | | | |
| 9 | | | | | | | |
| 9.5 | | | | | | | |
| 10 | | | | | | | |
| 10.5 | | | | | | | |
| 11 | | | | | | | |
| 11.5 | | | | | | | |
| 12 | | | | | | | |
| 12.5 | | | | | | | |
| 13 | | | | | | | |
| 13.5 | | | | | | | |
| 14 | | | | | | | |
| 14.5 | | | | | | | |
| 15 | | | | | | | |

# APPENDIX 5

# Boring Logs and Well Construction Details

## STICKUP MONITORING WELL
## MW-1



Profile Description

2.0' to 4.0'
Brown sandy silty Clay
no gravel, homogenous,
moist.

4.0' to 6.0'
sandy Clay.
rock in the end of spoon.

6.0' to 8.0'
Brown sandy silty Clay,
trace gravel, moist.

8.0' to 10.0'
Brown sandy Clay,
trace gravel some silt, wet.

10.0' to 12.0'
Brown sandy Clay,
trace gravel, wet.

12.0' to 14.0'
Brown sandy Clay,
trace gravel,wet.
Some Discoloration.

14.0' to 15.5'
Some clay, silt, gravel
and wet.
Discoloration.

15.5; to 18.0'
Decent Core sample.
Little verticle fracturing.

18.0' to 20.0'
Some horizontal fracturing

Core Recovery
76"/84"=90%

RQD
51.75"/84"=62%

20.0' to 22.5'
Smooth surfaced
laminated bedding
medium hard rock.

Bottom of Core at 22.5'.

|  |  |
|---|---|
| Well Screen Length | 15.0' |
| Depth to Bottom of Well Screen | 22.5' |
| Depth to Bottom of Rock Hole | 22.5' |

**NOT TO SCALE**

BERGMANN
associates

1200 East Main Street
City of Rochester, Monroe County, NY

# OVERBURDEN / BEDROCK INTERFACE
# MW-1 MONITORING WELL CONSTRUCTION

Date Installed
6-Jul-00

Figure
Well MW-1

## STICKUP MONITORING WELL
## MW-2

Profile Description

2.0' to 4.0'
sandy Silt, with
cobbles.
No odor or staining.

4.0' to 6.0'
silty Sand.
No odor or staining.

6.0' to 8.0'
Sandy material
No odor or staining.

8.0' to 10.0'
Sand, with gravel, wet.
No odor or staining.

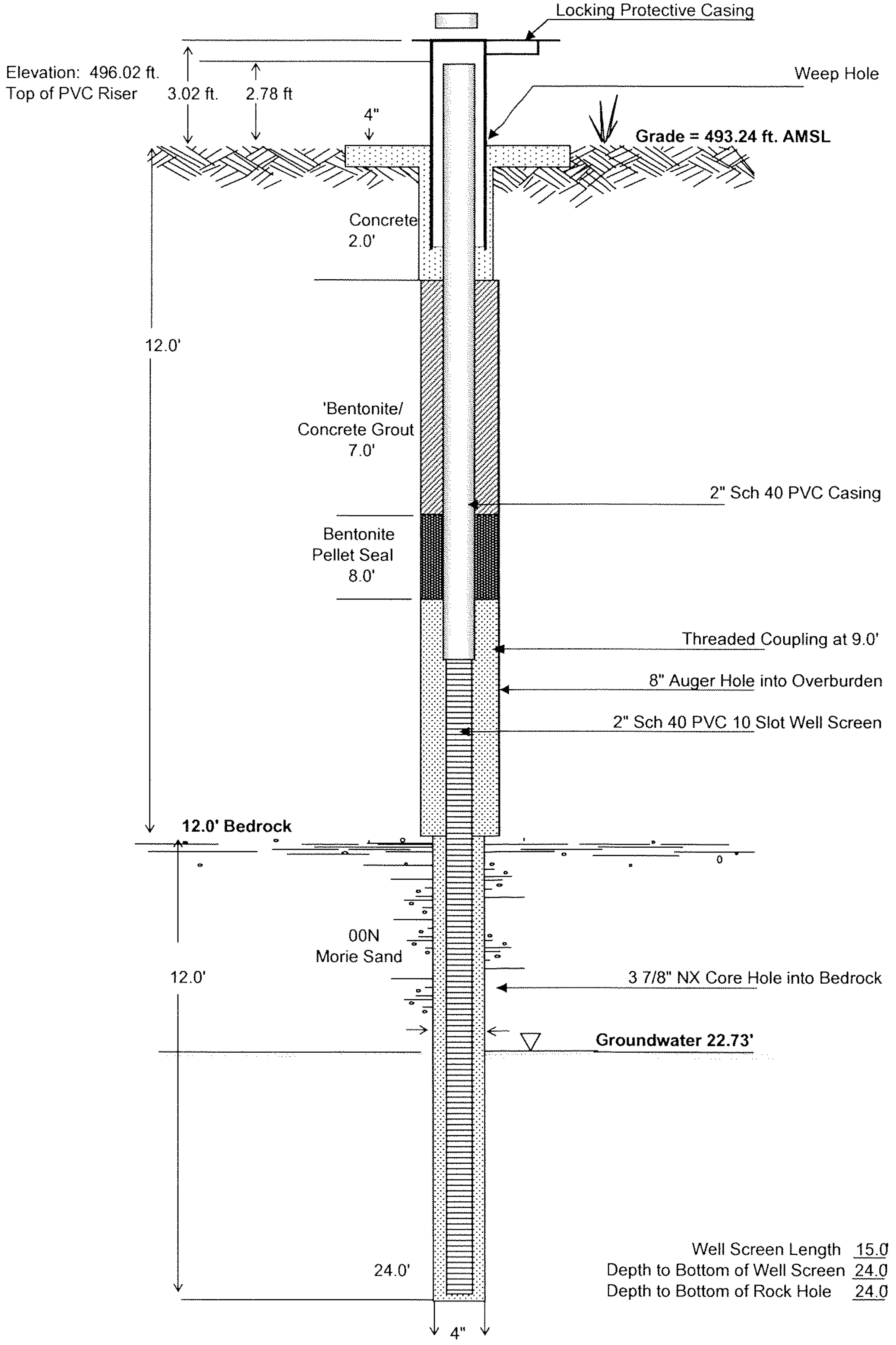
10.0' to 12.0'
Sand, with gravel, wet.

12.0' to 24.0'
No visible signs of
weekness or deteriation.
Except in the 17.9' to 18.0'
range, rock is crumbled.

No visible signs of verticle
stressing or cracking.

Core shows no signs of
discoloration.

Bottom of core at 24.0'.



Well Screen Length 15.0
Depth to Bottom of Well Screen 24.0
Depth to Bottom of Rock Hole 24.0

NOT TO SCALE

BERGMANN
associates

1200 East Main Street
City of Rochester, Monroe County, NY

## OVERBURDEN / BEDROCK INTERFACE
## MW-2 MONITORING WELL CONSTRUCTION

Date Installed
7-Jul-00

Figure
Well MW-2

# FLUSHMOUNT MONITORING WELL
## MW-3

Profile Description

2.0 to 13.0 ft
Mostly sandy Clay, some silt no gravel.

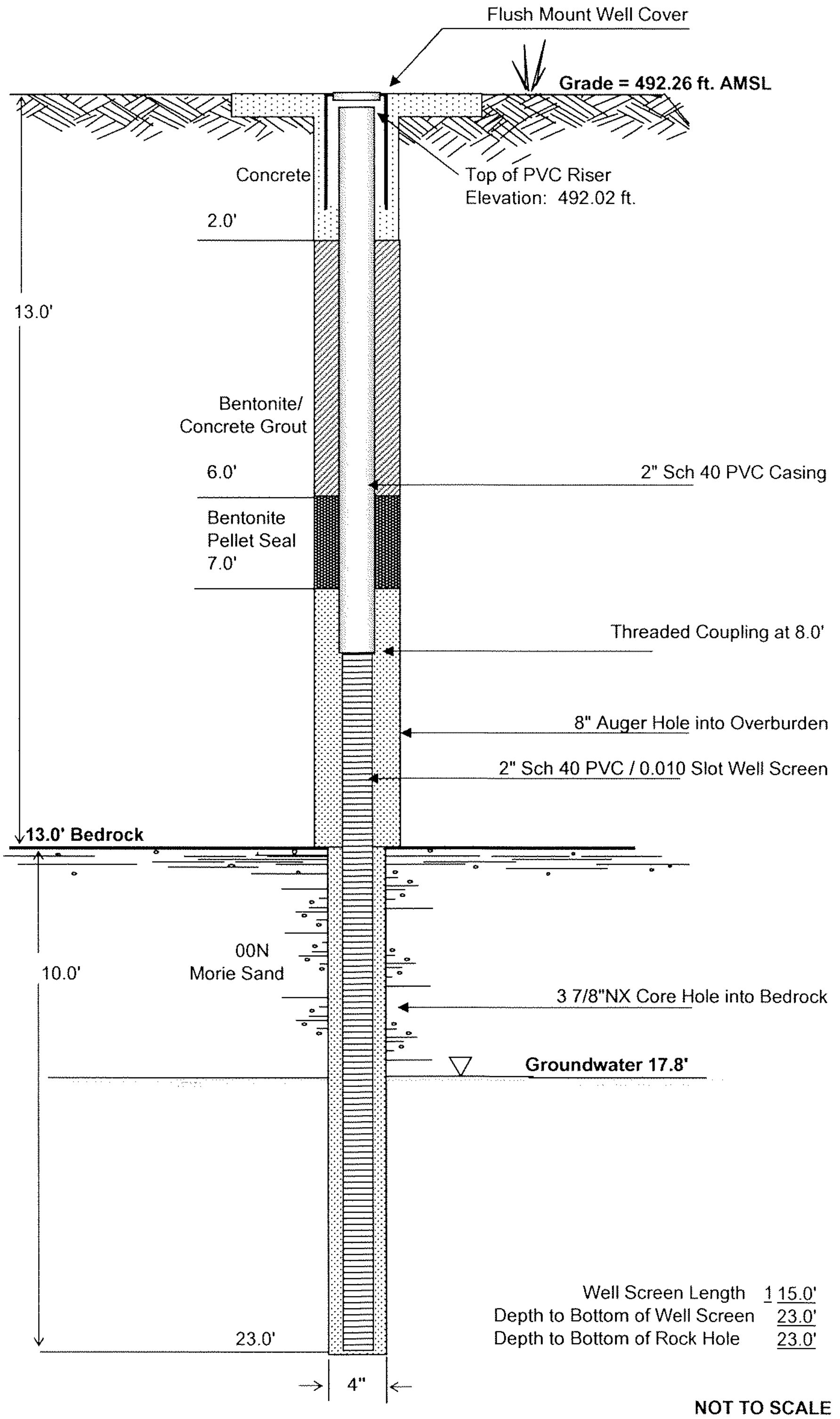
13.0' to 19.0'
Some vertical fracturing.
Some horizontal fracturing.

Core Recovery
107.5"/120"=90%

RQD
58.25"/120"=49%

19.0' to 23.0'
Smooth surfaced laminated bedding medium hard rock.

Bottom of core at 23.0'.



NOT TO SCALE

BERGMANN
associates

1200 East Main Street
City of Rochester, Monroe County, NY

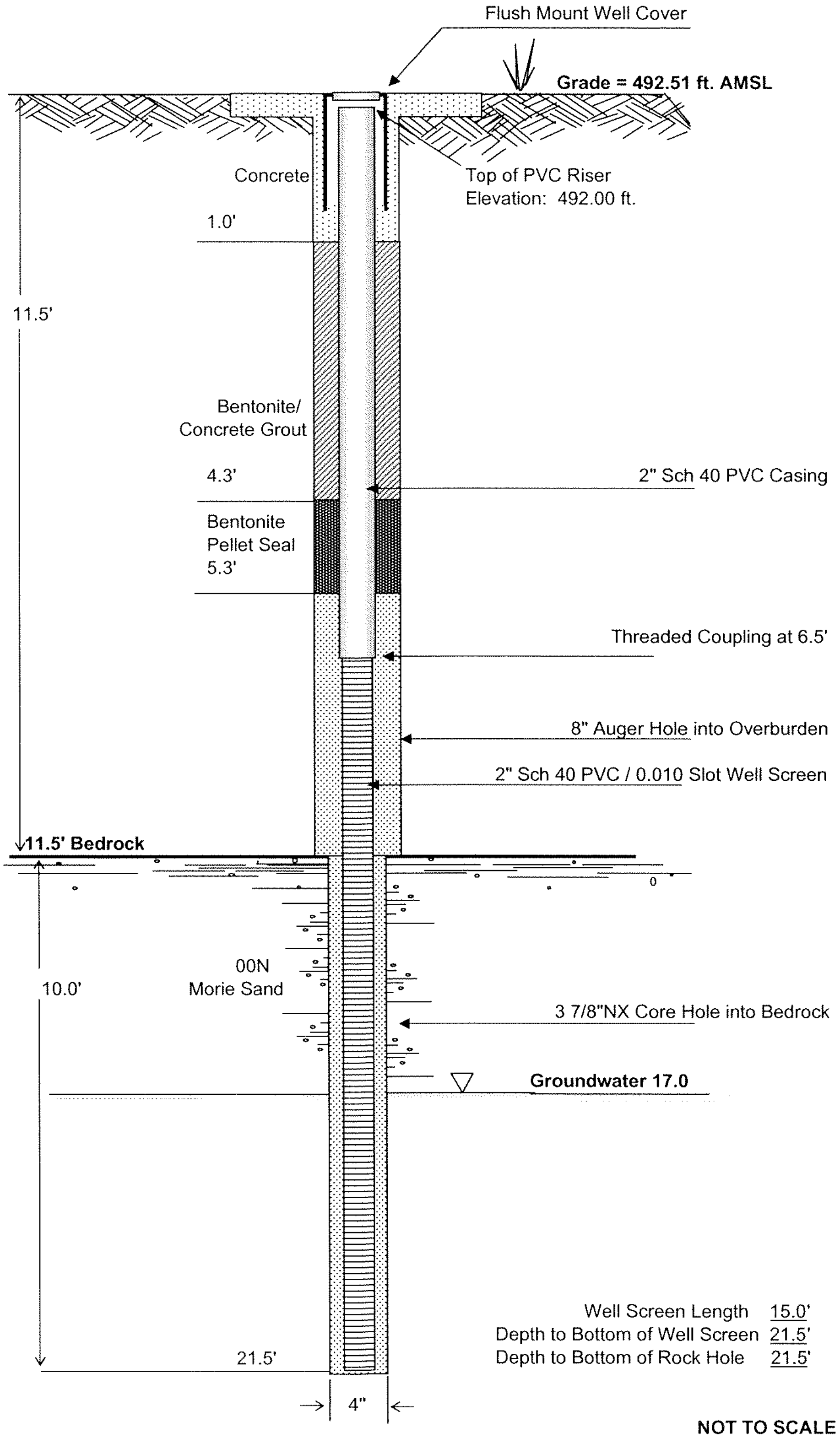
## OVERBURDEN / BEDROCK INTERFACE
## MW-3 MONITORING WELL CONSTRUCTION

Date Installed:
10-Jul-00

Figure:
Well MW-3

# FLUSHMOUNT MONITORING WELL
## MW-4

**Profile Description**



2.0' to 13.0'
Brown mostly sandy Silt,
trace gravel. Moist.
Homogenous to interface.

11.5' to 17.5'
Poor rock
Much vertical fracturing.
Horizontal fracturing.

Core Recovery
109"/120"=90%

RQD
52.5"/120"=44%

17.5' to 21.5'
Smooth surfaced
laminated bedding
medium hard rock.

Bottom of core at 21.5'

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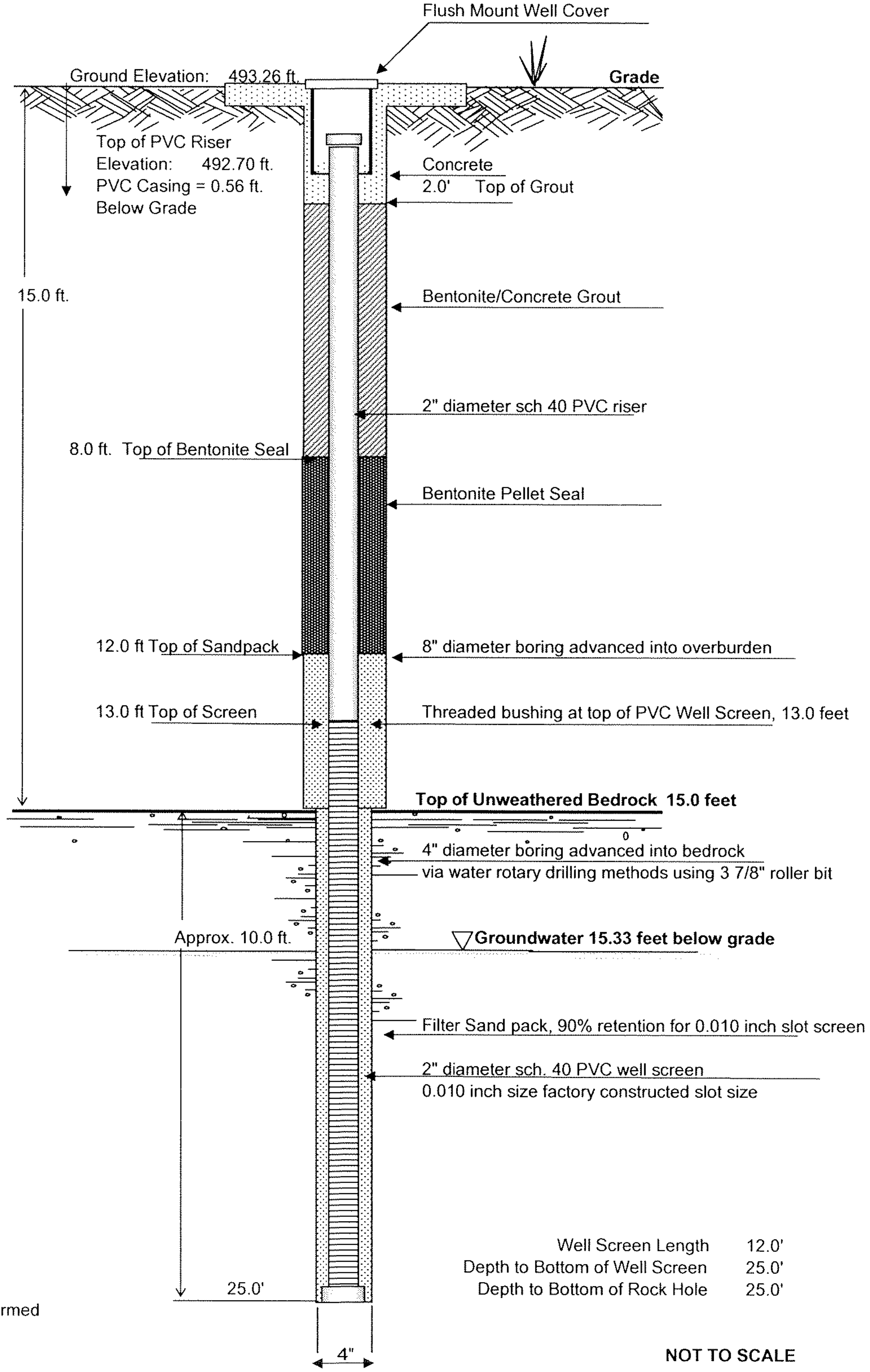
1200 East Main Street
City of Rochester, Monroe County, NY

**OVERBURDEN / BEDROCK INTERFACE**
**MW-4 MONITORING WELL CONSTRUCTION**

Date:
12-Jul-00

Figure:
Well MW-4

## MONITORING WELL MW-5



Advanced boring into bedrock
using tri-cone roller bit. No coring performed

| | |
|---|---|
| Well Screen Length | 12.0' |
| Depth to Bottom of Well Screen | 25.0' |
| Depth to Bottom of Rock Hole | 25.0' |

NOT TO SCALE

BERGMANN
associates

**1200 East Main Street**
**City of Rochester, Monroe County, New York**
**Supplemental Site Investigation**

MW-5 MONITORING WELL CONSTRUCTION

**Date Installed**
**1-Aug-03**

**Figure**
**Well MW-5**

# DRILLING LOG

BERGMANN associates

**BORING/WELL NUMBER:** **Monitoring Well MW-5**

PROJECT: 1200 East Main Street Rochester, NY Project No: 4453.02 Page No. 1 of 1

Start Date: 07/31/2003 Finish Date: 08/01/2003 Top of Well: N/A Boring No: MW-5

Driller: Joe Gardner, Buffalo Drilling Boring Location: In front of house at 1216 East Main Street

Inspector: Edward Jones, Bergmann Associates Water Level (During Drilling): Not encountered above bedrock

Drilling Method: 4-1/4 inch HAS Augers, Mobil B-61 truck rig Water Level (Post Drilling): Approximately 15.39 feet below grade

Remarks: Advanced test borings via Hollow Stem Augers. Monitoring well installed through augers via pull back method.

Screened Interval: 25.0 ft. to 13.0 ft. Slot Size: 0.010 inch Well Type: 2" dia. PVC Sandpack: 25.0 ft to 12.0 ft

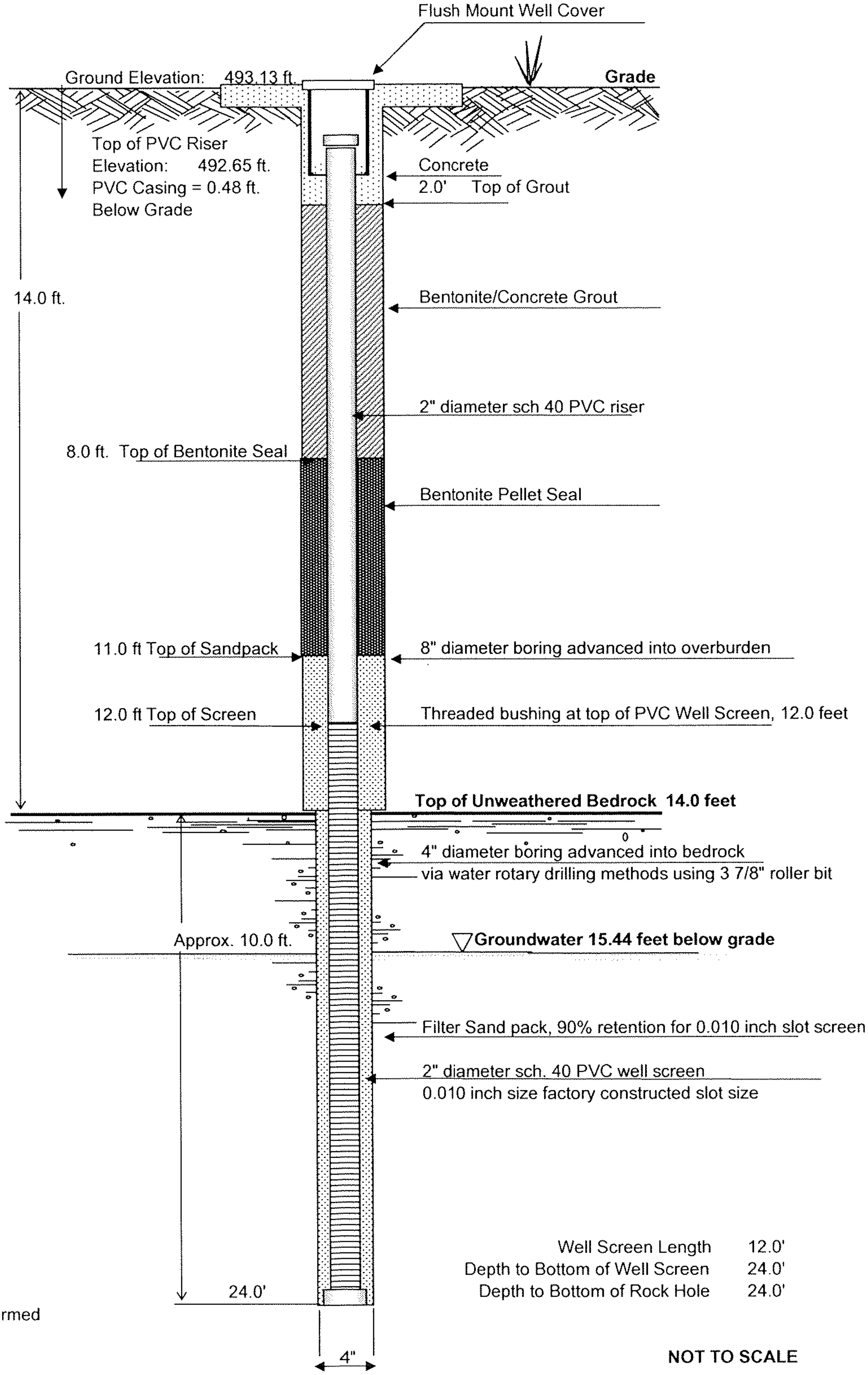
Seal: 12.0 feet to 8.0 feet Weather Conditions: Sunny, 72 degrees in the morning

Flush to grade roadway box installed over the monitoring well.

| DEPTH | BLOWS ON SAMPLER | | | | SAMPLE | | | | | SOIL AND ROCK INFORMATION | Field Screening for VOCs, ppm, using PID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0"/6" | 6"/12" | 12"/18" | 18"/24" | N | NO. | Depth | Type | Recovery | | |
| | - | 5 | | | 9 | 1 | 0-2' | soil | 42% | Concrete sidewalk surface, fill to 1.0- | ND |
| | | | 4 | 4 | | | | | | Damp Br. F. SAND and Silt, tr. Gravel | |
| | 4 | 3 | | | 6 | 2 | 2'-4' | soil | 67% | V. Moist Br. Loost F. SAND | ND |
| | | | 3 | 5 | | | | | | and Silt, Some Gravel | |
| 5 | 4 | 10 | | | 24 | 3 | 4'-6' | soil | 71% | Damp Br. M. Dense F SAND | ND |
| | | | 14 | 14 | | | | | | and Silt, Some Gravel | |
| | 27 | 22 | | | 52 | 4 | 6'-8' | soil | 88% | Damp Br. V. Dense F SAND and Silt | ND |
| | | | 30 | 25 | | | | | | Some Gravel | |
| | 12 | 16 | | | 25 | 5 | 8'-10' | soil | 92% | Same, M. Dense, V. Moist at 10' | ND |
| 10 | | | 9 | 19 | | | | | | | |
| | 16 | 24 | | | 48 | 6 | 10'-12' | soil | 63% | Moist Dense F-M SAND, Some Silt, | ND |
| | | | 24 | 28 | | | | | | Some Gravel | |
| | 19 | 18 | | | 40 | 7 | 12'-14' | soil | 50% | Same, M. Dense, moist | ND |
| | | | 22 | 20 | | | | | | | |
| 15 | 47 | 50/5" | | | 50+ | 8 | 14'-16' | soil | 83% | Damp Br. Dense F-M SAND and Gravel | ND |
| | | | | | | | | | | some Silt. Rock in split spoon 15' | |
| | | | | | | | | | | Auger refusal at 15'. Inferred as bedrock | |
| | | | | | | | | | | | |
| | | | | | | | | | | Spun casing into bedrock, to 15.0 ft. | |
| 20 | | | | | | | | | | Advanced boring through bedrock | |
| | | | | | | | | | | using 3 7/8" diameter roller bit. | |
| | | | | | | | | | | No rock core samples collected. | |
| | | | | | | | | | | Rock cuttings consist of | |
| | | | | | | | | | | fine grained grey limestone. | |
| 25 | | | | | | | | | | 25' | |
| | | | | | | | | | | | |
| | | | | | | | | | | Boring terminated at 25 feet | |
| | | | | | | | | | | 2" dia. monitoring well installed in boring | |
| | | | | | | | | | | | H NU PID with |
| 30 | | | | | | | | | | | 10.6 ev lamp |

N=No. of Blows to Drive 2" Spoon 12" with 140 lb wt. Hammer 30" Each Blow

## MONITORING WELL MW-6



| | |
|---|---|
| Well Screen Length | 12.0' |
| Depth to Bottom of Well Screen | 24.0' |
| Depth to Bottom of Rock Hole | 24.0' |

Advanced boring into bedrock
using tri-cone roller bit. No coring performed

NOT TO SCALE

BERGMANN
associates

**1200 East Main Street**
**City of Rochester, Monroe County, New York**
**Supplemental Site Investigation**

MW-6 MONITORING WELL CONSTRUCTION

**Date Installed**
**30-Jul-03**

**Figure**
**Well MW-6**

# DRILLING LOG

**BERGMANN associates**

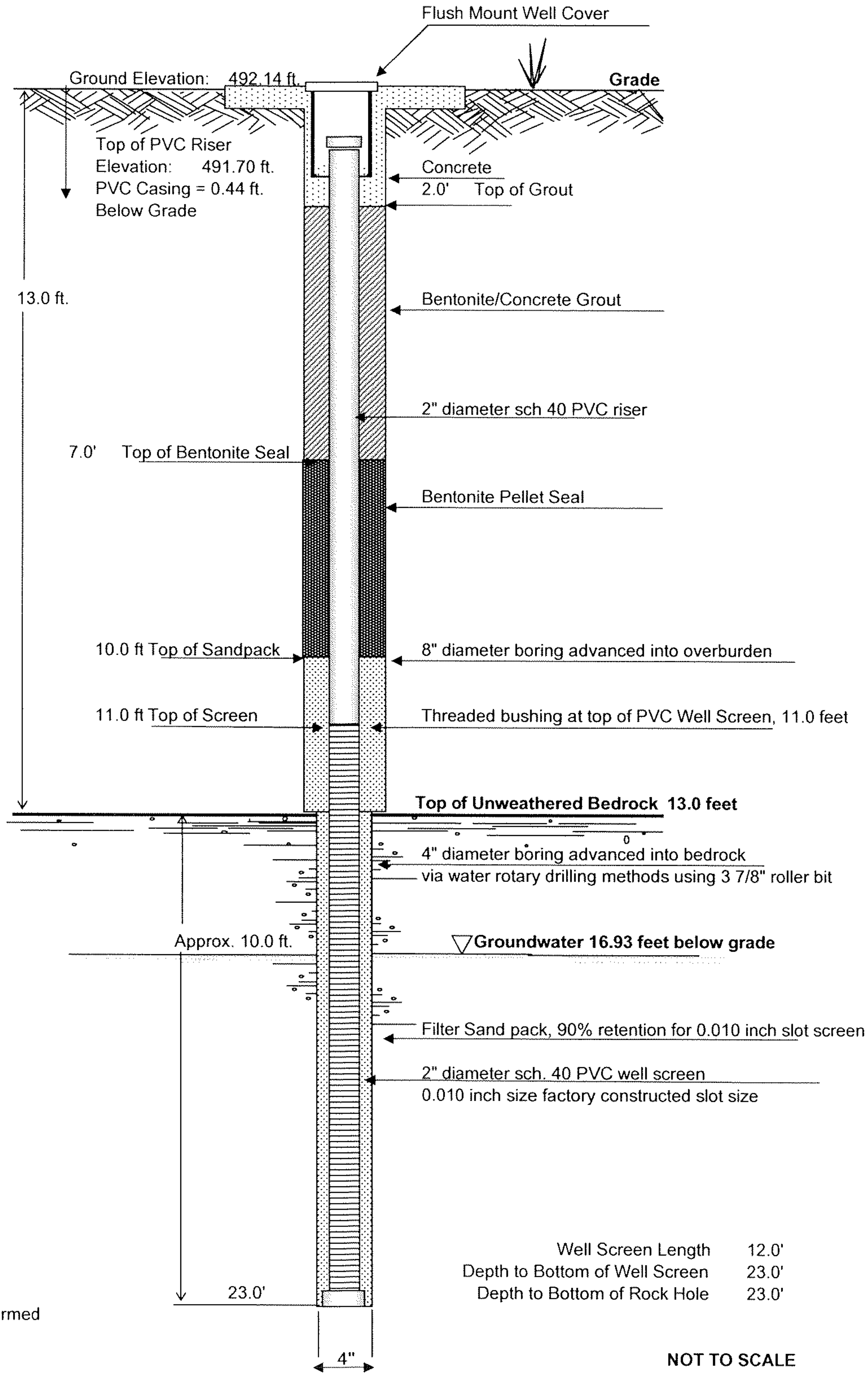
**BORING/WELL NUMBER:** **Monitoring Well MW-6**

PROJECT: 1200 East Main Street Rochester, NY Project No: 4453.02 Page No. 1 of 1
Start Date: 07/30/2003 Finish Date: 07/30/2003 Top of Well: N/A Boring No: MW-6
Driller: Joe Gardner, Buffalo Drilling Boring Location: In the backyard of the house at 1216 East Main St.
Inspector: James marscher, Bergmann Associates Water Level (During Drilling): Not encountered above bedrock
Drilling Method: 4-1/4 inch HAS Augers, Mobil B-61 truck rig Water Level (Post Drilling): Approximately 15.4 feet below grade
Remarks: Advanced test borings via Hollow Stem Augers. Monitoring well installed through augers via pull back method.
Screened Interval: 24.0 ft. to 14.0 ft. Slot Size: 0.010 inch Well Type: 2" dia. PVC Sandpack: 24.0 ft to 11.0 ft
Seal: 11.0 feet to 8.0 feet Weather Conditions: Sunny, upper 70s, lower 80s
Flush to grade roadway box installed over the monitoring well.

| DEPTH | BLOWS ON SAMPLER | | | | SAMPLE | | | | | SOIL AND ROCK INFORMATION | Field Screening for VOCs, ppm, using PID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0"/6" | 6"/12" | 12"/18" | 18"/24" | N | NO. | Depth | Type | Recovery | | |
| | 3 | 9 | | | 22 | 1 | 0-2' | soil | 38% | Brown Damp V. Stiff SILT with F. Sand | ND |
| | | | 13 | 17 | | | | | | with Gravel | |
| | 14 | 19 | | | 38 | 2 | 2'-4' | soil | 71% | Same, becomes Hard | ND |
| | | | 19 | 22 | | | | | | | |
| 5 | 20 | 20 | | | 43 | 3 | 4'-6' | soil | 50% | Same, Hard | ND |
| | | | 23 | 16 | | | | | | | |
| 30 | 30 | 50/5" | | | 50+ | 4 | 6'-8' | soil | 91% | Same, becomes Very Hard | ND |
| | | | | | | | | | | | |
| | 18 | 20 | | | 48 | 5 | 8'-10' | soil | 88% | Damp Brown Hard SILT, Some Gravel | ND |
| 10 | | | 28 | 18 | | | | | | with F. Sand | |
| | 15 | 17 | | | 36 | 6 | 10'-12' | soil | 50% | Same, Moist | ND |
| | | | 19 | 20 | | | | | | | |
| | 11 | 17 | | | | 67+ | 12'-14' | soil | 25% | Br Moist V. Hard Silt with Gravel | ND |
| | | | 50/4" | | | | | | | Trace F. Sand. Auger refusal 14' 14.0' | |
| 15 | | | | | | 8 | 14'-16' | soil | 83% | | ND |
| | | | | | | | | | | Auger refusal at 14'. Inferred as bedrock | |
| 20 | | | | | | | | | | Advanced boring through bedrock<br>using 3 7/8" diameter roller bit. | |
| | | | | | | | | | | No rock core samples collected.<br>Rock cuttings consist of<br>fine grained grey limestone.<br>24' | |
| 25 | | | | | | | | | | | |
| | | | | | | | | | | Boring terminated at 24 feet<br>2" dia. monitoring well installed in boring | |
| 30 | | | | | | | | | | | H NU PID with<br>10.6 ev lamp |

N=No. of Blows to Drive 2" Spoon 12" with 140 lb wt. Hammer 30" Each Blow

## MONITORING WELL MW-7



| | |
|---|---|
| Well Screen Length | 12.0' |
| Depth to Bottom of Well Screen | 23.0' |
| Depth to Bottom of Rock Hole | 23.0' |

Advanced boring into bedrock
using tri-cone roller bit. No coring performed

NOT TO SCALE

BERGMANN
associates

**1200 East Main Street**
**City of Rochester, Monroe County, New York**
**Supplemental Site Investigation**

MW-7 MONITORING WELL CONSTRUCTION

Date Installed
28-Jul-03

Figure
Well MW-7

# DRILLING LOG

BERGMANN associates

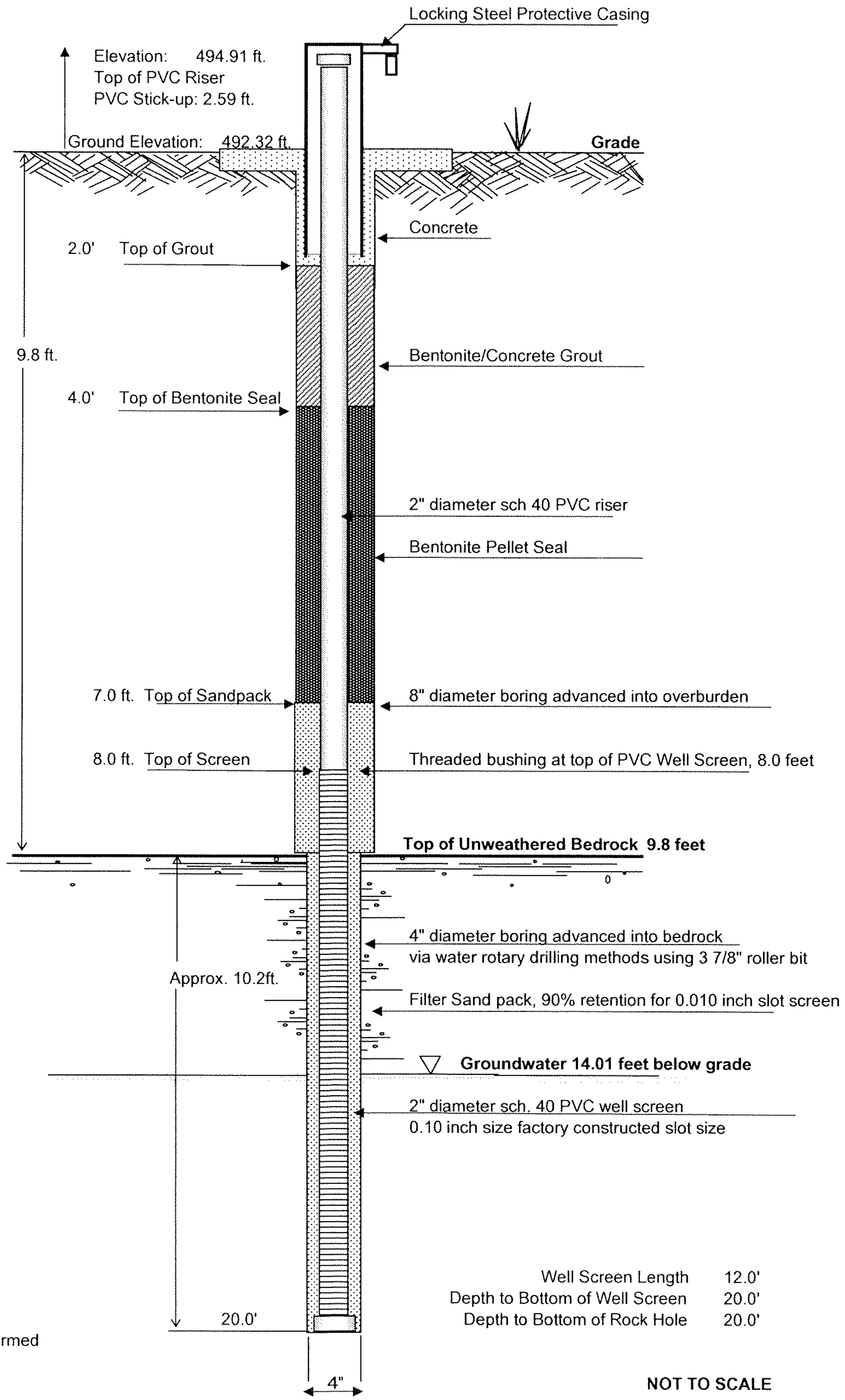
**BORING/WELL NUMBER:** **Monitoring Well MW-7**

PROJECT: 1200 East Main Street Rochester, NY Project No: 4453.02 Page No. 1 of 1
Start Date: 07/28/2003 Finish Date: 07/28/2003 Top of Well: N/A Boring No: MW-7
Driller: Joe Gardner, Buffalo Drilling Boring Location: at 1200 East. Main St., along south propery line
Inspector: James Marschner, Bergmann Associates Water Level (During Drilling): Not encountered above bedrock
Drilling Method: 4-1/4 inch HAS Augers, Mobil B-61 truck rig Water Level (Post Drilling): Approximately 16.9 feet below grade
Remarks: Advanced test borings via Hollow Stem Augers. Monitoring well installed through augers via pull back method.
Screened Interval: 23.0 ft. to 11.0 ft. Slot Size: 0.010 inch Well Type: 2" dia. PVC Sandpack: 23.0 ft to 10.0 ft
Seal: 10.0 feet to 7.0 feet Weather Conditions: Sunny, mid-70 degrees
Flush to grade roadway box installed over the monitoring well.

| DEPTH | BLOWS ON SAMPLER | | | | SAMPLE | | | | | SOIL AND ROCK INFORMATION | Field Screening for VOCs, ppm, using PID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0"/6" | 6"/12" | 12"/18" | 18"/24" | N | NO. | Depth | Type | Recovery | | |
| | - | 4 | | | 12 | 1 | 0-2' | soil | N/A | Concrete surface | ND |
| | | | 8 | 32 | | | | | | Brown Moist Stiff SILT, Trace F. Sand | |
| | 1 | 1 | | | 3 | 2 | 2'-4' | soil | N/A | Same to 2.4', then | 0.9 ppm |
| | | | 2 | 3 | | | | | | BR-Gray Moist Soft SILT, Trance F. Sand | petroleum odor |
| 5 | 1 | 7 | | | 18 | 3 | 4'-6' | soil | N/A | Same, becomes V. Stiff, petroleum odor | 23.3 ppm |
| | | | 11 | 50/2" | | | | | | | petroleum odor |
| 30 | 12 | 14 | | | 27 | 4 | 6'-8' | soil | 67% | Brown moist V. Stiff SILT with F. Sand | 48.1 ppm |
| | | | 13 | 13 | | | | | | and Gravel | |
| | 12 | 14 | | | 27 | 5 | 8'-10' | soil | 71% | Same, Very Stiff, Moist | 131 ppm |
| 10 | | | 13 | 13 | | | | | | | petroleum odor |
| | 8 | 10 | | | 19 | 6 | 10'-12' | soil | 79% | Same, Very Stiff, Moist | 137 ppm |
| | | | 9 | 7 | | | | | | | petroleum odor |
| | 7 | 50/3" | | | | | 12'-14' | soil | 100% | Same, Hard more gravel present 13' | 166 ppm |
| | | | | | | | | | | Auger refusal at 13.0' inferred as bedrock | petroleum odor |
| 15 | | | | | | 8 | 14'-16' | soil | 83% | | |
| | | | | | | | | | | Spun casing into bedrock, to 13.0 ft. | |
| | | | | | | | | | | Advanced boring through bedrock | |
| | | | | | | | | | | using 3 7/8" diameter roller bit. | |
| | | | | | | | | | | No rock core samples collected. | |
| 20 | | | | | | | | | | Rock cuttings consist of | |
| | | | | | | | | | | fine grained grey limestone. | |
| | | | | | | | | | | | |
| | | | | | | | | | | 23' | |
| | | | | | | | | | | | |
| 25 | | | | | | | | | | Boring terminated at 23.0 feet | |
| | | | | | | | | | | 2" dia. monitoring well installed in boring | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | H NU PID with |
| 30 | | | | | | | | | | | 10.6 ev lamp |

N=No. of Blows to Drive 2" Spoon 12" with 140 lb wt. Hammer 30" Each Blow

## MONITORING WELL MW-8



| | |
|---|---|
| Well Screen Length | 12.0' |
| Depth to Bottom of Well Screen | 20.0' |
| Depth to Bottom of Rock Hole | 20.0' |

Advanced boring into bedrock
using tri-cone roller bit. No coring performed

NOT TO SCALE

BERGMANN
associates

**1200 East Main Street**
**City of Rochester, Monroe County, New York**
**Supplemental Site Investigation**

MW-8 MONITORING WELL CONSTRUCTION

**Date Installed**
**25-Jul-03**

**Figure**
**Well MW-8**

# DRILLING LOG

BERGMANN associates

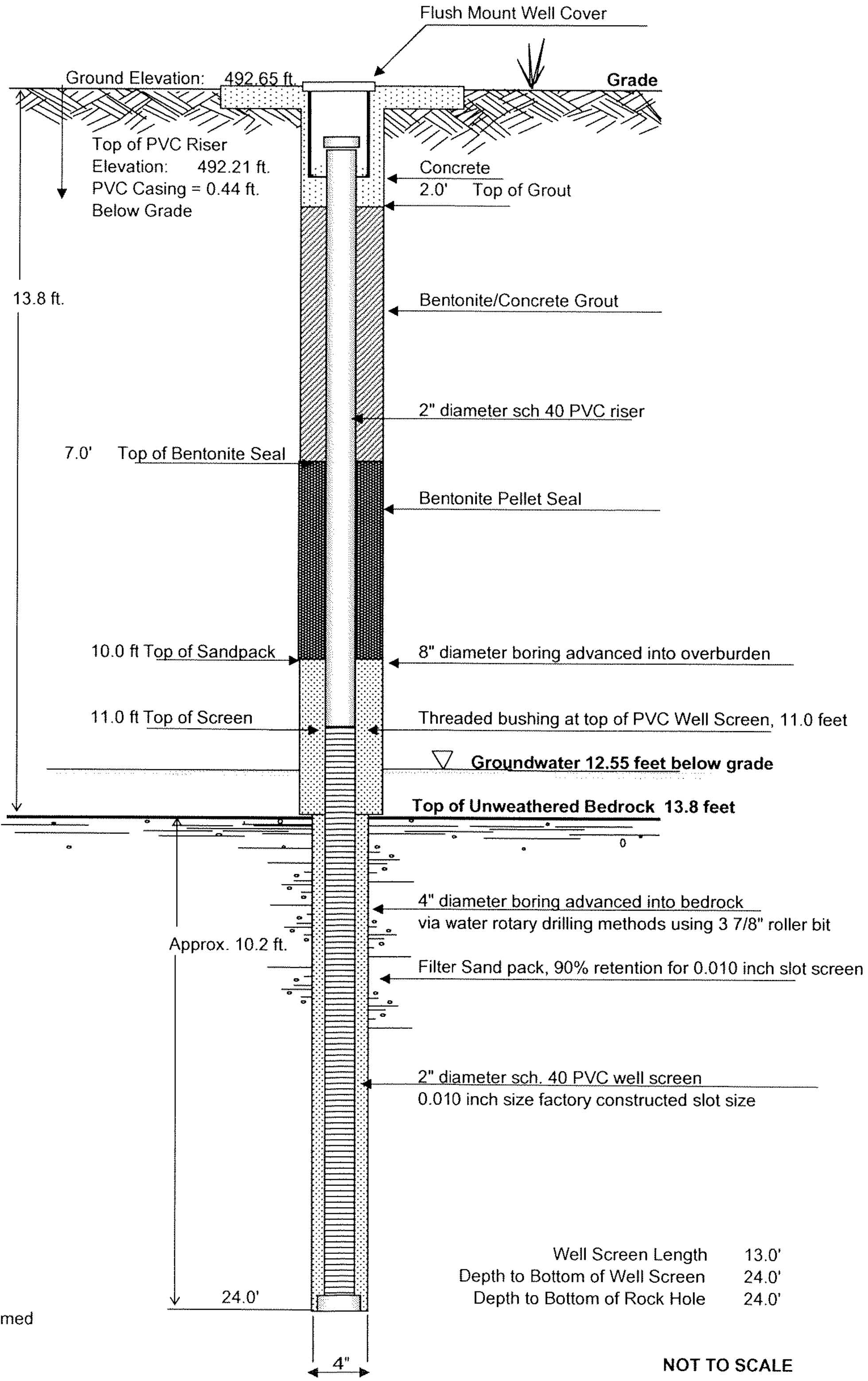
**BORING/WELL NUMBER:** **Monitoring Well MW-8**

PROJECT: 1200 East Main Street Rochester, NY Project No: 4453.02 Page No. 1 of 1
Start Date: 07/25/2003 Finish Date: 07/25/2003 Top of Well: N/A Boring No: MW-8
Driller: Joe Gardner, Buffalo Drilling Boring Location: at 1200 East. Main St., southwest corner by fence.
Inspector: James Marschner, Bergmann Associates Water Level (During Drilling): Not encountered above bedrock
Drilling Method: 4-1/4 inch HAS Augers, Mobil B-61 truck rig Water Level (Post Drilling): Approximately 14.0 feet below grade
Remarks: Advanced test borings via Hollow Stem Augers. Monitoring well installed through augers via pull back method.
Screened Interval: 20.0 ft. to 8.0 ft. Slot Size: 0.010 inch Well Type: 2" dia. PVC Sandpack: 20.0 ft to 7.0 ft
Seal: 7.0 feet to 4.0 feet Weather Conditions: Sunny, upper 60s in the morning
Protective Steel Casing installed over the monitoring well.

| DEPTH | BLOWS ON SAMPLER | | | | SAMPLE | | | | | SOIL AND ROCK INFORMATION | Field Screening for VOCs, ppm, using PID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0"/6" | 6"/12" | 12"/18" | 18"/24" | N | NO. | Depth | Type | Recovery | | |
| | 7 | 15 | | | 26 | 1 | 0-2' | soil | 58% | Grass surface, Brown Damp Hard SILT | ND |
| | | | 11 | 4 | | | | | | with Gravel, Trace F. Sand | |
| | 3 | 5 | | | 10 | 2 | 2'-4' | soil | 75% | Same to 2.9 feet | ND |
| | | | 5 | 8 | | | | | | Brown Moist Stiff SILT with Clay, Tr. Sand | |
| 5 | 10 | 12 | | | 26 | 3 | 4'-6' | soil | 8% | Same, becomes Very Stiff | ND |
| | | | 14 | 14 | | | | | | | |
| 30 | 14 | 12 | | | 24 | 4 | 6'-8' | soil | 71% | Same to 7.1 feet | ND |
| | | | 12 | 9 | | | | | | Br. Moist F. SAND, Trace Silt | |
| | 7 | 9 | | | 23 | 5 | 8'-10' | soil | 62% | Brown Wet M. Dense SAND & Silt, | ND |
| 10 | | | 14 | 50/3" | | | | | | Trace Gravel 9.8' | |
| | 50/0" | | | | 0 | 6 | 10'-12' | soil | 0% | | |
| | | | | | | | | | | Auger refusal at 9.8' inferred as bedrock | |
| | | | | | | | | | | | |
| | | | | | | | | | | Spun casing into bedrock, to 10.0 ft. | |
| 15 | | | | | | | | | | Advanced boring through bedrock | |
| | | | | | | | | | | using 3 7/8" diameter roller bit. | |
| | | | | | | | | | | No rock core samples collected. | |
| | | | | | | | | | | Rock cuttings consist of | |
| | | | | | | | | | | fine grained grey limestone. | |
| 20 | | | | | | | | | | 20' | |
| | | | | | | | | | | | |
| | | | | | | | | | | Boring terminated at 20.0 feet | |
| | | | | | | | | | | 2" dia. monitoring well installed in boring | |
| | | | | | | | | | | | |
| 25 | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | H NU PID with |
| 30 | | | | | | | | | | | 10.6 ev lamp |

N=No. of Blows to Drive 2" Spoon 12" with 140 lb wt. Hammer 30" Each Blow

## MONITORING WELL MW-9



| | |
|---|---|
| Well Screen Length | 13.0' |
| Depth to Bottom of Well Screen | 24.0' |
| Depth to Bottom of Rock Hole | 24.0' |

Advanced boring into bedrock
using tri-cone roller bit. No coring performed

NOT TO SCALE

BERGMANN
associates

**1200 East Main Street**
**City of Rochester, Monroe County, New York**
**Supplemental Site Investigation**

**MW-9 MONITORING WELL CONSTRUCTION**

**Date Installed**
**24-Jul-03**

**Figure**
**Well MW-9**

# DRILLING LOG

BERGMANN associates

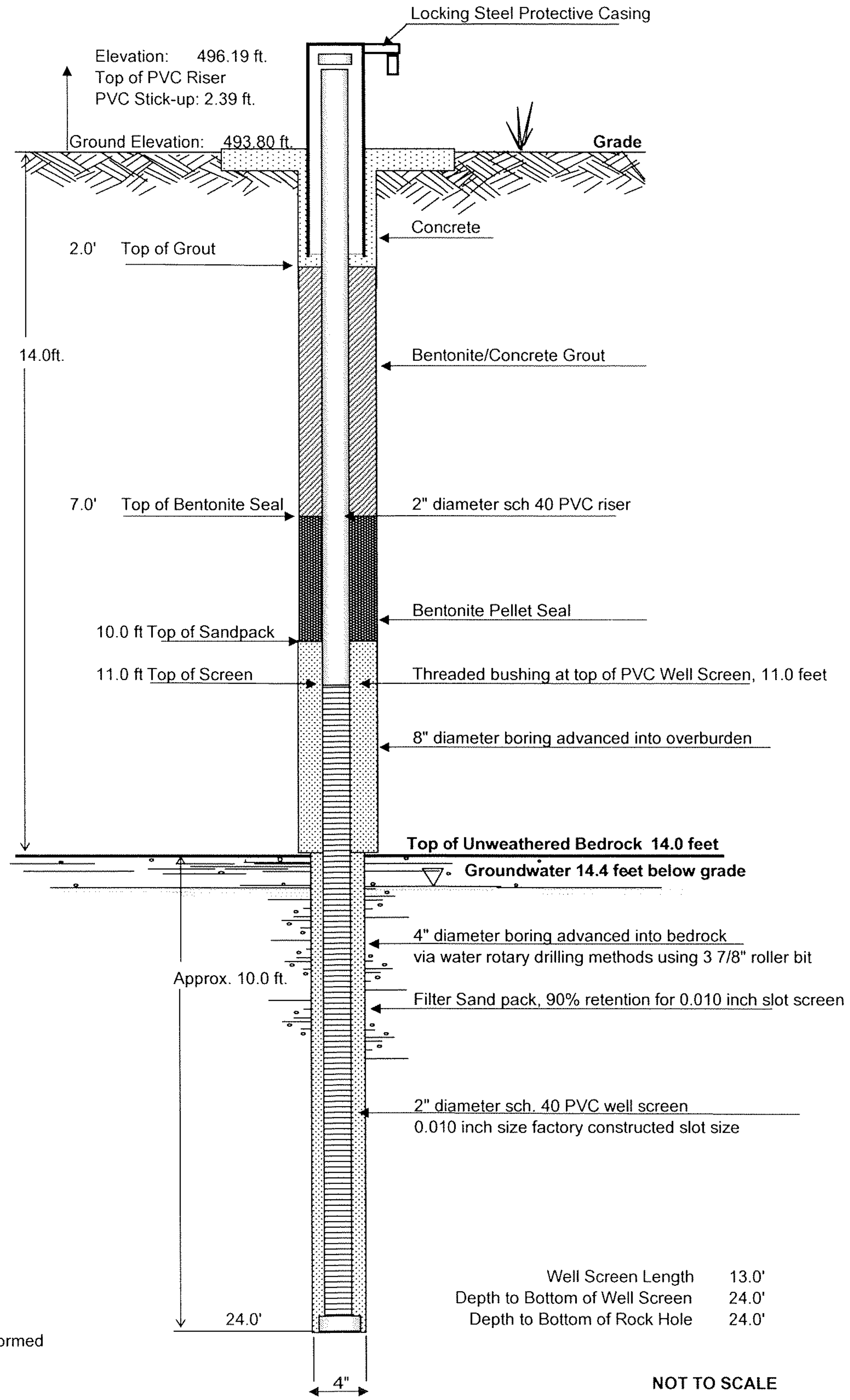
**BORING/WELL NUMBER:** **Monitoring Well MW-9**

PROJECT: 1200 East Main Street Rochester, NY
Project No: 4453.02
Page No. 1 of 1
Start Date: 07/24/2003
Finish Date: 07/24/2003
Top of Well: N/A
Boring No: MW-9
Driller: Joe Gardner, Buffalo Drilling
Boring Location: at 1200 East. Main St., center of old parking lot.
Inspector: James Marschner, Bergmann Associates
Water Level (During Drilling): Aproximately 13.5 feet below grade
Drilling Method: 4-1/4 inch HAS Augers, Mobil B-61 truck rig
Water Level (Post Drilling): Approximately 12.5 feet below grade
Remarks: Advanced test borings via Hollow Stem Augers. Monitoring well installed through augers via pull back method.
Screened Interval: 24.0 ft. to 11.0 ft.
Slot Size: 0.010 inch
Well Type: 2" dia. PVC
Sandpack: 24.0 ft to 10.0 ft
Seal: 10.0 feet to 7.0 feet
Weather Conditions: Sunny, mid-70 degrees
Flush to grade roadway box installed over the monitoring well.

| DEPTH | BLOWS ON SAMPLER | | | | SAMPLE | | | | | SOIL AND ROCK INFORMATION | Field Screening for VOCs, ppm, using PID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0"/6" | 6"/12" | 12"/18" | 18"/24" | N | NO. | Depth | Type | Recovery | | |
| | - | - | | | 7 | 1 | 0-2' | soil | 100% | Asphalt surface & gravel sub base to 1ft | ND |
| | | | 7 | 8 | | | | | | | |
| | 30 | 27 | | | 34 | 2 | 2'-4' | soil | 42% | Same to 2.4 ft. | ND |
| | | | 7 | 50 | | | | | | Dense GRAVEL and C. Sand | |
| 5 | 2 | 13 | | | 17 | 3 | 4'-6' | soil | 42% | Brown Damp V. Stiff SILT, Some Gravel, | ND |
| | | | 4 | 4 | | | | | | Trace F. Sand | |
| 30 | 5 | 12 | | | 26 | 4 | 6'-8' | soil | 42% | Br. Moist V. Stiff SILT, Some F. Gravel | ND |
| | | | 14 | 17 | | | | | | | |
| | 2 | 12 | | | 24 | 5 | 8'-10' | soil | 50% | Br. Moist V. Stiff SILT and F. Sand, | 1.9 ppm |
| 10 | | | 12 | 16 | | | | | | Trace Gravel | |
| | 10 | 22 | | | 51 | 6 | 10'-12' | soil | 42% | Same, Moist, Hard, occasional cobbles | 0.9 ppm |
| | | | 29 | 14 | | | | | | | |
| | 11 | 16 | | | 50+ | 7 | 12'-14' | soil | not recorded | Brown Wet Hard SILT and Gravel | ND |
| | | | 50/3" | | | | | | | wet sheen. Refusal at 13.8' 13.8' | |
| 15 | | | | | | | | | | | |
| | | | | | | | | | | Auger refusal at 13.8' inferred as bedrock | |
| | | | | | | | | | | | |
| | | | | | | | | | | Spun casing into bedrock, to 14' | |
| | | | | | | | | | | Advanced boring through bedrock | |
| 20 | | | | | | | | | | using 3 7/8" diameter roller bit. | |
| | | | | | | | | | | No rock core samples collected. | |
| | | | | | | | | | | Rock cuttings consist of | |
| | | | | | | | | | | fine grained grey limestone. | |
| | | | | | | | | | | 24.0' | |
| 25 | | | | | | | | | | | |
| | | | | | | | | | | Boring terminated at 24.0 feet | |
| | | | | | | | | | | 2" dia. monitoring well installed in boring | |
| | | | | | | | | | | | |
| | | | | | | | | | | | H NU PID with |
| 30 | | | | | | | | | | | 10.6 ev lamp |

N=No. of Blows to Drive 2" Spoon 12" with 140 lb wt. Hammer 30" Each Blow

## MONITORING WELL MW-10



| | |
|---|---|
| Well Screen Length | 13.0' |
| Depth to Bottom of Well Screen | 24.0' |
| Depth to Bottom of Rock Hole | 24.0' |

Advanced boring into bedrock
using tri-cone roller bit. No coring performed

NOT TO SCALE

BERGMANN
associates

**1200 East Main Street**
**City of Rochester, Monroe County, New York**
**Supplemental Site Investigation**

**MW-10 MONITORING WELL CONSTRUCTION**

**Date Installed**
**22-Jul-03**

**Figure**
**Well MW-10**

# DRILLING LOG

BERGMANN
associates

**BORING/WELL NUMBER:** Monitoring Well MW-10

| | | | | | |
|---|---|---|---|---|---|
| PROJECT: | 1200 East Main Street Rochester, NY | Project No: | 4453.02 | Page No. | 1 of 1 |
| Start Date: | 07/22/2003 Finish Date: 07/22/2003 | Top of Well: | N/A | Boring No: | MW-10 |
| Driller: | Joe Gardner, Buffalo Drilling | Boring Location: | at 1200 East. Main St., northwest corner of the site | | |
| Inspector: | James Marschner, Bergmann Associates | Water Level (During Drilling): | Approximately 14 feet below grade | | |
| Drilling Method: | 4-1/4 inch HAS Augers, Mobil B-61 truck rig | Water Level (Post Drilling): | Approximately 14.4 feet below grade | | |

Remarks: Advanced test borings via Hollow Stem Augers. Monitoring well installed through augers via pull back method.

Screened Interval: 24.0 ft. to 11.0 ft. Slot Size: 0.010 inch Well Type: 2" dia. PVC Sandpack: 24.0 ft to 10.0 ft

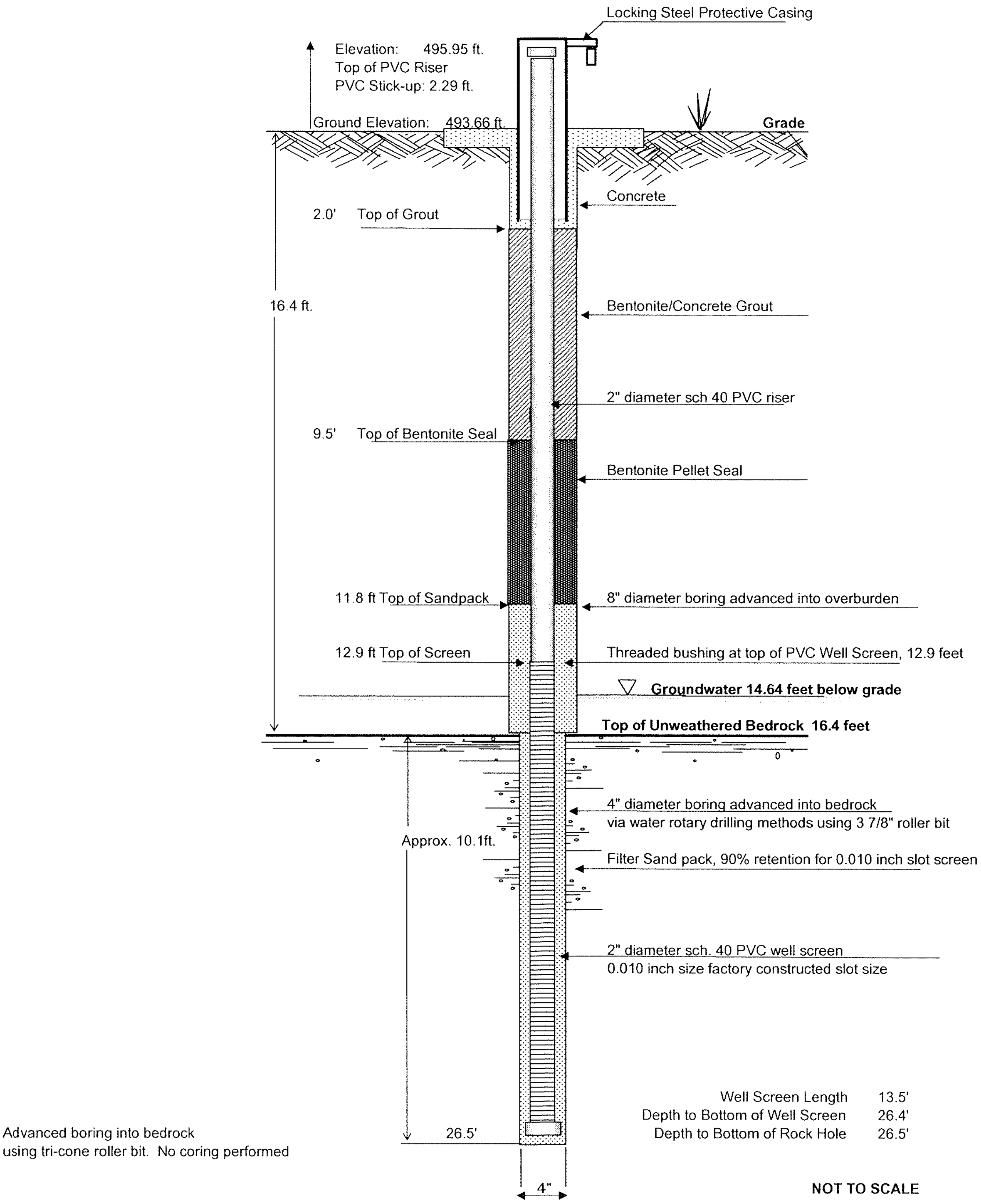
Seal: 10.0 feet to 7.0 feet Weather Conditions: Cloudy, 70s in the morning

Protective Steel Casing installed over the monitoring well.

| DEPTH | BLOWS ON SAMPLER | | | | SAMPLE | | | | | SOIL AND ROCK INFORMATION | Field Screening for VOCs, ppm, using PID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0"/6" | 6"/12" | 12"/18" | 18"/24" | N | NO. | Depth | Type | Recovery | | |
| | 7 | 8 | | | 26 | 1 | 0-2' | soil | 33% | Gravelly Silt to 0.4 ft. Brown Damp Stiff | ND |
| | | | 18 | 17 | | | | | | SILT, Some Gravel, Trace Silt | |
| | 8 | 9 | | | 14 | 2 | 2'-4' | soil | 50% | Same, Stiff, Damp | ND |
| | | | 5 | 5 | | | | | | Same to 3.6 feet | |
| 5 | 11 | 12 | | | 20 | 3 | 4'-6' | soil | 58% | Dark Br. Damp SILT, Trace Sand to 4.2' | ND |
| | | | 8 | 12 | | | | | | At 4.2' begin Brown Damp Stiff SILT, | |
| 30 | 10 | 15 | | | 65+ | 4 | 6'-8' | soil | 100% | Some Gravel, trace rootlets | ND |
| | | | 50/2" | | | | | | | Same, becomes Hard | |
| | 33 | 26 | | | 43 | 5 | 8'-10' | soil | 29% | Brown Damp Hard SILT and Gravel, | ND |
| 10 | | | 17 | 9 | | | | | | trace F. Sand | |
| | 7 | 20 | | | 36 | 6 | 10'-12' | soil | 38% | Brown Damp Hard SILT and Sand, | ND |
| | | | 16 | 19 | | | | | | some Gravel. Moist at 12' | |
| | 17 | 25 | | | 45 | 7 | 12'-14' | soil | 46% | Same, Hard, becomes Wet at 14' | ND |
| | | | 20 | 18 | | | | | | Gravel stone in shoe. No recovery 14.0' | |
| 15 | 50/1" | | | | 50+ | 8 | 14'-16' | soil | none | Auger refusal at 14.0' inferred as bedrock | |
| | | | | | | | | | | | |
| | | | | | | | 16-'18' | soil | none | Spun casing into bedrock, to 14.1 ft. | |
| | | | | | | | | | | Advanced boring through bedrock | |
| | | | | | | | | | | using 3 7/8" diameter roller bit. | |
| 20 | | | | | | | | | | No rock core samples collected. | |
| | | | | | | | | | | Rock cuttings consist of | |
| | | | | | | | | | | fine grained grey limestone. | |
| | | | | | | | | | | | |
| | | | | | | | | | | 24.0' | |
| 25 | | | | | | | | | | | |
| | | | | | | | | | | Boring terminated at 24.0 feet | |
| | | | | | | | | | | 2" dia. monitoring well installed in boring | |
| | | | | | | | | | | | |
| | | | | | | | | | | | H NU PID with |
| 30 | | | | | | | | | | | 10.6 ev lamp |

N=No. of Blows to Drive 2" Spoon 12" with 140 lb wt. Hammer 30" Each Blow

## MONITORING WELL MW-11



NOT TO SCALE

BERGMANN
associates

**1200 East Main Street**
**City of Rochester, Monroe County, New York**
**Supplemental Site Investigation**

**MW-11 MONITORING WELL CONSTRUCTION**

**Date Installed**
**23-Jul-03**

**Figure**
**Well MW-11**

# DRILLING LOG

BERGMANN
associates

**BORING/WELL NUMBER:** Monitoring Well MW-11

PROJECT: 1200 East Main Street Rochester, NY Project No: 4453.02 Page No. 1 of 1

Start Date: 07/23/2003 Finish Date: 07/23/2003 Top of Well: N/A Boring No: MW-11

Driller: Joe Gardner, Buffalo Drilling Boring Location: at 1200 East. Main St., northeastern area of the site

Inspector: James Marschner, Bergmann Associates Water Level (During Drilling): Aproximately 15 feet below grade

Drilling Method: 4-1/4 inch HAS Augers, Mobil B-61 truck rig Water Level (Post Drilling): Approximately 14.6 feet below grade

Remarks: Advanced test borings via Hollow Stem Augers. Monitoring well installed through augers via pull back method.

Screened Interval: 26.4 ft. to 12.9 ft. Slot Size: 0.010 inch Well Type: 2" dia. PVC Sandpack: 26.5 ft to 11.8 ft

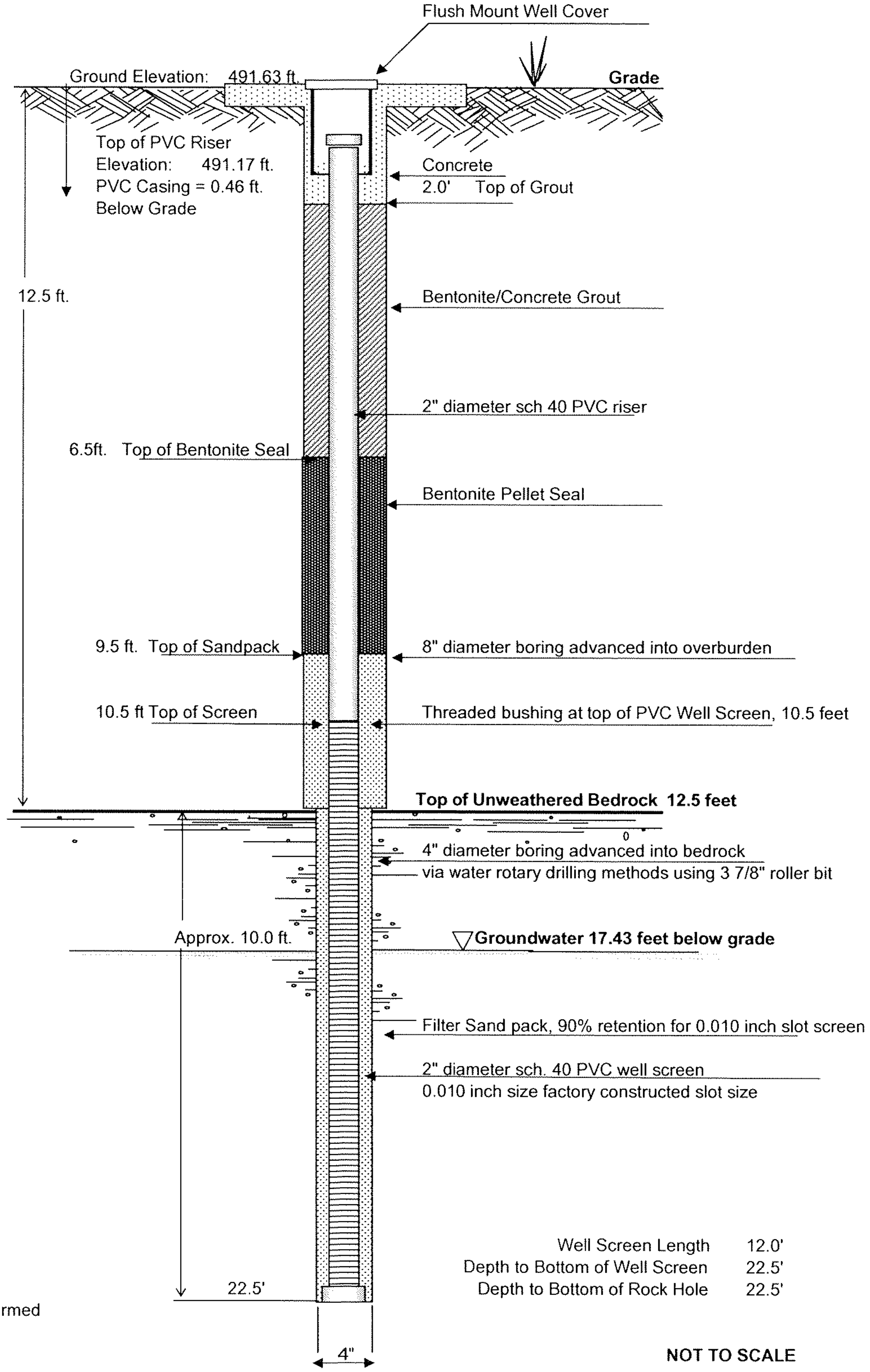
Seal: 11.8 feet to 9.5 feet Weather Conditions: Sunny, upper 60s in the morning

Protective Steel Casing installed over the monitoring well.

| DEPTH | BLOWS ON SAMPLER | | | | SAMPLE | | | | | SOIL AND ROCK INFORMATION | Field Screening for VOCs, ppm, using PID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0"/6" | 6"/12" | 12"/18" | 18"/24" | N | NO. | Depth | Type | Recovery | | |
| | 5 | 12 | | | 21 | 1 | 0-2' | soil | 63% | Dark Br. Damp Stiff SILT with Gravel | ND |
| | | | 9 | 8 | | | | | | Trace F. Sand to 2.1 feet | |
| | 7 | 10 | | | 20 | 2 | 2'-4' | soil | 75% | at 2.1 ft: Tan Brown Moist Stiff SILT | ND |
| | | | 10 | 12 | | | | | | Some Gravel Trace F. Sand | |
| 5 | 14 | 28 | | | 48 | 3 | 4'-6' | soil | 75% | Br. Damp Hard SILT and Gravel, | ND |
| | | | 20 | 18 | | | | | | Trace F. Sand | |
| 30 | 6 | 5 | | | 19 | 4 | 6'-8' | soil | 58% | Brown Damp Stiff SILT with Gravel, | ND |
| | | | 14 | 10 | | | | | | Trace F. Sand | |
| | 3 | 5 | | | 10 | 5 | 8'-10' | soil | 58% | Same, becomes Medium Stiff, Moist | ND |
| 10 | | | 5 | 10 | | | | | | | |
| | 5 | 14 | | | 31 | 6 | 10'-12' | soil | 63% | Same, Very Stiff | ND |
| | | | 17 | 15 | | | | | | | |
| | 7 | 14 | | | 37 | 7 | 12'-14' | soil | 42% | Brown Wet Hard SILT and Gravel, | ND |
| | | | 23 | 15 | | | | | | with F. Sand | |
| 15 | 39 | 18 | | | 32 | | 14'-16' | soil | 13% | Brown wet Dense GRAVEL, water sheen | 0.1 ppm |
| | | | 14 | 14 | | | | | | 16.4' | Slight petroleum |
| | 50/4" | | | | | | 16-'18' | soil | none | Auger refusal at 16.4' inferred as bedrock | odor |
| | | | | | | | | | | | |
| | | | | | | | | | | Spun casing into bedrock, to 16.5 ft. | |
| 20 | | | | | | | | | | Advanced boring through bedrock | |
| | | | | | | | | | | using 3 7/8" diameter roller bit. | |
| | | | | | | | | | | No rock core samples collected. | |
| | | | | | | | | | | Rock cuttings consist of | |
| | | | | | | | | | | fine grained grey limestone. | |
| 25 | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | 26.5' | |
| | | | | | | | | | | Boring terminated at 26.5 feet | |
| | | | | | | | | | | 2" dia. monitoring well installed in boring | H NU PID with |
| 30 | | | | | | | | | | | 10.6 ev lamp |

N=No. of Blows to Drive 2" Spoon 12" with 140 lb wt. Hammer 30" Each Blow

# MONITORING WELL MW-12



| | |
|---|---|
| Well Screen Length | 12.0' |
| Depth to Bottom of Well Screen | 22.5' |
| Depth to Bottom of Rock Hole | 22.5' |

Advanced boring into bedrock
using tri-cone roller bit. No coring performed

NOT TO SCALE

BERGMANN
associates

**1200 East Main Street**
**City of Rochester, Monroe County, New York**
**Supplemental Site Investigation**

**MW-12 MONITORING WELL CONSTRUCTION**

**Date Installed**
**29-Jul-03**

**Figure**
**Well MW-12**

# DRILLING LOG

BERGMANN associates

**BORING/WELL NUMBER:** **Monitoring Well MW-12**

PROJECT: 1200 East Main Street Rochester, NY Project No: 4453.02 Page No. 1 of 1

Start Date: 07/29/2003 Finish Date: 07/29/2003 Top of Well: N/A Boring No: MW-12

Driller: Joe Gardner, Buffalo Drilling Boring Location: In sidewalk along south side of East Main St.

Inspector: James Marschner, Bergmann Associates Water Level (During Drilling): Not encountered above bedrock

Drilling Method: 4-1/4 inch HAS Augers, Mobil B-61 truck rig Water Level (Post Drilling): Approximately 17.4 feet below grade

Remarks: Advanced test borings via Hollow Stem Augers. Monitoring well installed through augers via pull back method.

Screened Interval: 22.5 ft. to 10.5 ft. Slot Size: 0.010 inch Well Type: 2" dia. PVC Sandpack: 22.5 ft to 9.5 ft

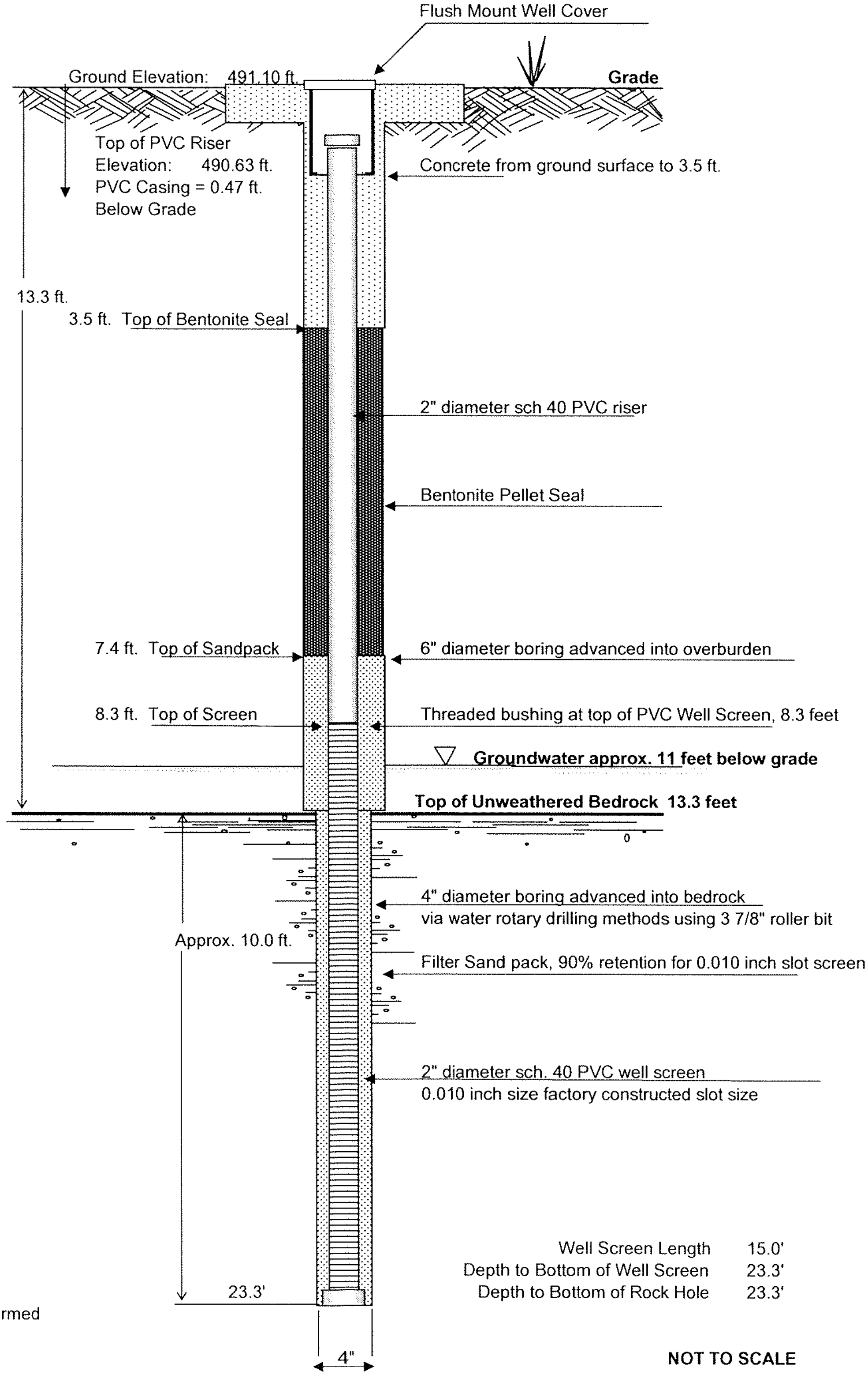
Seal: 9.5 feet to 6.5 feet Weather Conditions: Sunny, mid-70 degrees

Flush to grade roadway box installed over the monitoring well.

| DEPTH | BLOWS ON SAMPLER | | | | SAMPLE | | | | | SOIL AND ROCK INFORMATION | Field Screening for VOCs, ppm, using PID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0"/6" | 6"/12" | 12"/18" | 18"/24" | N | NO. | Depth | Type | Recovery | | |
| | - | 4 | | | 6 | 1 | 0-2' | soil | 0% | Concrete sidewalk to 6" | ND |
| | | | 2 | 3 | | | | | | No recovery of soil sample | |
| | 8 | 7 | | | 15 | 2 | 2'-4' | soil | 42% | Brown F. SAND to 2.4' | ND |
| | | | 8 | 9 | | | | | | Brown Moist SILT with Sand and Gravel | |
| 5 | 2 | 5 | | | 11 | 3 | 4'-6' | soil | 25% | Same SILT, Stiff | ND |
| | | | 6 | 3 | | | | | | | |
| 30 | 3 | 4 | | | 10 | 4 | 6'-8' | soil | 58% | Br. Moist Loose SAND, Trace Silt | ND |
| | | | 6 | 3 | | | | | | Trace Gravel | |
| | 6 | 11 | | | 31 | 5 | 8'-10' | soil | 38% | Same to 10.7', becomes M. Dense | ND |
| 10 | | | 20 | 33 | | | | | | Brown Moist Hard SILT and Gravel, Tr. Sand | |
| | 16 | 50/2" | | | 50+ | 6 | 10'-12' | soil | 13% | Same SILT and Gravel, V. Hard | ND |
| | | | | | | | | | | Auger refusal encountered at 12.5' | |
| | | | | | | | | | | | ND |
| | | | | | | | | | | Auger refusal at 12.5' inferred as bedrock | |
| 15 | | | | | | 8 | 14'-16' | soil | 83% | | ND |
| | | | | | | | | | | Spun casing into bedrock, to 12.5 ft. | |
| | | | | | | | | | | Advanced boring through bedrock | |
| | | | | | | | | | | using 3 7/8" diameter roller bit. | |
| | | | | | | | | | | No rock core samples collected. | |
| 20 | | | | | | | | | | Rock cuttings consist of | |
| | | | | | | | | | | fine grained grey limestone. | |
| | | | | | | | | | | 22.5' | |
| | | | | | | | | | | | |
| | | | | | | | | | | Boring terminated at 22.5 feet | |
| 25 | | | | | | | | | | 2" dia. monitoring well installed in boring | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | H NU PID with |
| 30 | | | | | | | | | | | 10.6 ev lamp |

N=No. of Blows to Drive 2" Spoon 12" with 140 lb wt. Hammer 30" Each Blow

## MONITORING WELL MW-13



| | |
|---|---|
| Well Screen Length | 15.0' |
| Depth to Bottom of Well Screen | 23.3' |
| Depth to Bottom of Rock Hole | 23.3' |

Advanced boring into bedrock
using tri-cone roller bit. No coring performed

NOT TO SCALE

BERGMANN
associates

**1200 East Main Street**
**City of Rochester, Monroe County, New York**
**Supplemental Site Investigation**

**MW-13 MONITORING WELL CONSTRUCTION**

**Date Installed**
**26-May-04**

**Figure**
**Well MW-13**

# DRILLING LOG

BERGMANN
associates

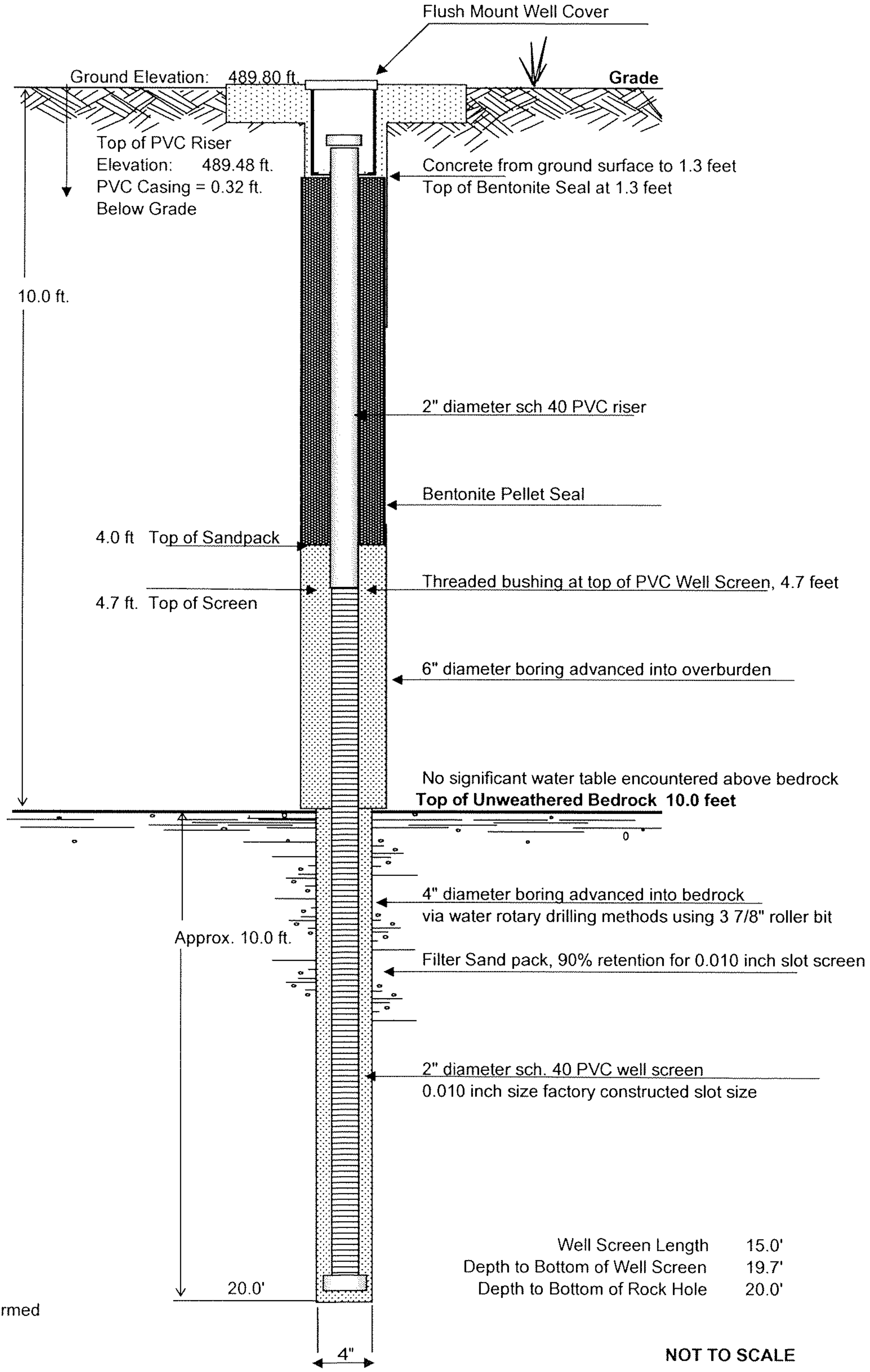
**BORING/WELL NUMBER:** MW-13

PROJECT: 1200 East Main Street Rochester, NY    Project No: 4453.03    Page No. 1 of 1
Start Date: 05/26/04    Finish Date: 05/26/04    Top of Well: 490.53 ft.    Boring No: MW-13
Driller: Buffalo Drilling, Larry Schroeder, Driller    Boring Location: Back yard of 427 Hayward Avenue.
Inspector: Edward Jones, Bergmann Associates    Water Level (During Drilling): approx. 11 feet below grade
Drilling Method: 2-1/4 inch HAS Augers, Mobil B-61 truck rig    Water Level (Post Drilling): approx. 8 ft 3inches below grade
Remarks: Advanced test borings via Hollow Stem Augers. Monitoring well installed through augers via pull back method.
Screened Interval: 23.3 ft. to 8.3 ft.    Slot Size: 0.010 inch    Well Type: 2" dia. PVC    Sandpack: 24.3 ft to 7.4ft
Seal: 7.4 feet to 3.5 feet    Weather Conditions: Overcast, fog, 60s in the morning
Flush to grade roadway box installed over the monitoring well.

| DEPTH | BLOWS ON SAMPLER | | | | SAMPLE | | | | | SOIL AND ROCK INFORMATION | Field Screening for VOCs, ppm, using PID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0"/6" | 6"/12" | 12"/18" | 18"/24" | N | NO. | Depth | Type | Recovery | | |
| | 3 | 4 | | | 8 | 1 | 0-2' | soil | 63% | Dirt parking lot surface. Topsoil to 6" | ND |
| | | | 4 | 7 | | | | | | Damp Orange Br. Loose F SAND & Silt | |
| | 6 | 8 | | | 17 | 2 | 2'-4' | soil | 67% | Little Gravel, roots. Becomes M. Dense | ND |
| | | | 9 | 10 | | | | | | Same, Damp, M. Dense. Glacial Till | |
| 5 | 36 | 20 | | | 36 | 3 | 4'-6' | soil | 58% | Same, damp, Dense to 5'6" | ND |
| | | | 16 | 37 | | | | | | Brown damp F-M SAND | |
| 30 | 50/4" | | | | 50+ | 4 | 6'-8' | soil | 0% | No recovery 6 ft-8', encountered cobble | ND |
| | | | | | | | | | | or rock fragment in till. Easily augered | |
| | 21 | 30 | | | 49 | 5 | 8'-10' | soil | 63% | V. Moist to wet Dense F. SAND | ND |
| 10 | | | 19 | 15 | | | | | | and Silt, some Gravel. Till | |
| | 20 | 28 | | | 62 | 6 | 10'-12' | soil | 79% | Same, V. Moist to Wet, Very Dense. | ND |
| | | | 34 | 31 | | | | | | Till | |
| | 49 | 17 | | | 67 | 7 | 12'-14' | soil | 53% | Same, V. Dense, saturated with water. | ND |
| | | | 50/3" | | | | | | | Refusal at 13.5 ft. Rock fragment in shoe | |
| 15 | | | | | | | | | | Auger refusal encountered at 13.5 ft. | |
| | | | | | | | | | | inferred as bedrock | No VOCs |
| | | | | | | | | | | | measured |
| | | | | | | | | | | Spun casing into bedrock at 13.5 ft | on bedrock |
| | | | | | | | | | | Advanced boring through bedrock | rock cuttings |
| 20 | | | | | | | | | | using 3 7/8" diameter roller bit. | flushed to |
| | | | | | | | | | | Drilling mud flushed up cuttings. | surface |
| | | | | | | | | | | No rock core samples collected. | Faint petroleum |
| | | | | | | | | | | Rock cuttings consist of | like odor |
| | | | | | | | | | | fine grained grey limestone. 23.3 ft | noticed in rock |
| 25 | | | | | | | | | | | cuttings |
| | | | | | | | | | | Boring terminated at 23.3 feet | flushed from |
| | | | | | | | | | | 2" dia. monitoring well installed in boring | the boring. |
| | | | | | | | | | | | |
| | | | | | | | | | | | H NU PID with |
| 30 | | | | | | | | | | | 10.6 ev lamp |

N=No. of Blows to Drive    2" Spoon 12" with 140 lb wt. Hammer 30" Each Blow

## MONITORING WELL MW-14



| | |
|---|---|
| Well Screen Length | 15.0' |
| Depth to Bottom of Well Screen | 19.7' |
| Depth to Bottom of Rock Hole | 20.0' |

Advanced boring into bedrock
using tri-cone roller bit. No coring performed

NOT TO SCALE

BERGMANN
associates

**1200 East Main Street**
**City of Rochester, Monroe County, New York**
**Supplemental Site Investigation**

**MW-14 MONITORING WELL CONSTRUCTION**

**Date Installed**
**27-May-04**

**Figure**
**Well MW-14**

# DRILLING LOG

BERGMANN associates

**BORING/WELL NUMBER:** MW-14

PROJECT: 1200 East Main Street Rochester, NY
Project No: 4453.03
Page No. 1 of 1
Start Date: 05/27/04
Finish Date: 05/27/04
Top of Well: 489.48 ft.
Boring No: MW-14
Driller: Buffalo Drilling, Larry Schroeder, Driller
Boring Location: Back yard of 405 Hayward Avenue.
Inspector: Edward Jones, Bergmann Associates
Water Level (During Drilling): Not encountered above bedrock
Drilling Method: 2-1/4 inch HAS Augers, Mobil B-61 truck rig
Water Level (Post Drilling): approx. 9 feet below grade
Remarks: Advanced test borings via Hollow Stem Augers. Monitoring well installed through augers via pull back method.
Screened Interval: 19.7 ft. to 4.7 ft.
Slot Size: 0.010 inch
Well Type: 2" dia. PVC
Sandpack: 20 ft to 4 ft
Seal: 4.0 feet to 1.3 feet
Weather Conditions: Clear & sunny in morning, 70s
Flush to grade roadway box installed over the monitoring well.

| DEPTH | BLOWS ON SAMPLER | | | | SAMPLE | | | | | SOIL AND ROCK INFORMATION | Field Screening for VOCs, ppm, using PID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0"/6" | 6"/12" | 12"/18" | 18"/24" | N | NO. | Depth | Type | Recovery | | |
| | 4 | 4 | | | 7 | 1 | 0-2' | soil | 42% | Grass yard surface. Black topsoil to 6" | ND |
| | | | 3 | 5 | | | | | | Damp Orange Br. Loose F SAND & Silt | |
| | 5 | 5 | | | 10 | 2 | 2'-4' | soil | 50% | Little Gravel, roots. Same, Damp, Loose | ND |
| | | | 5 | 6 | | | | | | Glacial Till | |
| 5 | 15 | 24 | | | 65 | 3 | 4'-6' | soil | 42% | Same, damp, becomes Very Dense | ND |
| | | | 41 | 29 | | | | | | Brown damp F-M SAND & Silt, Gravel | |
| 30 | 28 | 24 | | | 59 | 4 | 6'-8' | soil | 79% | Same, damp, V. Dense. Till | ND |
| | | | 35 | 28 | | | | | | | |
| | 47 | 50/2" | | | 50+ | 5 | 8'-10' | soil | 75% | Same but becomes moist to v. moist | ND |
| 10 | | | | | | | | | | V. Dense F. SAND & Silt, little Gravel | |
| | 45 | 50/2" | | | 50+ | 6 | 10'-12' | soil | 75% | Damp grey limestone fragments. 10.0 ft | ND |
| | | | | | | | | | | may be weathered bedrock surface | |
| | | | | | | | | | | Auger refusal encountered at 10.0 ft, | |
| | | | | | | | | | | inferred as bedrock | |
| 15 | | | | | | | | | | Spun casing into bedrock, at 10.0 ft. | |
| | | | | | | | | | | Advanced boring through bedrock | No VOCs |
| | | | | | | | | | | using 3 7/8" diameter roller bit. | measured |
| | | | | | | | | | | Drilling mud flushed up cuttings. | on bedrock |
| | | | | | | | | | | No rock core samples collected. | rock cuttings |
| 20 | | | | | | | | | | Rock cuttings consist of | flushed to |
| | | | | | | | | | | fine grained grey limestone. 23.20.0 ft | surface |
| | | | | | | | | | | | Faint petroleum |
| | | | | | | | | | | Boring terminated at 20.0 feet | like odor |
| | | | | | | | | | | 2" dia. monitoring well installed in boring | noticed in rock |
| 25 | | | | | | | | | | | cuttings |
| | | | | | | | | | | | flushed from |
| | | | | | | | | | | | the boring. |
| | | | | | | | | | | | |
| | | | | | | | | | | | H NU PID with |
| 30 | | | | | | | | | | | 10.6 ev lamp |

N=No. of Blows to Drive 2" Spoon 12" with 140 lb wt. Hammer 30" Each Blow

# APPENDIX 6

# Monitoring Well Depth Gauging and Development Forms

# SUMMARY OF GROUNDWATER ELEVATIONS AND FIELD MEASUREMENTS

1200 East Main Street
Rochester, NY

| | Monitoring Date: June 4, 2004 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-13 | MW-14 |
| Casing Elevation* | 495.35 | 496.02 | 492.02 | 492.00 | 492.70 | 492.65 | 491.70 | 494.91 | 492.21 | 496.19 | 495.95 | 491.17 | 490.63 | 489.48 |
| Depth to Free Product (btoc) | none | none | 15.55 | 14.05 | none | none | 15.28 | none | 10.96 | none | none | none | none | none |
| Depth to Groundwater (btoc) | 15.84 | 13.45 | 15.75 | 14.10 | 14.67 | 12.51 | 16.14 | 15.80 | 10.97 | 15.15 | 14.63 | 16.18 | 10.10 | 10.03 |
| Free Product Thickness, ft. | 0.00 | 0.00 | 0.20 | 0.05 | 0.00 | 0.00 | 0.86 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Groundwater Elevation | 479.51 | 482.57 | 476.27 | 477.90 | 478.03 | 480.14 | 475.56 | 479.11 | 481.24 | 481.04 | 481.32 | 474.99 | 480.53 | 479.45 |
| Elevation, top of bedrock | 477.40 | 481.24 | 479.26 | 481.01 | 478.26 | 479.13 | 479.14 | 482.52 | 478.85 | 479.80 | 477.26 | 479.13 | 477.80 | 479.80 |
| Well Diameter | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" |
| Well Depth (btoc) | 24.10 | 24.17 | 21.80 | 21.12 | 25.00 | 23.56 | 22.50 | 22.21 | 23.47 | 26.45 | 28.78 | 22.07 | 22.8 | 19.7 |
| Bottom of Well Elevation | 471.25 | 471.85 | 470.22 | 470.88 | 467.70 | 469.09 | 469.20 | 472.70 | 468.74 | 469.74 | 467.17 | 469.10 | 467.80 | 469.80 |
| Thickness of Water Column | 8.26 | 10.72 | 6.05 | 7.02 | 10.33 | 11.05 | 6.36 | 6.41 | 12.50 | 11.30 | 14.15 | 5.89 | 12.73 | 9.65 |
| Minimum Purge Volume (gal) | 1.35 | 1.75 | 0.99 | 1.14 | 1.68 | 1.80 | 1.04 | 1.04 | 2.04 | 1.84 | 2.31 | 0.96 | 2.07 | 1.57 |
| 3 Volumes | 4.04 | 5.24 | 2.96 | 3.43 | 5.05 | 5.40 | 3.11 | 3.13 | 6.11 | 5.53 | 6.92 | 2.88 | 6.22 | 4.72 |
| Actual volume purged | none | none | none | none | none | none | none | none | none | none | none | none | none | none |
| Comments/adjusted WT elev* | | gas odor | 476.43 | 477.94 | | | 476.25 | | 481.25 | | | | | |
| WT above or below bedrock | Above | Above | Below | Below | Below | Above | Below | Below | Above | Above | Above | Below | Above | Below |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Casing stick-up, feet | 2.45 | 2.78 | free product<br>flush | free product<br>flush | flush | flush | free product<br>flush | 2.59 | free product<br>flush | 2.39 | 2.29 | flush | flush | flush |

**NOTES**

btoc = Below top of casing (inner riser)    All measurements are in feet, referenced to Mean Sea Level

nd = No floating product encountered

Minimum purge volume = 3 X well volume, 0.163 gallon per foot in a 2" diameter well.

*= Water table adjusted for free floating product with a density of 0.8 and 80% thickness of the free product    Free product black color, not emsulified or viscous, weathered gasoline odor

| | |
|---|---|
| Average Depth to Water: | 13.06 |
| Average Water Table Elevation: | 479.18 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth to water, from grade | 13.39 | 10.67 | 15.75 | 14.10 | 14.67 | 12.51 | 16.14 | 13.21 | 10.97 | 12.76 | 12.34 | 16.18 | 10.10 | 10.03 |

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# Field Visit Summary

To: Rochester DEQ
From: Edward Jones
Date: May 28, 2004

Re: Supplemental Site Investigation
1200 East Main Street
Rochester, NY
Bergmann #4453.02

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## MONITORING WELL INSTALLATION SUMMARY MEMO

Completed installation of wells MW-13 and MW-14 and post-installation development

Wednesday May 26, 2004
On-Site at 9:00 am.
Weather: Overcast and Fog, light rain in morning, 60 degrees
Site is secure and a Master lock is on the gate (Key #2342).

Task Completed

Crew from Buffalo Drilling (Larry Schroeder, Driller) on-site at 9:30 am. Walked area, checked utility stake-out and proposed well locations. Minor adjustments necessary to locate the drill rig in the backyards and to avoid overhead lines.

Bob Long from NYSDEC on-site about 9:40 am.
Anne Spaulding and Jane Forbes from City of Rochester on-site about 11:00 am.
Debbie McNaughton from the NYSDOH on-site about 1:30 pm.
Placed boring for MW-13 in the backyard of # 427 Hayward Avenue.

Well MW-13 Summary
MW-13 located approximately 65 feet north of MW-11, back yard of #427 Hayward Ave.
Encountered bedrock approximately 13.3 below ground surface.
No measurable VOCs or odor in soil samples.
Groundwater encountered during drilling approximately 11 feet below ground surface. Groundwater is present above bedrock at this location.

Advanced boring through bedrock using tri-cone roller bit. Boring advanced to 23.3 feet below ground surface, extending 10 feet into bedrock. Faint petroleum-like odor noticed in bedrock cuttings flushed to ground surface, but no measurable VOCs using H NU PID.

Completed MW-13. 15 feet of 2" dia. PVC well screen installed, screened interval from 8.3 feet to 23.3 feet below ground surface.
Filter sand pack extends from bottom of boring to 7.4 feet below ground surface.
Bentonite seal placed from 7.4 feet to 3.5 feet below ground surface.
A flush mount protective roadway box was placed in cement at ground level.

On Friday 05/28/04 the depth to water at MW-13 was measured at 8 feet 3 inches below ground surface.

Used power washer to decontaminate all rods, augers and drilling equipment.

Secured gate to site. Of-site at 4:00 pm.

# Field Visit Summary

Thursday May 27, 2004
On-site 7:30 am
Weather: Sunny, clear and warm, 72 degrees
Site is secure and a Master lock is on the gate (Key #2342).

Task Completed

Used City of Rochester hydrant to fill up water tank on the drill rig. Mobilized to #405 Hayward Avenue to install MW-14.

Bob Long from the NYSDEC and Debbie McNaughton from the NYSDOH on-site about 8:00 am.

## Well MW-14 Summary

Boring for MW-14 placed in the backyard of #405 Hayward Avenue. The boring was re-located to eastern side of backyard to avoid overhead lines. The well is approximately 75 feet north-northwest of MW-10.

Bedrock encountered 10.0 feet below ground surface. No measurable VOCs detected using H HU PID. No noticeable odor in the soil samples. Very faint odor in bedrock soil cuttings.

No evidence of significant groundwater encountered above bedrock. Soil on top of bedrock was wet.

Advanced boring through bedrock using tri-cone roller bit. Boring advanced to 20.0 feet below ground surface. Monitoring well MW-14 installed 10 feet into bedrock.

Faint gasoline odors noticed in the bedrock chips flushed to the surface.

Completed MW-14. 15 feet of 2" dia. PVC well screen, 5 feet to 20 feet below ground surface.
Filter sand pack extends from bottom of boring to 4.0 feet below ground surface.
Bentonite seal placed from 4.0 feet to 1.3 feet below ground surface.
A flush mount protective roadway box was placed in cement at ground level.

After installation, groundwater measured approximately 9.0 feet below ground surface at MW-14.

Used bailer to surge and develop both MW-13 and MW-14. Each well surged and bailed by hand for about 45 minutes.

Approximately 20 gallons of water was hand-bailed from MW-14. The well appeared to recharge adequately.

Approximately 6 gallons of water was hand-bailed from MW-13 during initial development. This well did not recharge as fast as MW-14. MW-13 was almost able to be hand bailed dry.

2 drums of soil cuttings left secured at 1200 East Main St. 2 empty drums also left on-site for future groundwater purge water storage. Secured the gate. Off-site at 2:30 pm to return rental equipment and to return hydrant valve and meter to the City of Rochester Water Bureau.

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# Field Visit Summary

To: Rochester DES
From: Edward Jones
Date: April 21, 2004

Re: Supplemental Site Investigation
1200 East Main Street
Rochester, NY
Bergmann #4453.02

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## SITE MONITORING REPORT

Wednesday April 21, 2004

Weather: Sunny, 55 degrees, no snow or ice
Site is secure and a Master lock is on the gate (Key #2342).
All monitoring wells are secure, with either locking stand pipes or curb boxes secure.

Tasks Completed

1. Collection of all drums for off-site disposal.
2. Monitoring and depth to water gauging for all monitoring wells.
3. Measurement of free product (LNAPL, weathered gasoline).

Free phase floating product was detected in 4 monitoring:

- 17.5 inches of black, weathered gasoline detected in MW-7.
- 10.50 inches of same weathered gasoline detected in MW-9.
- 6.75 inches of same weathered gasoline detected in MW-3.
- 0.75 inch of same weathered gasoline detected in MW-4.

A total of 16 drums were picked up by SLC Environmental for off-site disposal/recycling. The drums consisted of:

- 2 drums of hazardous waste, lead sludge from the 2003 UST removal.
- 1 drum of hazardous mixed gasoline and water from bailing wells with free product.
- 1 drum of non-hazardous absorbent pads and debris from the 2003 UST removal.
- 6 drums of non-hazardous soil cuttings from the 2003 well drilling program.
- 6 drums of non-hazardous purge water from the 2003 drilling program.

The April 2004 water table surface shows a site-wide rise in average elevation compared to the December 2003 data. On average, the current measurements show a site-wide average water table surface average that is approximately 1.51 feet higher than December 2003.

The rise in the water table surface is most pronounced at monitoring wells located in grassy or un-paved areas in the center to northern portions of the site. At MW-11 the water table surface showed a rise of 4.06 feet, the greatest rise in water table elevations per well at the site. The rise was much less, but still evident, at wells in paved areas at the southern portion of the site, i.e. MW-7 and MW-12.

The April 2004 monitoring indicates groundwater flow from the north-northwest to the south-southeast. The water table in the central-northern portions of the site, i.e. MW-9 and MW-11, is above the top of the bedrock surface, with groundwater present in unconsolidated sediments.

At MW-9, free phase product consisting of apparent weathered gasoline was detected in the unconsolidated sediments above bedrock. At the southern portion of the site the water table is still limited to below bedrock, with no perched water table in the overburden. Groundwater is present in joints and fissures in the bedrock in this area. Free product is present in the bedrock at the southern-southeastern corner of the site.

# SUMMARY OF GROUNDWATER ELEVATIONS AND FIELD MEASUREMENTS

1200 East Main Street
Rochester, NY

Monitoring Date: April 21, 2004

| | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Casing Elevation* | 495.35 | 496.02 | 492.02 | 492.00 | 492.70 | 492.65 | 491.70 | 494.91 | 492.21 | 496.19 | 495.95 | 491.17 |
| Depth to Free Product (btoc) | none | none | 15.05 | 13.01 | none | none | 14.75 | none | 8.93 | none | none | none |
| Depth to Groundwater (btoc) | 15.01 | 13.03 | 15.61 | 13.07 | 14.62 | 11.11 | 16.21 | 15.55 | 9.81 | 13.46 | 11.54 | 15.72 |
| Free Product Thickness, ft. | 0.00 | none | 0.56 | 0.06 | 0.00 | 0.00 | 1.46 | 0.00 | 0.88 | 0.00 | 0.00 | 0.00 |
| Groundwater Elevation | 480.34 | 482.99 | 476.41 | 478.93 | 478.08 | 481.54 | 475.49 | 479.36 | 482.40 | 482.73 | 484.41 | 475.46 |
| Elevation, top of bedrock | 477.40 | 481.24 | 479.26 | 481.01 | 478.26 | 479.13 | 479.14 | 482.52 | 478.85 | 479.80 | 477.26 | 479.13 |
| Well Diameter | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" |
| Well Depth (btoc) | 24.10 | 24.17 | 21.80 | 21.12 | 25.00 | 23.56 | 22.50 | 22.21 | 23.47 | 26.45 | 28.78 | 22.07 |
| Bottom of Well Elevation | 471.25 | 471.85 | 470.22 | 470.88 | 467.70 | 469.09 | 469.20 | 472.70 | 468.74 | 469.74 | 467.17 | 469.10 |
| Thickness of Water Column | 9.09 | 11.14 | 6.19 | 8.05 | 10.38 | 12.45 | 6.29 | 6.66 | 13.66 | 12.99 | 17.24 | 6.36 |
| Minimum Purge Volume (gal) | 1.48 | 1.82 | 1.01 | 1.31 | 1.69 | 2.03 | 1.03 | 1.09 | 2.23 | 2.12 | 2.81 | 1.04 |
| 3 Volumes | 4.45 | 5.45 | 3.03 | 3.94 | 5.08 | 6.09 | 3.08 | 3.26 | 6.68 | 6.35 | 8.43 | 3.11 |
| Actual volume purged | none | | | | | | | | | | | |
| Comments/adjusted WT elev* | | gas odor | 476.86 | 478.98 | | | 476.66 | | 483.10 | | | |
| WT above or below bedrock | Above | Above | Below | Below | Below | Above | Below | Below | Above | Above | Above | Above |
| | | | 6.75 "<br>free product | 0.75 "<br>free product | | | 17.50 "<br>free product | | 10.50"<br>free product | | | |
| Casing stick-up | 2.45 | 2.78 | flush | flush | flush | flush | flush | 2.59 | flush | 2.39 | 2.29 | flush |

**NOTES**

btoc = Below top of casing (inner riser)   All measurements are in feet, referenced to Mean Sea Level

| | |
|---|---|
| Average Depth to Water: | 12.69 |
| Average Water Table Elevation: | 479.98 |

nd = No floating product encountered
Minimum purge volume = 3 X well volume, 0.163 gallon per foot in a 2" diameter well.
*= Water table adjusted for free floating product with a density of 0.8 and 80% thickness of the free product   Free product black color, not emsulified or viscous, weathered gasoline odo

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth to water, from grade | 12.56 | 10.25 | 15.61 | 13.07 | 14.62 | 11.11 | 16.21 | 12.96 | 9.81 | 11.07 | 9.25 | 15.72 |

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# Field Visit Summary

To: Rochester DES
From: Edward Jones
Date: December 9, 2003

Re: Supplemental Site Investigation
1200 East Main Street
Rochester, NY
Bergmann #4453.02

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## SITE MONITORING REPORT

Tuesday December 9, 2003
Weather: overcast, 40 degrees, patchy snow

Site is secure and a Master lock is on the gate (Key #3297).

All monitoring wells are secure, with either locking stand pipes or curb boxes secure.
All wells were measured for depth to water and presence of free product on 12/09/03

Free phase floating product was detected in 3 monitoring wells:

- 13 inches of black, weathered gasoline detected in MW-7.
- 1 and 1/16 inch of same weathered gasoline detected in MW-3.
- ¼" of same weathered gasoline detected in MW-4.

Evaluation of water table surface and groundwater flow pattern

The water table surface shows a site-wide rise in elevation compared to the September 2003 data. On average, the December 2003 measurements show a site-wide average water table surface that is approximately 1.23 feet higher than September 2003.

The rise in the water table surface is most pronounced at monitoring wells located in grassy or un-paved areas. At MW-11 the water table surface showed a rise of 2.05 feet.

The rise was much less, but still evident, at wells in paved areas at the southern portion of the site, i.e. MW-7 and MW-12.

The water table in the central-northern portions of the site, i.e. MW-9 and MW-11, is noticeably above the top of the bedrock surface, with groundwater present in the unconsolidated sediments.

At the southern portion of the site the water table is still limited to below bedrock, with no perched water table in the overburden. Groundwater is present in joints and fissures in the bedrock in this area. Free product is present in the bedrock at the southern-southeastern corner of the site.

The groundwater flow regime for December 2003 indicates a somewhat bi-modal distribution pattern. For the central-southern portion of the site, groundwater is limited to bedrock and is flowing in a southeast to southerly direction, with free product concentrated at MW-7 to MW-3 area.

At the northern portion of the site, where groundwater is above bedrock, the water table surface is relatively flat, with a component of flow moving in an apparent northwesterly direction, towards MW-10 and MW-11.

1200 East Main Street
Rochester, NY

| | Monitoring Date: December 9, 2003 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 |
| Casing Elevation | 495.35 | 496.02 | 492.02 | 492.00 | 492.70 | 492.65 | 491.70 | 494.91 | 492.21 | 496.19 | 495.95 | 491.17 |
| Depth to Groundwater (btoc) | 17.31 | 14.54 | 16.37 | 14.92 | 14.64 | 12.66 | 16.23 | 16.56 | 11.62 | 15.75 | 15.60 | 16.65 |
| Groundwater Elevation* | 478.04 | 481.48 | 475.65 | 477.08 | 478.06 | 479.99 | 475.47 | 478.35 | 480.59 | 480.44 | 480.35 | 474.52 |
| Well Diameter | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" |
| Product Thickness, feet | nd | nd | 0.09 ft | 0.02 ft | nd | nd | 1.08 ft | nd | nd | nd | nd | nd |
| Well Depth (btoc) | 24.10 | 24.17 | 21.80 | 21.12 | 25.00 | 23.56 | 22.50 | 22.21 | 23.47 | 26.45 | 28.78 | 22.07 |
| Bottom of Well Elevation | 471.25 | 471.85 | 470.22 | 470.88 | 467.70 | 469.09 | 469.20 | 472.70 | 468.74 | 469.74 | 467.17 | 469.10 |
| Thickness of Water Column | 6.79 | 9.63 | 5.43 | 6.20 | 10.36 | 10.90 | 6.27 | 5.65 | 11.85 | 10.70 | 13.18 | 5.42 |
| Minimum Purge Volume (gal) | 1.11 | 1.57 | 0.89 | 1.01 | 1.69 | 1.78 | 1.02 | 0.92 | 1.93 | 1.74 | 2.15 | 0.88 |
| 3 Volumes | 3.32 | 4.71 | 2.66 | 3.03 | 5.07 | 5.33 | 3.07 | 2.76 | 5.79 | 5.23 | 6.45 | 2.65 |
| Actual volume purged | | | | | | | | | | | | |
| Comments* | | | product | product | | | product | | | | | |

Weather: Overcast, 40 degrees F, patchy snow cover.

## NOTES

btoc = Below top of casing (inner riser)    All measurements are in feet, referenced to Mean Sea Level
nd = No floating product encountered
Minimum purge volume = 3 X well volume, 0.163 gallon per foot in a 2" diameter well.
*= Water table adjusted for free floating product with a density of 0.8 and 80% thickness of the free product

TOTAL VOLUME to PURGE, 3X ALL WELLS:
0.0 Gallons

at MW-7
DTP: 16.01
DTW 17.09
80.00% 0.86
adjust WT: 16.23

product: 1.08 ft

at MW-3
DTP: 16.35
DTW: 16.44
80.00% 0.07
adjust WT: 16.37

product: 0.09 ft

at MW-4
DTP: 14.92
DTW: 14.94
80.00% 0.016
adjust WT: 14.924

product: 0.02

1200 East Main Street
Rochester, NY

| | Monitoring Date: September 4, 2003 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 |
| Casing Elevation* | 495.35 | 496.02 | 492.02 | 492.00 | 492.70 | 492.65 | 491.70 | 494.91 | 492.21 | 496.19 | 495.95 | 491.17 |
| Depth to Groundwater (btoc) | 18.25 | 16.32 | 16.95 | 15.99 | 14.73 | 15.30 | 17.52 | 17.43 | 13.19 | 17.26 | 17.65 | 17.02 |
| Groundwater Elevation | 477.10 | 479.70 | 475.07 | 476.01 | 477.97 | 477.35 | 474.18 | 477.48 | 479.02 | 478.93 | 478.30 | 474.15 |
| Well Diameter | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" | 2" |
| Product Thickness | nd | nd | 0.10 | 0.06 | nd | nd | 0.79 | nd | nd | nd | nd | nd |
| Well Depth (btoc) | 24.10 | 24.17 | 21.80 | 21.12 | 25.00 | 23.56 | 22.50 | 22.21 | 23.47 | 26.45 | 28.78 | 22.07 |
| Bottom of Well Elevation | 471.25 | 471.85 | 470.22 | 470.88 | 467.70 | 469.09 | 469.20 | 472.70 | 468.74 | 469.74 | 467.17 | 469.10 |
| Thickness of Water Column | 5.85 | 7.85 | 4.85 | 5.13 | 10.27 | 8.26 | 4.98 | 4.78 | 10.28 | 9.19 | 11.13 | 5.05 |
| Minimum Purge Volume (gal) | 0.95 | 1.28 | 0.79 | 0.84 | 1.67 | 1.35 | 0.81 | 0.78 | 1.68 | 1.50 | 1.81 | 0.82 |
| 3 Volumes | 2.86 | 3.84 | 2.37 | 2.51 | 5.02 | 4.04 | 2.44 | 2.34 | 5.03 | 4.49 | 5.44 | 2.47 |
| Actual volume purged | | | | | | | | | | | | |
| Comments* | | | 475.15 | 476.06 | | | 474.81 | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Casing stick-up, feet | 2.45 | 2.78 | flush | flush | flush | flush | flush | 2.59 | flush | 2.39 | 2.29 | flush |
| Depth to GW, below grade | 15.8 | 13.5 | 17.0 | 15.99 | 14.7 | 15.3 | 17.5 | 14.8 | 13.2 | 14.87 | 15.36 | 17.02 |

**NOTES**

btoc = Below top of casing (inner riser)    All measurements are in feet, referenced to Mean Sea Level

nd = No floating product encountered

Minimum purge volume = 3 X well volume, 0.163 gallon per foot in a 2" diameter well.

*= Water table adjusted for free floating product with a density of 0.8 and 80% thickness of the free product

TOTAL VOLUME to PURGE, 3X ALL WELLS:
137.9 Gallons

Average Depth to Water: 15.43
Average Water Table Elevation: 477.11

Recommended Order for Groundwater Sampling, 1200 East Main St., Rochester, NY
June 2004 Sampling program
Sampling order: lowest VOCs to highest concentration of VOCs. All samples for VOCs and SVOCs

| Sampling Order | Well Number | 2003 VOCs | Comments | | |
|---|---|---|---|---|---|
| 1 | MW-6 | ND | | SW-846 | |
| 2 | MW-5 | ND | | SW-846 | |
| 3 | MW-12 | ND | | SW-846 | |
| 4 | MW-14 | Not tested | New well, ASP | | MS-ASP, MSD-ASP: base ASP sample also for STARS |
| 5 | MW-13 | Not tested | New well, ASP | | also a duplicate, standard: ASP sample also for STARS |
| 6 | MW-8 | 282 ppb | | SW-846 | |
| 7 | MW-11 | 1,371 ppb | | SW-846 | |
| 8 | MW-2 | 2,082 ppb | | SW-846 | |
| 9 | MW-1 | 3,856 ppb | | SW-846 | |
| 10 | MW-10 | 9,251 ppb | | SW-846 | |
| 11 | MW-3 | 2,693 ppb | product | SW-846 | |
| 12 | MW-4 | 5,834 ppb | product | SW-846 | |
| 13 | MW-9 | 16,690 ppb | product | SW-846 | |
| 14 | MW-7 | 23,940 ppb | product | SW-846 | |

The 2 new wells for ASP analysis are also to be tested via STARS 8260 to pick up non-ASP STARS analytes

Also collect 1 field blank-rinsate for both VOCs and SVOCS analysis, standard SW-846
Submit 1 lab-prepared trip blank for both VOCs and SVOCs analysis, standard SW-846
Total of 19 samples to be submitted for analysis ( 1 TB, 1 FB, 14 well samples, 1 duplicate, 1 MS and 1 MSD)

The wells with free product are to be developed and sampled: collect samples below product layer.
3 well volumes to be removed via lowering the tubing below the free product layer
and collecting the samples directly from the tubing via low flow.
Do not use bailers to collect samples from wells with free product.

June
2004
well
Development
Forms

## GROUNDWATER SAMPLING WORKSHEET

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associates

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/17/04
Weather: CLOUDY & RAIN ~70's
Personnel: J. MARSCHNER

### GROUNDWATER SAMPLE POINT

Well Number: MW-1
Location: SEE PLAN
Casing Diameter: 2.0 in

Depth to water, below top of casing: 16.05
Depth to bottom of the well: 24.10'
Length of water column in well: 8.05

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Volume of water in well casing, gallons: 1.312
3 Well volumes (= length water column X gal/foot X 3): 3.936
Actual volume purged prior to sampling: 3.5 GALLONS
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22 W/FLOWCELL
Well Recharged? YES @ LOWER INTERVAL
Required Analysis: 8260 + STARS | 8270 STARS ONLY

### FIELD PARAMETER MEASUREMENTS

INTAKE @ 20.0' @ MID OF H2O COLUMN | INTAKE @ 22.0'

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | START | ~0.10GAL | ~0.10GAL | <.20GAL | <.30GAL | 1.5GAL | ~2.0 | ~2.4 | ~2.7 | ~3.0 | ~3.3 |
| Turbidity | 53.7 | 39.1 | 42.3 | 37.7 | 41.0 | 64.0 | 53.6 | 49.9 | 43.3 | 40.8 | 40.4 |
| Temperature | 19.7 | 18.8 | 18.5 | 19.3 | 18.2 | 14.0 | 13.8 | 13.9 | 13.8 | 13.8 | 13.7 |
| pH | 7.24 | 7.27 | 7.28 | 7.28 | 7.30 | 7.31 | 7.30 | 7.30 | 7.29 | 7.30 | 7.30 |
| Conductivity | 0.837 | 0.871 | 0.877 | 0.867 | 0.888 | 0.898 | 0.903 | 0.905 | 0.917 | 0.916 | 0.916 |
| DTW | 17.01 | 17.20 | 17.27 | 17.29 | 17.38 | 19.21 | 19.20 | 19.19 | 19.19 | 19.18 | 19.18 |
| TIME | 0952 | 0958 | 1002 | 1003 | 1012 | 1042 | 1046 | 1050 | 1054 | 1058 | 1102 |

42 SEC/40 MLS
46 SEC/40 MLS
MOVE INTAKE TO
266 MLS/MIN

Time sample was collected: 1120

| **COMMENTS** • WELL GOING DRY @ PUMPS LOWEST SETTING. |
|---|
| DROP INTAKE DOWN WELL TO NEW ~~[illegible]~~ 42 MLS/MIN |
| SCREEN SECTION • PETRO ODOR |

DTW
19.00' @
END OF SAMPLING

①

# GROUNDWATER SAMPLING WORKSHEET

BERGMANN associates

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/17/04
Weather: CLOUDY UPPER 60's
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-2
Location: SEE PLAN
Casing Diameter: 2.0in

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 13.45
Depth to bottom of the well: 24.17
Length of water column in well: 10.72

Volume of water in well casing, gallons: 1.747
3 Well volumes (= length water column X gal/foot X 3): 5.24
Actual volume purged prior to sampling: 1.25 GALLONS
Sampling Methodology: LOW FLOW SAMPLING
Sampling Equipment: GEOPUMP
HORIBA U-22 w/FLOWCELL
Well Recharged?
Required Analysis: 8260 + STARS / 8270 STARS ONLY

## FIELD PARAMETER MEASUREMENTS

INTAKE @ ~18.8' MID POINT OF H2O

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | START | ~0.15GAL | ~0.25GAL | ~0.5GAL | ~0.7 GAL | 0.9GAL | 1.1 GAL | |
| Turbidity | 67.0 | 71.2 | 62.1 | 53.5 | 50.7 | 47.8 | 47.6 | |
| Temperature | 19.9 | 18.1 | 17.2 | 17.0 | 16.8 | 16.9 | 16.7 | |
| pH | 7.32 | 7.25 | 7.21 | 7.18 | 7.19 | 7.21 | 7.21 | |
| Conductivity | 0.516 | 0.531 | 0.540 | 0.554 | 0.554 | 0.551 | 0.550 | |
| DTW | 13.92 | 13.87 | 13.86 | 13.87 | 13.87 | 13.87 | 13.87 | |
| TIME | 0848 | 0852 | 0856 | 0900 | 0904 | 0908 | 0912 | |

Time sample was collected: 0920

**COMMENTS**

12 SEC/40mls
200mls/min

# GROUNDWATER SAMPLING WORKSHEET

BERGMANN
associates

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/17/04
Weather: RAIN CLOUDY 70's
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-3
Location: SEE PLAN
Casing Diameter: 2.0in

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 15.62
Depth to bottom of the well: 21.80'
Length of water column in well: 6.18

Volume of water in well casing, gallons: 1.007
3 Well volumes (= length water column X gal/foot X 3): 3.02
Actual volume purged prior to sampling: ~0.8 GALLONS
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22 W/ FLOWCELL
Well Recharged?
Required Analysis: 8260+STARS / 8270 STARS ONLY

## FIELD PARAMETER MEASUREMENTS

INTAKE @ 18.5' MID OF H2O COLUMN

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | START | ~0.10 GAL | ~0.20 GA | ~0.30 GAL | ~0.40 GAL | ~0.5 GAL | ~0.6 GAL | ~0.7 GAL | |
| Turbidity | 118.0 | 97.8 | 92.9 | 67.4 | 74.5 | 69.3 | 55.5 | 54.2 | |
| Temperature | 18.7 | 17.7 | 17.2 | 17.6 | 17.2 | 17.1 | 17.5 | 17.4 | |
| pH | 7.49 | 7.48 | 7.50 | 7.50 | 7.51 | 7.51 | 7.51 | 7.51 | |
| Conductivity | 1.10 | 1.13 | 1.14 | 1.15 | 1.16 | 1.15 | 1.15 | 1.15 | |
| DTW | 15.70 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | 15.72 | |
| TIME | 1520 | 1525 | 1530 | 1535 | 1540 | 1545 | 1550 | 1555 | |

Time sample was collected: 1610

**COMMENTS** 0.33' PRODUCT THICKNESS
PETRO ODOR W/ SHEEN ON PURGE H2O
(29 SEC / 40 MLS
82 MLS / MIN)

## GROUNDWATER SAMPLING WORKSHEET

BERGMANN
associates

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/18/04
Weather: CLOUDY 60's
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-4
Location: SEE PLAN
Casing Diameter: 2.0in

Depth to water, below top of casing: 14.18 DTP | 14.45 DTW
Depth to bottom of the well: 21.12'
Length of water column in well: 6.67

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Volume of water in well casing, gallons: 1.087
3 Well volumes (= length water column X gal/foot X 3): 3.26
Actual volume purged prior to sampling: 2.0 GAL
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22
Well Recharged? YES
Required Analysis: 8260+STARS | 8270 STARS ONLY

## FIELD PARAMETER MEASUREMENTS

INTAKE MID PT OF H2O COLUMN DRAW/INTAKE @ 20.60'

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | START | ~0.15GAL | ~0.25 | 1.1GAL | 1.3GAL | 1.5GAL | 1.7GAL | 1.9GAL |
| Turbidity | 69.8 | 44.5 | 47.5 | 84.1 | 73.8 | 86.4 | 61.9 | 72.0 |
| Temperature | 18.0 | 18.2 | 18.1 | 19.4 | 17.3 | 16.7 | 16.8 | 17.0 |
| pH | 7.12 | 7.09 | 7.10 | 7.11 | 7.12 | 7.12 | 7.12 | 7.13 |
| Conductivity | 0.643 | 0.645 | 0.646 | 0.610 | 0.658 | 0.670 | 0.672 | 0.693 |
| DTW | 15.48 | 15.70 | 15.86 | 17.58 | 17.42 | 17.40 | 17.34 | 17.23 |
| TIME | 0915 | 0920 | 0925 | 1002 | 1008 | 1012 | 1016 | 1020 |

32 SEC|40 MLS

Time sample was collected: 1025

**COMMENTS**

35 SEC | 40 MLS
52 MLS | MIN

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
associates

**PROJECT NAME:** City of Roch 1200 E. Main St
Project Number: 4453.03
Site Location: 1200 E. Main St
Sample Date: 6/15/04
Weather: Cloudy 70's
Personnel: J. Marschner

## GROUNDWATER SAMPLE POINT

5
Well Number: MW-5
Location: See Plan
Casing Diameter: 2.0"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 14.68
Depth to bottom of the well: 23.56
Length of water column in well: 8.88

Volume of water in well casing, gallons: 1.447
3 Well volumes (= length water column X gal/foot X 3): 4.34
Actual volume purged prior to sampling: 4.50 Gal
Sampling Methodology: Low Flow Sampling
Sampling Equipment: Geopump
Horiba U-22
Well Recharged? Yes
Required Analysis: 8260 + STARS / 8270

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Start | 0.5 | 1.0 | 2.0 | 3.0 | 4.0 | 4.5 | |
| Turbidity | 995 | 77.8 | 57.8 | 43.0 | 41.6 | 36.7 | 36.5 | |
| Temperature | 18.4 | 16.4 | 16.2 | 15.7 | 15.5 | 15.4 | 15.4 | |
| pH | 7.44 | 7.39 | 7.39 | 7.36 | 7.37 | 7.39 | 7.40 | |
| Conductivity | 1.88 | 0.853 | 0.733 | 0.77 | 0.791 | 0.808 | 0.811 | |
| | | | | | | | | |
| | | | | | | | | |

Time sample was collected: 0840

**COMMENTS**

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
associates

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/15/04
Weather: CLOUDY 70'S
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-6 6
Location: SEE PLAN
Casing Diameter: 2.0

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 12.83
Depth to bottom of the well: 25.00
Length of water column in well: 12.17

Volume of water in well casing, gallons: 1.9837
3 Well volumes (= length water column X gal/foot X 3): 5.95
Actual volume purged prior to sampling: 2.5 GAL
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22
Well Recharged?
Required Analysis: 8260+STARS / 8270

## FIELD PARAMETER MEASUREMENTS

3-5 MIN READS TILL STABLE

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | START | 0.5 | 1.0 | 1.5 | 2.0 | ~2.5 | 5.0 | 6.0 |
| Turbidity | -5.5 962 | | 57.5 | 49.7 | 48.3 | 45.1 | | |
| Temperature | 15.8 | | 14.4 | 14.4 | 14.3 | 14.2 | | |
| pH | 7.44 | | 7.27 | 7.27 | 7.28 | 7.29 | | |
| Conductivity | 0.922 | | 0.97 | 0.97 | 0.97 | 0.97 | | |
| DTW | 12.83 | | 12.99 | 13.01 | 13.00 | — | | |
| TIME | — | | | 0939 | 0944 | 0948 | | |

Time sample was collected: 0955

MW-6

**COMMENTS** Fe BACT CLOUD @ START OF SAMPLING
12.99 STABLE
DEC SPLIT SAMPLE ON VOA'S 8SEC/40ml
= 300 ml/min

# GROUNDWATER SAMPLING WORKSHEET

BERGMANN
associates

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/18/04
Weather: CLOUDY & 70'S
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-7
Location: SEE PLAN
Casing Diameter: 2.0 in

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 15.34' 0.45'
Depth to bottom of the well: 22.50'
Length of water column in well: 7.16

Volume of water in well casing, gallons: 1.167
3 Well volumes (= length water column X gal/foot X 3): 3.50
Actual volume purged prior to sampling:
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22 w/ LOW FLOW CELL
Well Recharged?
Required Analysis: 8260+STARS | 8270 STARS ONLY

## FIELD PARAMETER MEASUREMENTS

INTAKE @ ~18.9' MIDDLE OF H2O COLUMN

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | START | ~0.20GAL | ~0.40GAL | 0.60GAL | 0.80GAL | | | |
| Turbidity | 82.4 | 93.8 | 51.5 | 50.0 | 37.4 | | | |
| Temperature | 18.6 | 17.5 | 17.2 | 17.0 | 17.1 | | | |
| pH | 7.27 | 7.24 | 7.26 | 7.28 | 7.28 | | | |
| Conductivity | 1.12 | 1.16 | 1.18 | 1.19 | 1.20 | | | |
| DTW | 15.88 | 15.88 | 15.85 | 15.84 | 15.83 | | | |
| TIME | 1210 | 1215 | 1220 | 1225 | 1230 | | | |

Time sample was collected: 1245

**COMMENTS**

(15 SEC FOR 40 MLS
160 MLS/MIN)

## GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
associates

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/16/04
Weather: SUNNY 70'S
Personnel: J. MARSCHNER

### GROUNDWATER SAMPLE POINT

Well Number: MW-8
Location: SEE PLAN
Casing Diameter: 2.0 in

Depth to water, below top of casing: 16.0
Depth to bottom of the well: 22.21
Length of water column in well: 6.21

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Volume of water in well casing, gallons: 1.01
3 Well volumes (= length water column X gal/foot X 3): 3.03
Actual volume purged prior to sampling: 0.33 GALLONS
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22 W/ FLOW CELL
Well Recharged? YES
Required Analysis: FULL 8260 + STARS & 8270, SW846 STARS ONLY

### FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | START | ~0.1 GAL | <0.2 GAL | <0.25 GAL | <1/3 GAL | <1/3 GAL | <1/3 GAL | 1/3 GAL |
| Turbidity | 78.2 | 58.8 | 53.3 | 49.5 | 45.3 | 51.2 | 48.6 | 46.4 |
| Temperature | 21.3 | 20.8 | 19.9 | 20.4 | 20.5 | 19.7 | 19.4 | 19.5 |
| pH | 7.30 | 7.29 | 7.28 | 7.28 | 7.27 | 7.29 | 7.29 | 7.28 |
| Conductivity | 0.706 | 0.713 | 0.725 | 0.722 | 0.731 | 0.737 | 0.734 | 0.728 |
| DTW | 16.56 | 16.58 | 16.61 | 16.61 | 16.59 | 16.59 | 16.59 | 16.59 |
| TIME | 1020 | 1024 | 1028 | 1032 | 1036 | 1040 | 1044 | 1048 |

Time sample was collected: 1105

START INTAKE @ ~19.0' MID OF $H_2O$ COLUMN

**COMMENTS**

1/3 sec/40 mls
(* 55 mls/min )
= 20 min to fill 1 liter bottle

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
associates

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/18/04
Weather: CLOUDY 70'S
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-9
Location: SEE PLAN
Casing Diameter: 2.0in

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 11.15 (PRODUCT THICK 0.05)
Depth to bottom of the well: 23.47
Length of water column in well: 12.32

Volume of water in well casing, gallons: 2.008
3 Well volumes (= length water column X gal/foot X 3): 6.024
Actual volume purged prior to sampling: 0.78 GALLONS
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22 W/FLOW CELL
Well Recharged?
Required Analysis: 8260 +STARS | 8270 STARS ONLY

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | START | ~0.1GAL | ~0.25 | ~0.4 | ~0.55 | | | |
| Turbidity | 68.7 | 61.9 | 33.7 | 25.8 | 34.9 | | | |
| Temperature | 21.3 | 18.7 | 18.2 | 18.1 | 18.1 | | | |
| pH | 7.23 | 7.18 | 7.18 | 7.18 | 7.19 | | | |
| Conductivity | 0.792 | 0.817 | 0.823 | .824 | 0.826 | | | |
| DTW | 11.25 | 11.27 | 11.29 | 11.29 | 11.29 | | | |
| TIME | 11:15 | 1120 | 1125 | 1130 | 1135 | | | |

Time sample was collected: 1145

**COMMENTS**

(22sec/MIL=40
109mls/min)

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
associates

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/16/04
Weather: SUNNY UPPER 70's
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-10
Location: SEE PLAN
Casing Diameter: 2.0 in

Depth to water, below top of casing: 15.52
Depth to bottom of the well: 26.45'
Length of water column in well: 10.93

| Well Dia. | Volume/Foot |
|---|---|
| 1" | = 0.041 gal/foot |
| [✓ 2"] | = 0.163 gal/foot |
| 4" | = 0.653 gal/foot |
| 6" | = 1.469 gal/foot |
| 8" | = 2.611 gal/foot |

Volume of water in well casing, gallons: 1.78
3 Well volumes (= length water column X gal/foot X 3): 5.34
Actual volume purged prior to sampling:
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22 W/FLOWCELL
Well Recharged?
Required Analysis: FULL 8260 + STARS 8270 STARS ONLY SW846

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | START | <0.1GAL | ~0.1GAL | ~0.2GAL | ~0.25GAL | ~0.30GAL | ~0.40 | ~0.50GAL |
| Turbidity | 113.0 | 100.0 | 78.7 | 65.5 | 57.0 | 51.7 | 49.7 | 51.7 |
| Temperature | 18.9 | 17.9 | 18.1 | 18.1 | 18.6 | 18.6 | 18.7 | 18.6 |
| pH | 7.01 | 6.96 | 6.95 | 6.95 | 6.96 | 6.97 | 6.97 | 6.98 |
| Conductivity | 1.39 | 1.41 | 1.43 | 1.45 | 1.45 | 1.47 | 1.48 | 1.49 |
| DTW 15.65 | 15.65 | 15.67 | 15.67 | 15.67 | 15.67 | 15.67 | 15.67 | 15.67 |
| TIME | 1231 | 1235 | 1239 | 1243 | 1247 | 1251 | 1255 | 1259 |

Time sample was collected: 1315

INTAKE @ ~21.0FT MIDPOINT OF $H_2O$ COLUMN

**COMMENTS**

40mls/42 sec

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
associates

**PROJECT NAME:** CITY OF ROCH 1200 E MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/16/04
Weather: SUNNY ~80°
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-11
Location: SEE PLAN
Casing Diameter: 2.0in

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 15.16'
Depth to bottom of the well: 28.78'
Length of water column in well: 13.62'

Volume of water in well casing, gallons: 2.22
3 Well volumes (= length water column X gal/foot X 3): 6.66
Actual volume purged prior to sampling:
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22 W/ FLOW CELL
Well Recharged? YES
Required Analysis: 8260 STARS / 8270 STARS ONLY SW846

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | START | 0.26GAL | ~0.35GAL | ~0.45GAL | 0.55GAL | 0.65GAL | 0.75GAL | |
| Turbidity | 794.0 | 745 | 61.6 | 50.8 | 46.2 | 43.2 | 40.6 | |
| Temperature | 18.8 | 16.4 | 15.9 | 15.8 | 15.7 | 15.7 | 15.7 | |
| pH | 6.77 | 6.73 | 6.78 | 6.80 | 6.83 | 6.86 | 6.88 | |
| Conductivity | 1.36 | 1.44 | 1.44 | 1.43 | 1.43 | 1.41 | 1.40 | |
| DTW | 15.32 | 15.36 | 15.36 | 15.36 | 15.36 | 15.36 | 15.36 | |
| TIME | 1428 | 1432 | 1438 | 1442 | 1446 | 1450 | 1454 | |

Fe BACT
CLEAN OUT CELL @1434

Time sample was collected: 1520

INTAKE @~21.78' MID OF $H_2O$ COLUMN

**COMMENTS**
* LT PETRO ODOR DURING PURGE
21 SEC/40 MLS
114 MLS/MIN

FIELD BLANK (W MW-11 TUBE)
1410 HRS

⑪

# GROUNDWATER SAMPLING WORKSHEET

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/16/04
Weather: PARTLY CLOUDY 70'S
Personnel: J. MARSCHNER

BERGMANN
associates

## GROUNDWATER SAMPLE POINT

Well Number: MW-12
Location: SEE PLAN
Casing Diameter: 2.0in

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 16.34'
Depth to bottom of the well: 22.07'
Length of water column in well: 5.73'

Volume of water in well casing, gallons: 0.9339
3 Well volumes (= length water column X gal/foot X 3): 2.80
Actual volume purged prior to sampling: 1.1 GALLONS
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22 w/ FLOWCELL
Well Recharged? FAIR TO POOR
Required Analysis: FULL 8260 & 8270 SW846
+STARS STARS ONLY.

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | | | | | | * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | START | <.10GAL | <.2GAL | ~.25GAL | <.30GAL | <.40GAL | ~.5GAL | >.5GAL | ~.6GAL | .75GAL | .9GAL | 1GAL | 1.1GAL |
| Turbidity | 102 | 110 | 102 | 91.3 | 84.8 | 70.2 | 57.5 | 48.8 | 47.3 | 45.8 | 54.2 | 53.0 | 52.4 |
| Temperature | 20.1 | 19.2 | 19.2 | 19.0 | 18.8 | 19.0 | 19.8 | 20.1 | 19.9 | 19.6 | 19.0 | 18.9 | 18.7 ← SUN? |
| pH | 7.12 | 7.09 | 7.08 | 7.08 | 7.09 | 7.09 | 7.14 | 7.17 | 7.19 | 7.20 | 7.21 | 7.21 | 7.21 |
| Conductivity | 8.78 | 8.69 | 8.65 | 8.63 | 8.55 | 8.27 | 6.83 | 5.98 | 5.27 | 4.94 | 4.56 | 4.47 | 4.39 |
| DTW | 16.38 | 16.38 | 16.38 | 16.38 | 16.38 | 16.38 | 16.38 | — | — | — | 16.38 | — | 16.38 |
| TIME | 0819 | 0824 | 0828 | 0832 | 0835 | 0840 | 0845 | 0850 | 0855 | 0900 | 0905 | 0910 | 0915 |

16.31
↑
START PUMP

16.38 DTW

Time sample was collected: 0930

START INTAKE @ ~19.0' MID OF H2O COLUMN

**COMMENTS**
- BAILED H2O OUT OF PROTECTIVE CASING PRIOR TO OPENING WELL

32 sec/40 mls
(*75 mls/min FLOW RATE)

⑫

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN associates**

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/15/04
Weather: CLOUDY 70'S
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-13
Location: SEE PLAN
Casing Diameter: 2.0in

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 10.08
Depth to bottom of the well: 22.8
Length of water column in well: 12.72

Volume of water in well casing, gallons: 2.07
3 Well volumes (= length water column X gal/foot X 3): 6.22
Actual volume purged prior to sampling: 0.6GAL
Sampling Methodology: LOW FLOW PUMPING
Sampling Equipment: GEOPUMP
HORIBA U-22
Well Recharged? FAIR TO POOR
Required Analysis: 8260 + STARS & 8270 ASP + DUP

## FIELD PARAMETER MEASUREMENTS

3-5min

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | START | ~1/6GAL | ~0.25GAL | ~0.40GAL | ~0.45GAL | ~0.5GAL | ~0.60GAL | |
| Turbidity | 82.1 | 73.6 | 74.6 | 60.9 | 59.1 | 61.3 | 58.0 | |
| Temperature | 16.7 | 16.7 | 16.6 | 16.4 | 17.5 | 17.3 | 17.4 | |
| pH | 7.22 | 7.31 | 7.35 | 7.36 | 7.35 | 7.34 | 7.34 | |
| Conductivity | 1.56 | 1.53 | 1.55 | 1.56 | 1.55 | 1.57 | 1.60 | |
| DTW | 10.30 | 10.71 | 10.82 | 10.94 | 10.97 | 10.95 | — | |
| TIME | 1042<br>1044 | 1048 | 1052 | 1104 | 1108 | 1114 | 1118 | |

Time sample was collected: 1125 3 SET = DUP & ASP PROTOCOL

**COMMENTS**

SAMPLE @ 15' INTAKE

1st
22sec/40ml
109ml/min

2nd
27sec/40ml
89ml/min

# GROUNDWATER SAMPLING WORKSHEET

**PROJECT NAME:** CITY OF ROCH 1200 E. MAIN ST
Project Number: 4453.03
Site Location: 1200 E. MAIN ST
Sample Date: 6/15/04
Weather: PARTLY CLOUDY 70'S
Personnel: J. MARSCHNER

BERGMANN associates

## GROUNDWATER SAMPLE POINT

Well Number: MW-14
Location: SEE PLAN
Casing Diameter: 2.0in

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| ② " = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 10.22
Depth to bottom of the well: 19.7
Length of water column in well: 9.48

Volume of water in well casing, gallons: 1.545
3 Well volumes (= length water column X gal/foot X 3): 4.63
Actual volume purged prior to sampling: 0.8 GAL
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22
Well Recharged? YES
Required Analysis: 8260+STARS | 8270 + MS|MSD & ASP PROTOCOL

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | START | ~0.15 | ~1/4GAL | ~.5GAL | ~.7GAL | 0.8GAL | | |
| Turbidity | 106 | 66.6 | 62.2 | 50.2 | 48.6 | 49.3 | | |
| Temperature | 19.8 | 18.6 | 18.0 | 17.9 | 18.0 | 18.0 | | |
| pH | 7.26 | 7.21 | 7.22 | 7.21 | 7.21 | 7.22 | | |
| Conductivity | 0.928 | 0.925 | 0.924 | 0.919 | 0.915 | 0.916 | | |
| DTW | 10.29 | 10.29 | 10.3 | — | — | — | | |
| Time | 1301 | 1314 | 1318 | 1322 | 1326 | 1330 | | |

Time sample was collected: 1335

**COMMENTS**

DEC SPLIT

22 SEC | 40 mLS
109 mLS | MIN

(14)

MW-14

## GROUNDWATER SAMPLING WORKSHEET

BERGMANN
associates

**PROJECT NAME:** 1200 EAST MAIN ST- Rochester
Project Number: 4453.03
Site Location: Rochester, NY
Sample Date: Thurs 05/27/04
Weather: overcast in PM
Personnel: Edward Jones

**GROUNDWATER SAMPLE POINT**

Well Number: MW-14
Location: Behind #405 Hayward - Abandoned House
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: ~8.0 ft
Depth to bottom of the well: ~20 Ft well
Length of water column in well: 16 feet

Volume of water in well casing, gallons: 2.61
3 Well volumes (= length water column X gal/foot X 3): 7.83 gallons
Actual volume purged prior to sampling: not sampled - 17 gallons Bailed
Sampling Methodology: purged & surged by Hand-Bailer
Sampling Equipment: HORIBA U-10 & Disposable Bailer

Well Recharged? Yes - Rechared well
Required Analysis: NO Sampling

**FIELD PARAMETER MEASUREMENTS** $0^2$ readings NOT working

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.06 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 8.0 | 10 | 12 | 15 | 17G |
| Turbidity | 230 | 999 | 999 | 999 | 999 | 999 | 999 | 999 | 999 | 396 | 999 |
| Temperature | 18.9 | 14.6 | 14.8 | 14.2 | 13.6 | 13.4 | 13.5 | 13.3 | 13.3 | 13.3 | 13.1 |
| pH | 7.8 | 8.08 | 8.14 | 8.15 | 8.16 | 8.15 | 8.12 | 8.11 | 8.10 | 8.09 | 8.08 |
| Conductivity | 0.413 | 0.718 | 0.700 | 0.702 | 0.705 | 0.706 | 0.709 | 0.712 | 0.716 | 0.716 | 0.713 |
| Oxygen | 19.99 | 19.99 | 19.99 | 19.99 | 19.99 | 19.99 | 19.99 | 19.99 | 19.99 | 19.99 | 19.99 |
| Salinity | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |

Time sample was collected: ____________

**COMMENTS** Developed well shortly After installation ~ 1 Hour after completion Drilling fluid present on/in water table Hand-Bailed out

MW-13

# GROUNDWATER SAMPLING WORKSHEET

BERGMANN
associates

**PROJECT NAME:** 1200 EAST MAIN ST.
Project Number: 4453.03
Site Location: Hayward St. Rochester
Sample Date: Thurs 05/27/04
Weather: overcast in PM
Personnel: Edward Jones

## GROUNDWATER SAMPLE POINT

Well Number: MW-13
Location: 427 Hayward - Fire Damaged House
Casing Diameter: 2''

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 8'3½'' = 8.29'
Depth to bottom of the well: 22'9'' = 22.75'
Length of water column in well: 14.46 Ft

Volume of water in well casing, gallons: 2.36 gallon
3 Well volumes (= length water column X gal/foot X 3): 7.0 gallon
Actual volume purged prior to sampling: 6.5 gallons
Sampling Methodology: used a Bailer to surge & purge well
Sampling Equipment: HORIBA U-10

Well Recharged? slowly
Required Analysis: N/A - NO Sampling

## FIELD PARAMETER MEASUREMENTS

HORIBA U-10 $O^2$ Readings NOT working

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.5 | 1.5 | 3.0 | 4.0 | 5 | 6 | 6.25 | 6.50 | | |
| Turbidity | 999 | 555 | 981 | 676 | 999 | 999 | 999 | 999 | | |
| Temperature | 11.9 | 11.1 | 10.7 | 11.1 | 10.6 | 10.8 | 10.9 | 10.8 | | |
| pH | 8.32 | 8.11 | 8.09 | 8.03 | 8.10 | 8.06 | 8.06 | 8.06 | | |
| Conductivity | 1.14 | N/A | 0.924 | 0.866 | 1.29 | 1.35 | 1.40 | 1.43 | | |
| Oxygen | 19.99 | 19.99 | 19.99 | 19.99 | 19.99 | 19.99 | 19.99 | 19.99 | BROKEN | |
| salinity | 0.04 | 0.05 | 0.04 | 0.03 | 0.04 | 0.05 | 0.06 | 0.06 | | |

only 6'' left

~10'' water left in well

Time sample was collected: N/A

**COMMENTS**

Developed well 24 hours after well completion
well installed 05/26, Developed 05/27

mw-1

Sept. 2003 Sampling

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN associates**

**PROJECT NAME:** 1200 EAST MAIN ST.
Project Number: 4453-02
Site Location: 1200 EAST MAIN S
Sample Date: MON 09/08/03 930AM
Weather: cool sunny
Personnel: Ed Jones

## GROUNDWATER SAMPLE POINT

Well Number: mw-1
Location: on property old GAS STATION
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 18.37
Depth to bottom of the well: 24.09
Length of water column in well: 5.72

Volume of water in well casing, gallons: 0.932
3 Well volumes (= length water column X gal/foot X 3): 2.80
Actual volume purged prior to sampling: 2.50 gallons
Sampling Methodology: peristaltic Low Flow pump
Sampling Equipment: Dedicated tubing per well

Well Recharged? Yes
Required Analysis: VOCs & SVOCs

## FIELD PARAMETER MEASUREMENTS

HORIBA U-22 Flow Through cell

started@ 835am 19.55 19.60 19.50 19.60 19.65 19.70

19.73 19.53

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 02 | 0.52 | 0.82 | 1.09 | 1.49 | 1.75 | 2.25 | 2.50 |
| Turbidity | 76.4 | 65.2 | 71.8 | 74.7 | 75.9 | 77.7 | 74.7 | 74.3 |
| Temperature | 14.9 | 15.4 | 15.2 | 15.2 | 15.3 | 15.1 | 15.1 | 15.1 |
| pH | 6.84 | 6.57 | 6.54 | 6.51 | 6.51 | 6.52 | 6.53 | 6.54 |
| Conductivity | 0.836 | 0.815 | 0.813 | 0.810 | 0.809 | 0.808 | 0.809 | 0.805 |
| D.O. | 5.28 | 1.42 | 1.04 | 1.02 | 1.01 | 1.05 | 1.04 | 1.03 |
| Salinity | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.03 | 0.03 | 0.03 |

12sec/40ml 14sec/40ml 15sec/[illegible] 14sec/40ml 16sec/40ml 16sec/40ml 16sec/40ml 16sec/40ml

Time sample was collected: ____

**COMMENTS**

MW-2

## GROUNDWATER SAMPLING WORKSHEET

BERGMANN
associates

**PROJECT NAME:** CITY OF ROCHESTER
Project Number: 4453.02
Site Location: 1200 E. MAIN ST
Sample Date: 9/5/03
Weather: CLOUDY UPPER 60'S
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-2
Location: SEE SITE PLAN
Casing Diameter: 2.0"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 16.32
Depth to bottom of the well: 24.17
Length of water column in well: 7.85

Volume of water in well casing, gallons: 1.2796
3 Well volumes (= length water column X gal/foot X 3): 3.8387
Actual volume purged prior to sampling: 1.60
Sampling Methodology: LOW FLOW SAMPLING
Sampling Equipment: GEOPUMP
HORIBA U-22 FLOW CELL
Well Recharged?
Required Analysis: SEE SAMPLE PLAN OR COC

## FIELD PARAMETER MEASUREMENTS HORIBA U-22

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | INITIAL | 0.5GAL | 0.75GAL | 1.0GAL | 1.2GAL | 1.4GAL | 1.6 | |
| Turbidity | 57.7 | 48.5 | 46.2 | 47.0 | 45.8 | 58.6 | 56.3 | |
| Temperature | 17.2 | 17.1 | 17.2 | 17.2 | 17.2 | 17.2 | 17.1 | |
| pH | 6.76 | 6.72 | 6.72 | 6.72 | 6.72 | 6.72 | 6.72 | |
| Conductivity | 0.737 | 0.738 | 0.741 | 0.742 | 0.743 | 0.748 | 0.754 | |
| D.O. | 2.92 | 0.56 | 0.17 | 0.09 | 0.04 | 0.01 | 0.00 | |
| salinity | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | |

TIME 1534 1538 1542 1546 1550 1554 1558
Sec/ml 11sec/40 12/40 14/40 14/40 — -

Time sample was collected:

FEET DTW 16.95' 17.31 17.45 17.47 17.45 17.46 17.50

**COMMENTS**

mw-3

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN associates**

**PROJECT NAME:** 1200 EAST MAIN ST.
Project Number: 4453.02
Site Location: ON-Site, 1200 E. MAIN Rochester
Sample Date: Sept. 4, 2003
Weather: clear ~ 70° F
Personnel: Edward Jones

## GROUNDWATER SAMPLE POINT

Well Number: mw -3
Location: SE corner
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 16.85' product 16.95' H2O
Depth to bottom of the well: 21.8
Length of water column in well: 4.85

Volume of water in well casing, gallons: 0.790
3 Well volumes (= length water column X gal/foot X 3): 2.379
Actual volume purged prior to sampling: 2.25 gallons
Sampling Methodology: Low flow peristaltic pump
Sampling Equipment: Geo pump

Well Recharged? yes
Required Analysis: VOCs & SVOCs STARS / TCL

## FIELD PARAMETER MEASUREMENTS HORIBA U-22

17.10 17.20 17.25 17.25 17.20 17.20 17.18 17.17

| **Parameter** | 17.1 | 17.2 | **Accumulated Volume Purged in Gallons** | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0g | 0.50 | 0.75g | 1.0g | 1.50 | 1.75 | 2.00 | 2.25 |
| Turbidity | 1050 | 109 | 111.0 | 116.0 | 102 | 102 | 117 | 105 |
| Temperature | 17.5 | 17.0 | 17.6 | 17.5 | 17.8 | 17.9 | 17.9 | 17.9 |
| pH | 6.94 | 6.86 | 6.87 | 6.80 | 6.79 | 6.80 | 6.81 | 6.81 |
| Conductivity | 0.719 | 0.947 | 0.918 | 0.896 | 0.888 | 0.902 | 0.903 | 0.913 |
| D.O. | 1.41 | 0.27 | 0.26 | 0.17 | 0.17 | 0.16 | 0.16 | 0.16 |
| Salinity | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |

40ml/105sec 40ml 105sec 40ml 15sec 40mL 13sec 40mL 15 sec 40mL 16sec 40mL 15sec 40mL 16sec

Time sample was collected:

**COMMENTS** Some free product in well

MW-4

# GROUNDWATER SAMPLING WORKSHEET

**PROJECT NAME:** 1200 EAST MAIN ST. Roch.
Project Number: 4453.02
Site Location: 1200 EAST MAIN ST
Sample Date: Sept. 4, 2003
Weather: clear ~ 70°F
Personnel: Edward Jones

BERGMANN associates

## GROUNDWATER SAMPLE POINT

Well Number: mw-4
Location: ON-Site
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 15.99
Depth to bottom of the well: 21.09
Length of water column in well: 5.10

Volume of water in well casing, gallons: 0.821
3 Well volumes (= length water column X gal/foot X 3): 2.50
Actual volume purged prior to sampling: 2.0gal
Sampling Methodology: peristaltic pump / Low flow sampling
Sampling Equipment: Dedicated Tubing per well

Well Recharged? yes
Required Analysis: VOCs & SVOCs

## FIELD PARAMETER MEASUREMENTS

0.62 - Picked up product
19.50 19.9' 18.35 19.0 19.10 19.1

| Parameter | 18.15 | 19.40 | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0.2 | 0.25 | 0.62 | 1.02 | 1.10 | 1.20 | 1.40 | 1.5 | 1.75 | 2.00 |
| Turbidity | 70.1 | 80.3 | 149 | 230 | 197 | 213 | 192 | 153 | 108.0 | 98.0 |
| Temperature | 16.8 | 17.1 | 18.1 | 19.4 | 20.7 | 21.4 | 18.3 | 18.8 | 18.6 | 18.8 |
| pH | 6.50 | 6.35 | 6.35 | 6.32 | 6.36 | 6.41 | 6.47 | 6.46 | 6.47 | 6.48 |
| Conductivity | 0.804 | 0.803 | 0.788 | 0.772 | 0.790 | 0.810 | 0.816 | 0.816 | 0.820 | 0.819 |
| D.O. | 4.00 | 0.47 | 1.07 | 1.77 | 0.48 | 0.95 | 2.01 | 0.68 | 0.66 | 0.60 |
| Salinity | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.03 |

15sec/40ml 37sec/40ml 45sec/40ml 6sec/40ml 22sec/40mL 21sec/40ml

Time sample was collected:

**COMMENTS** some free product in well

MW-5

# GROUNDWATER SAMPLING WORKSHEET

**PROJECT NAME:** CITY OF ROCHESTER
Project Number: 4453.02
Site Location: 1200 E. MAIN ST
Sample Date: 9/4/03
Weather: SUNNY 70'S
Personnel: J. MARSCHNER

**BERGMANN associates**

## GROUNDWATER SAMPLE POINT

Well Number: MW-5
Location: SEE PLAN
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 14.73
Depth to bottom of the well: 25.00
Length of water column in well: 10.27

Volume of water in well casing, gallons: 1.6740
3 Well volumes (= length water column X gal/foot X 3): 5.0220
Actual volume purged prior to sampling: 5.10
Sampling Methodology: LOW FLOW SAMPLING
Sampling Equipment: GEO PUMP
HORIBA U-22 FLOWCELL
Well Recharged? YES
Required Analysis: AS PER SITE PLAN

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | INITIAL | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 |
| Turbidity | 149 | 95.1 | 87.7 | 187 | 143 | 60 | 166 | 49 | 57 | 46.5 | 48.3 |
| Temperature | 15.7 | 15.6 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 15.9 | 16.1 | 16.0 |
| pH | 6.81 | 6.65 | 6.64 | 6.68 | 6.67 | 6.67 | 6.66 | 6.65 | 6.65 | 6.66 | 6.66 |
| Conductivity | 0.710 | 0.681 | 0.667 | 0.631 | 0.644 | 0.655 | 0.671 | 0.692 | 0.701 | 0.724 | 6.728 |
| D.O. | 8.98 | 1.38 | 1.27 | 3.61 | 3.72 | 4.20 | 5.81 | 6.62 | 6.98 | 7.59 | 7.59 |
| Salinity | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |

15.05' STABLE FLOW

Time sample was collected: 1430

SAMPLE RATE 2-3 MIN/LTR

**COMMENTS** MS/MSD FROM THIS LOCATION
MOD CLEAR FROM START OF PURGE.
15.14' END OF SAMPLING

MW-6

## GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
associates

**PROJECT NAME:** CITY OF ROCHESTER
Project Number: 4453.02
Site Location: 1200 E MAIN ST
Sample Date: 9/4/03
Weather: SUNNY & 70'S
Personnel: J. MARSCHER

## GROUNDWATER SAMPLE POINT

Well Number: MW-6
Location: SEE PLAN
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 15.30
Depth to bottom of the well: 23.56
Length of water column in well: 8.26

Volume of water in well casing, gallons: 1.3464
3 Well volumes (= length water column X gal/foot X 3): 4.0391
Actual volume purged prior to sampling: 4.25g
Sampling Methodology: LOW FLOW SAMPLING
Sampling Equipment: GEO PUMP
YES HORIBA U-22 FLOW CELL
Well Recharged? YES
Required Analysis: AS PER SITE PLAN

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | INITIAL | 0.50g | 1.06 | 1.56 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 |
| Turbidity | 71000 | 218 | 128 | 105 | 133 | 116 | 106 | 100 ~~6.41~~ | 98.7 |
| Temperature | 14.2 | 14.2 | 14.2 | 14.1 | 14.0 | 14.0 | 14.0 | 13.9 | 13.9 |
| pH | 6.87 | 6.56 | 6.48 | 6.45 | 6.42 | 6.42 | 6.41 | 6.41 | 6.41 |
| Conductivity | 0.980 | 0.855 | 0.858 | 0.871 | 0.880 | 0.891 | 0.893 | 0.896 | 0.894 |
| D.O. | 7.02 | 1.84 | 1.34 | 1.16 | 0.93 | 0.78 | 0.66 | 0.58 | 0.51 |
| Salinity | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 |

Time sample was collected: 1325 HRS

**COMMENTS** RUSTY TURBID 1ST VOL, CLEAR @ END & SAMPLE

mw-7

# GROUNDWATER SAMPLING WORKSHEET

**PROJECT NAME:** 1200 EAST MAIN ST- Rochester
Project Number: 4453.02
Site Location: On-site 1200 EAST MAIN. Rochester
Sample Date: Sept-8, 2003
Weather: sunny ~70°F
Personnel: Edward Jones

BERGMANN associates

## GROUNDWATER SAMPLE POINT

16.73' DTP
17.52 DTW

Well Number: mw-7
Location: south-fence line
Casing Diameter: 2"

product: 16.73'
H2O: 17.52

Depth to water, below top of casing:
Depth to bottom of the well: 22.50
Length of water column in well: 4.98

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Volume of water in well casing, gallons: 0.812
3 Well volumes (= length water column X gal/foot X 3): 2.449
Actual volume purged prior to sampling: 2.50 gallons
Sampling Methodology: peristaltic Geopump
Sampling Equipment: LOW FLOW sampling
Dedicated Tubing per well
Well Recharged? yes
Required Analysis: VOCs / SVOCs

## FIELD PARAMETER MEASUREMENTS

-HORIBA U-22

product product 17.10 17.10 DTP 17.08 DTP 17.08 DTP 17.08

| Parameter | 17.00 | 16.98 | Accumulated Volume Purged in Gallons | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0 | 1.00 | 1.25 | 1.50 | 1.75 | 2.00 | 2.25 | 2.50 |
| Turbidity | 487 | 148.0 | 106 | 111.0 | 122.0 | 117.0 | 62.9 | 129.0 |
| Temperature | 17.70 | 17.0 | 17.4 | 17.6 | 17.6 | 17.6 | 17.6 | 17.5 |
| pH | 6.84 | 6.62 | 6.65 | 6.69 | 6.67 | 6.68 | 6.70 | 6.67 |
| Conductivity | 0.791 | 0.745 | 0.742 | 0.750 | 0.739 | 0.740 | 0.738 | 0.739 |
| D.O. | 3.27 | 0.25 | 0.12 | 0.20 | 0.20 | 0.07 | 0.03 | 0.03 |
| Salinity | 0.05 | 0.05 | 0.03 | 0.03 | 0.03 | 0.03 | 0.07 | 0.08 |

40mL/13sec 40 mL/10sec 40 mL/14sec 40 mL/15sec 40mL/15sec 40mL/15 sec

Time sample was collected:

**COMMENTS**

FREE Floating product- Gasoline in well

MW-8

## GROUNDWATER SAMPLING WORKSHEET

**BERGMANN associates**

**PROJECT NAME:** CITY OF ROCHESTER
Project Number: 4453.22
Site Location: 1200 E. MAIN ST
Sample Date: 9/5/03
Weather: CLOUDY LT RAIN/SPRINKLE 60'S
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-8
Location: SEE SITE PLAN
Casing Diameter: 2.0"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 17.43
Depth to bottom of the well: 22.21
Length of water column in well: 4.78

Volume of water in well casing, gallons: 0.7791
3 Well volumes (= length water column X gal/foot X 3): 2.3374
Actual volume purged prior to sampling: 1.5 GAL
Sampling Methodology: LOW FLOW SAMPLING
Sampling Equipment: GEOPUMP
HORIBA U-22 FLOWCELL
Well Recharged? SLOW/POOR
Required Analysis:

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | INITIAL | 1/3 GAL | 3/4 GAL | 1 GAL | >1 GAL | 1 1/3 GAL | 1.5 GAL | |
| Turbidity | 42.2 | 37.5 | 32.9 | 35 | 36.3 | 31.9 | 35.0 | |
| Temperature | 16.6 | 16.6 | 16.8 | 17.0 | 17.1 | 17.2 | 17.3 | |
| pH | 7.03 | 6.70 | 6.58 | 6.55 | 6.55 | 6.53 | 6.50 | Sample |
| Conductivity | 1.08 | 0.90 | 0.96 | 0.92 | 0.997 | 0.848 | 0.999 | |
| D.O. | 4.95 | 3.14 | 1.02 | 5.99 | 8.32 | 5.51 | 5.89 | |
| Salinity | 0.05 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | |
| TIME | 9:27 | 0931 | 0937 | 0945 | 0951 | 0958 | 1004 | |

8.5ml/40mls 14/30ml 23/40ml 33.5/40mls

Time sample was collected: 1030

~20.13 STABLE
20.13 DTW WELL GOING DRY

H2O LEVEL DROPPING

**COMMENTS** FINAL SAMPLE MEASURE = 20.13
(LT COLOR PRESENT)

MW-9

## GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
associates

**PROJECT NAME:** CITY OF ROCHESTER
Project Number: 4453.02
Site Location: 1200 E. MAIN ST.
Sample Date: 9/5/03
Weather: CLOUDY UPPER 60'S
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-9
Location: SEE SITE PLAN
Casing Diameter: 2.0"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 13.19
Depth to bottom of the well: 23.47
Length of water column in well: 10.28

Volume of water in well casing, gallons: 1.6756
3 Well volumes (= length water column X gal/foot X 3): 5.0269
Actual volume purged prior to sampling: 1.10
Sampling Methodology: LOW FLOW SAMPLING
Sampling Equipment: GEO PUMP
HORIBA U-22 w/ FLOW CELL
Well Recharged?
Required Analysis: SEE SAMPLING PLAN or COC

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | INITIAL | 0.5GAL | 0.75GAL | 0.80 | 0.90 | 1.0GAL | 1.10 | |
| Turbidity | 96.1 | 94.2 | 81.2 | 80.3 | 79.7 | 73.2 | 69.7 | |
| Temperature | 17.3 | 16.4 | 16.7 | 16.8 | 16.9 | 16.9 | 16.9 | SAMPLE |
| pH | 6.55 | 6.55 | 6.55 | 6.56 | 6.57 | 6.57 | 6.58 | |
| Conductivity | 0.183 | 0.787 | 0.777 | 0.775 | 0.774 | 0.777 | 0.773 | |
| D.O. | 1.0 | 0.26 | 0.17 | 0.13 | 0.09 | 0.06 | 0.04 | |
| Salinity | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | |
| TIME | 1404 | 1408 | 1412 | 1416 | 1420 | 1424 | 1428 | |
| SEC/ML | 10/40 | 10.5/40 | 11/40 | " | " | " | " | |

Time sample was collected: 1435

| DTW | 13.37 | 13.41 | 13.46 | 13.41 | 13.42 | 13.42 | 13.43 |
|---|---|---|---|---|---|---|---|

**COMMENTS**

PETRO ODOR

MW-10

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
associates

**PROJECT NAME:** CITY OF ROCHESTER
Project Number: 4453.02
Site Location: 1200 E. MAIN ST.
Sample Date: 9/5/03
Weather: CLOUDY LT SPRINKLES (60'S
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-10
Location: SEE SITE PLAN
Casing Diameter: 2.0"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| [✓ 2"] = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 17.26
Depth to bottom of the well: 26.45
Length of water column in well: 9.19

Volume of water in well casing, gallons: 1.498
3 Well volumes (= length water column X gal/foot X 3): 4.4939
Actual volume purged prior to sampling: 2.0 GAL
Sampling Methodology: LOW FLOW
Sampling Equipment: GEOPUMP
HORIBA U-22 FLOW CELL
Well Recharged? YES
Required Analysis: SEE SAMPLE PLAN OR C&C

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | INITIAL | ~0.5 GAL | ~0.9 GAL | ~1.25 GAL | 1.5 GAL | 1.75 GAL | ~2.0 GAL | |
| Turbidity | 51.0 | 41.9 | 41.4 | 42.9 | 44.6 | 47.9 | 48.9 | |
| Temperature | 13.9 | 13.7 | 13.8 | 13.8 | 13.8 | 13.8 | 13.9 | |
| pH | 6.45 | 6.42 | 6.42 | 6.42 | 6.42 | 6.42 | 6.43 | SAMPLE |
| Conductivity | 0.926 | 0.908 | 0.875 | 0.865 | 0.863 | 0.865 | 0.862 | |
| D.O. | 9.87 | 3.79 | 3.42 | 2.33 | 1.77 | 1.37 | 1.16 | |
| Salinity | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | 0.04 | |
| | 1119 | 1123<br>95e/40ml | 1127<br>14/40ml | 1131<br>14/40 | 1135 | 1139 | 1143 | |

Time sample was collected: 1150

DTW 17.85' 17.90' 17.88' 17.89' 17.89' 17.89' 17.89

**COMMENTS** DUPLICATE SET COLLECTED
(PETRO ODOR)

MW-11

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN associates**

**PROJECT NAME:** CITY OF ROCHESTER
Project Number: 4453.02
Site Location: 1200 E MAIN ST
Sample Date: 9/5/03
Weather: CLOUDY 60'S
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-11
Location: SEE SITE PLAN
Casing Diameter: 2.0"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 17.65
Depth to bottom of the well: 28.78
Length of water column in well: 11.13

Volume of water in well casing, gallons: 1.8142
3 Well volumes (= length water column X gal/foot X 3): 5.4426
Actual volume purged prior to sampling: 1.5 GAL
Sampling Methodology: LOW FLOW SAMPLING
Sampling Equipment: GEOPUMP
HORIBA U-22 FLOW CELL
Well Recharged? YES
Required Analysis: SEE SAMPLING PLAN OR COC

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | INITIAL | ~0.5 GAL | 0.8 | ~1.0 GAL | ~1.2 GAL | ~1.3 GAL | 1.4 GAL | ~1.5 GAL |
| Turbidity | 96.9 | 120.0 | 159.0 | 154.0 | 168.0 | 157.0 | 129.0 | 103.0 |
| Temperature | 13.6 | 13.6 | 14.0 | 14.1 | 13.9 | 14.1 | 14.0 | 14.0 |
| pH | 6.27 | 6.27 | 6.23 | 6.30 | 6.38 | 6.40 | 6.38 | 6.41 |
| Conductivity | 0.91 | 0.91 | 0.90 | 0.888 | 0.90 | 0.999 | 0.814 | 0.90 |
| D.O. | 2.47 | 1.96 | 2.02 | 1.43 | 1.80 | 1.56 | 1.70 | 1.64 |
| Salinity | 0.04 | 0.04 | 0.04 | 0.05 | 0.04 | 0.04 | 0.04 | 0.05 |
| TIME | 1245 | 1249 | 1253 | 1257 | 1301 | 1305 | 1309 | 1313 |
| SEC/ML | 8sec/40ml | 10/40 | 17/40 | " | " | " | " | " |

Time sample was collected: 1320

| DTW | 17.90' | 17.99' | 17.99' | 17.96' | 17.99' | 17.99' | 17.99 | 17.99 |
|---|---|---|---|---|---|---|---|---|

**COMMENTS**

MW-12

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN associates**

**PROJECT NAME:** CITY OF ROCHESTER
Project Number: 4453.02
Site Location: 1200 E. MAIN ST.
Sample Date: 9/4/03
Weather: SUNNY & 70'S
Personnel: J. MARSCHNER

## GROUNDWATER SAMPLE POINT

Well Number: MW-12
Location: SEE SITE PLAN
Casing Diameter: 2.0"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 17.02
Depth to bottom of the well: 22.07
Length of water column in well: 5.05

Volume of water in well casing, gallons: 0.8232
3 Well volumes (= length water column X gal/foot X 3): 2.4695
Actual volume purged prior to sampling: 1 GALLON DRY
Sampling Methodology: LOW FLOW SAMPLING
Sampling Equipment: GEO PUMP
HORIBA U-22 FLOW CELL
Well Recharged? POOR RECHARGE
Required Analysis: AS PER SITE PLAN

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | INITIAL | ~0.25 GAL | ~0.5 GAL | 1.0 GAL | | | | |
| Turbidity | 342 | 78.2 | 96.0 | 99.4 | DRY | | | |
| Temperature | 18.6 | 18.8 | 18.0 | 18.3 | | | | |
| pH | 6.79 | 6.90 | 6.74 | 6.81 | | | | |
| Conductivity | 7.25 | 6.71 | 6.87 | 6.79 | | | | |
| D. O. | 9.64 | 10.38 | 8.46 | 7.02 | | | | |
| Salinity | 0.37 | 0.36 | 0.37 | 0.36 | | | | |
| | 1549 | 1559 | [illegible] | 1605 | | | | |

Time sample was collected: 1630 → VOC'S COLLECTED

| COMMENTS | 14 SEC = 50 mls | DRIPPING HEAD EVEN @ |
|---|---|---|
| | 14 SEC = 50 mls ⟸ | LOWEST POSSIBLE PUMP SETTING |
| | | W/OUT PUMP SHUTDOWN |

MW-5

INITIAL
well
Developmen
08/01/03
After
installation

## GROUNDWATER SAMPLING WORKSHEET

**PROJECT NAME:** 1200 EAST MAIN Rochester
Project Number: 4453.02
Site Location: Rochester
Sample Date: FRI 08/01/03
Weather: Overcast Humid ~ 75°F
Personnel: E Jones / Dan

BERGMANN
associates

## GROUNDWATER SAMPLE POINT

Well Number: MW-5
Location: SE corner of H 1216
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 14.74
Depth to bottom of the well: 25.0
Length of water column in well:

Volume of water in well casing, gallons: 10.26
3 Well volumes (= length water column X gal/foot X 3): 1.67
Actual volume purged prior to sampling: 5.0
Sampling Methodology: Hand Bailer
Sampling Equipment:

Well Recharged? yes - INITIAL well Development
Required Analysis: prior to sampling
After installation

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0.5 | 1.5 | 3.0 | 4.5 | 5.5 | 7.0 | | |
| Turbidity | >999 | >999 | >999 | >999 | >999 | >999 | | |
| Temperature | 16.9 | 16.5 | 16.8 | 16.7 | 16.6 | 16.6 | | |
| pH | 8.12 | 8.36 | 8.38 | 8.40 | 8.42 | 8.41 | | |
| Conductivity | 0.671 | 0.652 | 0.697 | 0.729 | 0.748 | 0.759 | | |
| Sal | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 | | |
| DO | 9.26 | 9.25 | 9.30 | 10.20 | 10-23 | 10.23 | | |

NO odor

Time sample was collected: Started 11^25 Am Done 12^00 pm

**COMMENTS**
clean Bottom NO SAND
NO odor @ 3.0 gal

mw-6

## GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
associates

**PROJECT NAME:** 1200 EAST MAIN ST.
Project Number: 4453.02
Site Location: Residence - 1214 E. MAIN
Sample Date: FRI 08/01/03
Weather: Overcast ~75°f
Personnel: Edward Jones

## GROUNDWATER SAMPLE POINT

Well Number: mw-6
Location: N.E. corner #1216 House
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 14.96 ft
Depth to bottom of the well: 24.0 ft
Length of water column in well: 9.04

Volume of water in well casing, gallons: 1.47 gal
3 Well volumes (= length water column X gal/foot X 3): 4.40 gal
Actual volume purged prior to sampling:
Sampling Methodology: 4 Ft Bailer Surged & Bailed
Sampling Equipment:

Well Recharged? Yes! > Bail Rate
Required Analysis:

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0.5 | 1.5 | 3.0 | 4.5 | 6.0 | | | |
| Turbidity | 575 | 723 | 702 | 570 | 578 | | | |
| Temperature | 15.1 | 14.7 | 14.4 | 14.7 | 14.8 | | | |
| pH | 8.19 | 8.34 | 8.38 | 8.39 | 8.41 | | | |
| Conductivity | 0.97 | 0.943 | 0.938 | 0.939 | 0.930 | | | |
| DO | 11.02 | 11.01 | 11.11 | 11.27 | 11.30 | | | |
| Sal | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 | | | |

NO ODOR!

Time sample was collected: 12$^{30}$ pm start Develop 1$^{00}$ pm Done

**COMMENTS** Clean Bottom NO Odor
Recharged well > Bail Rate

MW-7

## GROUNDWATER SAMPLING WORKSHEET

**BERGMANN associates**

**PROJECT NAME:** 1200 EAST MAIN ST. Rochester
Project Number: 4453-02
Site Location:
Sample Date: FRI 08/01/03
Weather: Overcast - Humid ~75°F
Personnel: Ed Jones

## GROUNDWATER SAMPLE POINT

Well Number: MW-7
Location: By fence, old pump island
Casing Diameter: 2"

Depth to water, below top of casing:
Depth to bottom of the well:
Length of water column in well:

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Volume of water in well casing, gallons:
3 Well volumes (= length water column X gal/foot X 3):
Actual volume purged prior to sampling:
Sampling Methodology: N/A
Sampling Equipment: Used Bailer to Develop well

Well Recharged? Yes: > Bail Rate
Required Analysis:

## FIELD PARAMETER MEASUREMENTS

Dirtier
Clean!

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0.59 | 1.5 | 3.0 | 4.5 | | | | |
| Turbidity | 101 | 145 | 271 | 171 | | | | |
| Temperature | 16.7 | 16.3 | 16.2 | | | | | |
| pH | 8.42 | 8.34 | 8.36 | 8.39 | | | | |
| Conductivity | 1.02 | 0.99 | 0.99 | 1.00 | | | | |
| DO | 10.70 | 10.76 | 10.80 | 10.80 | | | | |
| Sal | 0.04 | 0.04 | 0.04 | 0.04 | | | | |

Time sample was collected: $1^{05}$ pm start develop

**COMMENTS**

Grabbed samples Bottom of Bailer
after skimming 3" black gasoline free product
stayed clean! clean Bottom
almost silt free entire Dev.

MW-8

# GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
**associates**

**PROJECT NAME:** 1200 East Main St. Roch.
Project Number: 4453-02
Site Location: On-site
Sample Date: Fri 08/01/03
Weather: Humid 75°f
Personnel: Ed Jones

## GROUNDWATER SAMPLE POINT

Well Number: MW-8
Location: SW corner of property
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 16.60
Depth to bottom of the well: 21.5+2.5 sub. = 24.0
Length of water column in well: 7.4

Volume of water in well casing, gallons: 1.21
3 Well volumes (= length water column X gal/foot X 3): 3.62
Actual volume purged prior to sampling:
Sampling Methodology:
Sampling Equipment: Heavy 4 ft Bailer Surged & Bailed

Well Recharged? Yes - Faster Than Bailed
Required Analysis:

## FIELD PARAMETER MEASUREMENTS

cleaning @ 3.0g

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0.5 | 1.5 | 3.0 | 4.5 | 5.0 | | | |
| Turbidity | >999 | 562 | 199 | 382 | 263 | | | |
| Temperature | 16.0 | 15.8 | 15.9 | 15.6 | 15.5 | | | |
| pH | 8.43 | 8.37 | 8.35 | 8.36 | 8.36 | | | |
| Conductivity | 2.27 | 2.35 | 2.40 | 2.53 | 2.55 | | | |
| DO | 9.50 | 9.53 | 9.40 | 9.34 | 9.40 | | | |
| sal | 0.10 | 0.11 | 0.11 | 0.11 | 0.12 | | | |

Time sample was collected: started $10^{10}$ am
Done: $10^{34}$ am

NO odor

**COMMENTS**
Clean Bottom, No Sand
getting clean @ 3.0g
No gas odor

MW-9

## GROUNDWATER SAMPLING WORKSHEET

**BERGMANN associates**

**PROJECT NAME:** 1200 EAST MAIN ST.
Project Number: 4453-02
Site Location: 1200 EAST MAIN ST.
Sample Date: FRI 08/01/03
Weather: Overcast Humid 75°F
Personnel: Ed Jones

## GROUNDWATER SAMPLE POINT

Well Number: MW-9
Location: Asphalt North of Bldg Area
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 24.0 ft Flush
Depth to bottom of the well: 12.11
Length of water column in well:

Volume of water in well casing, gallons: 11.89
3 Well volumes (= length water column X gal/foot X 3): 1.93
Actual volume purged prior to sampling: 5.81
Sampling Methodology:
Sampling Equipment: Heavy 4ft Bailer to Surge & Bail

Well Recharged? Yes - clear Bottom - Recharged > Bail Rate!
Required Analysis:

## FIELD PARAMETER MEASUREMENTS

Started to get clean 4.5g

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0.5 | 1.5 | 3.0 | 4.5 | 6.5 | | | |
| Turbidity | >999 | >999 | >999 | >999 | 412 | | | |
| Temperature | 15.0 | 15.3 | 15.4 | 15.4 | 15.7 | | | |
| pH | 8.60 | 8.42 | 8.40 | 8.39 | 8.40 | | | |
| Conductivity | 0.807 | 0.801 | 0.807 | 0.810 | 0.818 | | | |
| DO | 9.55 | 9.64 | 9.50 | 9.55 | 9.40 | | | |
| SAL | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | | | |

Time sample was collected: Started $9^{35}$ Am Done $10^{15}$

**COMMENTS**

Gasoline odor, stronger than MW-9
cleaned up after 4.5 gallons

MW-10

## GROUNDWATER SAMPLING WORKSHEET

**BERGMANN**
**associates**

**PROJECT NAME:** 1200 East MAIN ST.
Project Number: 4453.02
Site Location: 1200 East MAIN ST. Rochester
Sample Date: FRI 08/01/03
Weather: Overcast - Hazy 70°F Am
Personnel: Ed Jones

## GROUNDWATER SAMPLE POINT

Well Number: MW-10
Location: NW corner
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 16.79
Depth to bottom of the well: 26.5ft, inc. stick-up
Length of water column in well: 9.71

Volume of water in well casing, gallons: 1.58
3 Well volumes (= length water column X gal/foot X 3): 4.74
Actual volume purged prior to sampling:
Sampling Methodology: Bailed & Surged - Heavy Bailer
Sampling Equipment:

Well Recharged? Yes - Still ~10ft After 1 volume Bailed!
Required Analysis: Still ~9ft After Bailing 5 gallons

## FIELD PARAMETER MEASUREMENTS

| Parameter | 1 volume<br>Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1.5gal | 3.0 | 4.0 | 5.0 | | | | |
| Turbidity | 451 | 482 | 366 | 214 | | | | |
| Temperature | 14.7 | 13.6 | 13.6 | 13.7 | | | | |
| pH | 8.30 | 8.29 | 8.33 | 8.33 | | | | |
| Conductivity | 1.47 | 1.00 | 0.975 | 0.950 | | | | |
| DO | 9.47 | 9.76 | 9.71 | 9.75 | | | | |
| Sal | 0.06 | 0.04 | 0.04 | 0.04 | | | | |

Time sample was collected: $8^{30}$ Am Start to Develop END $9^{00}$ Am

**COMMENTS** NO Silt/mud On Bottom of well
FAINT petroleum odor in purge water

MW-11

## GROUNDWATER SAMPLING WORKSHEET

**PROJECT NAME:** 1200 EAST MAIN ST
Project Number: 4453.02
Site Location: 1200 EAST MAIN ST - Rochester
Sample Date: Fri 08/01/03
Weather: Overcast / Humid 75°F
Personnel: Edward Jones

BERGMANN associates

## GROUNDWATER SAMPLE POINT

Well Number: MW-11
Location: NE corner
Casing Diameter: 2"

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 16.93
Depth to bottom of the well: 26.4 + 2.0 S.U. = 28.4
Length of water column in well: 11.47 ft

Volume of water in well casing, gallons: 1.88 gal
3 Well volumes (= length water column X gal/foot X 3): 5.61
Actual volume purged prior to sampling:
Sampling Methodology:
Sampling Equipment:

Well Recharged? Yes! clear Bottom, Recharged well. Still ~10 ft After 6.5 gallons Bailed
Required Analysis:

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 0.5 | 1 | 2.5 | 4.0 | 5.5 | 6.5 | | |
| Turbidity | >999 | >999 | >999 | >999 | >999 | >999 | | |
| Temperature | 13.2 | 13.0 | 13.0 | 12.9 | 12.9 | 12.8 | | |
| pH | 8.48 | 8.41 | 8.39 | 8.40 | 8.40 | 8.41 | | |
| Conductivity | 1.26 | 1.23 | 1.17 | 1.14 | 1.11 | 1.10 | | |
| Sal | 0.05 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 | | |
| DO | 10.38 | 10.38 | 10.33 | 10.40 | 10.41 | 10.43 | | |

Time sample was collected: start Bail 9⁰⁰ Am Done 9³⁰ Am

**COMMENTS**
Surged with Bailer - Recharging
more turbid than #10
FAINT Gas odor Less MW-10

MW-12 1200 EAST MAIN ST

## GROUNDWATER SAMPLING WORKSHEET

**BERGMANN associates**

**PROJECT NAME:** 1200 EAST MAIN ST.
Project Number: 4453.02
Site Location: South Side of East Main St. Roch
Sample Date: FRI 08/01/03
Weather: Overcast / Humid 75°F
Personnel: Edward Jong

## GROUNDWATER SAMPLE POINT

Well Number: MW-12
Location: South Side E. MAIN
Casing Diameter:

| Well Dia. | Volume/Foot |
|---|---|
| 1" = | 0.041 gal/foot |
| 2" = | 0.163 gal/foot |
| 4" = | 0.653 gal/foot |
| 6" = | 1.469 gal/foot |
| 8" = | 2.611 gal/foot |

Depth to water, below top of casing: 16.97 Flush
Depth to bottom of the well: 22.50
Length of water column in well:

Volume of water in well casing, gallons: 5.53
3 Well volumes (= length water column X gal/foot X 3): 0.90
Actual volume purged prior to sampling: 2.70
Sampling Methodology:
Sampling Equipment: 4 Ft Heavy Bailer
Surged & Bailed 4 Ft Bailer
Well Recharged? Slow: Less than about at Rate Bailed
Required Analysis: ABLE TO BAIL DRY. ~2"

## FIELD PARAMETER MEASUREMENTS

| Parameter | Accumulated Volume Purged in Gallons | | | | | | | 1.7 gallons |
|---|---|---|---|---|---|---|---|---|
| | 0.5 | 1 | 1.5 | WAITED | 20 | minutes | | At 1200pm |
| Turbidity | >999 | >999 | >999 | ~1.65 g | | | | 663 |
| Temperature | 16.0 | 15.6 | 17.8 | Not | enough | for a | Read: | no/16.5 |
| pH | 8.39 | 8.33 | 8.29 | | | | | 8.50 |
| Conductivity | 4.31 | 4.88 | 4.52 | | | | | 4.39 |
| DO | 9.28 | 9.46 | 8.67 | | | | | 10.23 |
| Sal | 0.21 | 0.26 | 0.24 | | | | | 0.21 |

Time sample was collected: 10³⁵ Am start

NO ODOR NO ODOR

**COMMENTS** Clean Bottom Less water ~ < 4F After 1.5 gal
NO SAND
after 1.5 g. ~2" WAITED 20 min: still only

But cleaner ~3": NO recovery

# APPENDIX 7

## 2003 Chain-of-Custody Forms

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An Employee - Owned Company
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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

PAGE 1 OF 1

SR #

CAS Contact

Project Name: CITY OF ROCHESTER 1200 E. MAIN ST

Project Number: 4453.02

Project Manager: GARY FLISNIK

Report CC:

Company/Address:
BERGMANN ASSOCIATES
200 FIRST FEDERAL PLAZA, 28 E. MAIN ST.
ROCHESTER, NY 14614

Phone #: 232-5135

FAX#: 232-4652

Sampler's Signature:

Sampler's Printed Name: MARSCHNER

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☒8260 ☐624 +MTBE ☐CLP | GC/MS SVOA's ☒8270 ☐625 ☐CLP | GC VOA's ☐8021 ☐601/602 | PESTICIDES ☐8081 ☐608 ☐CLP | PCB's ☒8082 ☐608 ☐CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | SW-846 RCRA 8 METALS | ETHYLENE GLYCOL | | 8260 +MTBE ASP | 8270 ASP | SW-846 RCRA 8 METALS ASP | 8082 ASP | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRESERVATIVE | | | | | | 0 → | → | → | → | → | → | → | → | → | → | → | → | → | → | |
| TT-8 | 648786 8 | 6/16/03 | 10:50 | SOIL | 4 | + | X | | | X | | | X | X | | | | | | |
| FIELD DUP #2 TT-8 | | 6/16/03 | 10:50 | SOIL | 4 | + | X | | | X | | | X | [illegible] | | | | | | |
| TT-9 | | 6/16/03 | 12:30 | SOIL | 4 | X | X | | | ✓ | | | X | X | | | | | | |
| TT-11 | 648809 | 6/16/03 | 1405 | SOIL | 4 | | | | | | | | | X | | X | X | X | X | |
| TT-7 | | 6/16/03 | 1515 | SOIL | 4 | X | X | | | X | | | X | X | | | | | | |
| TT-10 | | 6/16/03 | 1600 | SOIL | 4 | X | X | | | X | | | X | X | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | |

Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
**Metals**
SW-846
RCRA 8

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
X STANDARD
REQUESTED FAX DATE ______
REQUESTED REPORT DATE ______

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
✓ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:

SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______

CUSTODY SEALS: Y N

| | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|---|
| Signature | | [illegible] | | | | |
| Printed Name | MARSCHNER | Heather Lovejoy | | | | |
| Firm | BERGMANN ASSOC. | CAS | | | | |
| Date/Time | [illegible]6/03 @ 1635 | 6/16/03 1635 | | | | |

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SCOC-1102-08

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PAGE 1 OF 1

SR #

CAS Contact

Project Name CITY OF ROCHESTER 200 E. MAIN STREET
Project Number 4453.02
Project Manager GARY FUSNIK
Report CC
Company/Address BERGMANN ASSOCIATES
200 FIRST FEDERAL PLAZA, 28 E. MAIN STREET
ROCHESTER, NY 14614
Phone # 232.5135
FAX# 232.4652
Sampler's Signature
Sampler's Printed Name MARSCHNER

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

PRESERVATIVE 0 →

Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP + MTBE | GC/MS SVOA's ☒ 8270 ☐ 625 ☐ CLP | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☒ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | SW846 RCRA 8 METALS | ETHYLENE GLYCOL | | 8260+MTBE ASP | 8270 ASP | SW846 RCRA 8 METALS ASP | 8082 ASP | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TT-6 | 648808 | 6/17/03 | 0920 | SOIL | 4 | X | X | | | X | X | | | X | | X | X | X | X | |
| TT-5 | | 6/17/03 | [illegible] | SOIL | 4 | X | X | | | X | | | X | X | | | | | | |
| TT-2 | | 6/17/03 | 1030 | SOIL | 4 | X | X | | | X | | | X | X | | | | | | |
| TT-3 | 07 | 6/17/03 | [illegible] | SOIL | 4 | | | | | | | | | X | | X | X | X | X | |
| FIELD DUP #1 TT-3 | 10 | 6/17/03 | 1100 | SOIL | 4 | | | | | | | | | X | | X | X | X | X | |
| TT-12A | | 6/17/03 | 1455 | SOIL | 4 | X | X | | | X | | | X | X | | | | | | |
| TT-12 | | 6/17/03 | 1530 | SOIL | 4 | X | X | | | X | | | X | X | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

SPECIAL INSTRUCTIONS/COMMENTS
**Metals**
SW846
RCRA 8 METALS

See QAPP ☐

TURNAROUND REQUIREMENTS
______ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
X STANDARD
REQUESTED FAX DATE
______
REQUESTED REPORT DATE
______

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
X IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature Heather Lorenz | Signature | Signature | Signature | Signature |
| Printed Name MARSCHNER | Printed Name Heather Lorenz | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm BERGMANN ASSOC | Firm CAS | Firm | Firm | Firm | Firm |
| Date/Time 6/17/03 @ 1620 | Date/Time 6/17/03 1620 | Date/Time | Date/Time | Date/Time | Date/Time |

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PAGE 1 OF 1

SR #

CAS Contact

Project Name [illegible]

Project Number 4453-2

Project Manager [illegible]

Report CC

Company/Address [illegible]

Phone # [illegible]

FAX# 232 4652

Sampler's Signature

Sampler's Printed Name [illegible]

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP | GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☐ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRESERVATIVE | | | | | | [illegible] | — | — | — | | | — | | | — | | | | [illegible] | |
| Foundation 1 | | 6/18/03 | 0930 | soil | 4 | | | | | | | | | X | | X | X | X | X | |
| Foundation 2 | | 6/18/03 | 1000 | soil | 4 | X | X | | | X | | | X | X | | | | | | |
| Foundation #3 | | 6/18/03 | 1400 | soil | 4 | X | X | | | X | | | X | X | | | | | | |
| TT-1 | | 6/18/03 | 1515 | soil | 4 | X | X | | | X | | | X | X | | | | | | |
| TT-13 (2) | | 6/18/03 | 1615 | soil | 4 | X | X | | | X | | | X | X | | | | | | |
| TT-13 A (3) | | 6/18/0 | 1620 | s | 4 | ~~X~~ | ~~X~~ | | | X | | | X | X | | X | X | X | X | |
| | | | | | | | | | | X<br>012 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
**Metals**
[illegible]

See QAPP ☐

TURNAROUND REQUIREMENTS
______ RUSH (SURCHARGES APPLY)
______ 24 hr ______ 48 hr ______ 5 day
X STANDARD
REQUESTED FAX DATE
______
REQUESTED REPORT DATE
______

REPORT REQUIREMENTS
______ I. Results Only
______ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
______ III. Results + QC and Calibration Summaries
______ IV. Data Validation Report with Raw Data
______ V. Speicalized Forms / Custom Report
Edata ______ Yes ______ No

INVOICE INFORMATION
PO# Bergmann A[illegible]
BILL TO: Job# 4453.02
Gary Flink
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature Edward J Jones | Signature Edward J Jones | Signature | Signature | Signature |
| Printed Name [illegible] | Printed Name Edward F Jones | Printed Name Edward F Jones | Printed Name Brian Ca[illegible] | Printed Name | Printed Name |
| Firm [illegible] | Firm Bergmann Associates | Firm Bergmann Assoc | Firm CAS | Firm | Firm |
| Date/Time [illegible] | Date/Time 06/18/03 1432 | Date/Time 06/18/03 1700 | Date/Time 6/15/03 1700 | Date/Time | Date/Time |

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SCOC-1102-08

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PAGE 1 OF 1

SR #

CAS Contact

Project Name: CITY OF ROCHESTER 1200 E. MAIN STREET
Project Number: 4453.02
Project Manager: GARY FLISNIK
Report CC:
Company/Address: BERGMANN ASSOCIATES
200 FIRST FEDERAL PLAZA 28 E. MAIN ST
ROCHESTER, NY 14614
Phone #: 232-5135
FAX#: 232-4652
Sampler's Signature:
Sampler's Printed Name: MARSCHNER

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

PRESERVATIVE: 0 ——→

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☒8260 ☐624 ☐CLP + MTBE | GC/MS SVOA's ☒8270 ☐625 ☐CLP | GC VOA's ☐8021 ☐601/602 | PESTICIDES ☐8081 ☐608 ☐CLP | PCB's ☒8082 ☐608 ☐CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | SW-846 RECRA 8 METALS | ETHYLENE GLYCOL | | 8260 MTBE ASP | 8270 ASP | SW846 RECRA 8 METALS ASP | 8082 ASP | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SSU-1 | | 6/20/03 | 1230 | SOIL | 3 | X | ✓ | | | X | | | X | X | | | | | | |
| SSU-2 | 648814 | 6/20/03 | 1240 | | 4 | | | | | | | | | X | | X | X | X | X | |
| SSU-3 | | 6/20/03 | 1250 | | 3 | X | ✓ | | | X | | | X | X | | | | | | |
| SSU-4 | | 6/20/03 | 1300 | | 3 | X | ✓ | | | X | | | X | X | | | | | | |
| SSU-5 | | 6/20/03 | 1315 | | 3 | X | X | | | X | | | X | X | | | | | | |
| SSU-6 | 17 | 6/20/03 | 1325 | | 4 | | | | | | | | | X | | X | X | X | X | |
| SSU-7 | | 6/20/03 | 1335 | | 4 | X | X | | | X | | | X | X | | | | | | |

Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
**Metals**
SW846
RECRA 8 METALS

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
X IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature Heather Lovejoy | Signature | Signature | Signature | Signature |
| Printed Name MARSCHNER | Printed Name Heather Lovejoy | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm BERGMANN | Firm CAS | Firm | Firm | Firm | Firm |
| Date/Time 6/20/03 @ 1355 | Date/Time 6/20/03 1355 | Date/Time | Date/Time | Date/Time | Date/Time |

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PAGE ________ OF ________

SR #

CAS Contact Jan Jaeger

Project Name 1200 East Main St
Project Number 4453.02
Project Manager Gary Eisnik
Report CC
Company/Address 200 First Federal plaza 28 East Main St.
Rochester, NY 14614
Phone # 585) 232-5135
FAX# (585)-232-4652
Sampler's Signature
Sampler's Printed Name

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP & MtBE | GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☐ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | ASP-VOCs 8260 MtBE | ASP-SVOCs 8270 | ASP-PCBs | ASP-8 RCRA metals | Ethylene Glycol |  |  | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRESERVATIVE |  |  |  |  |  | E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TT-4 bottom |  | 6/20 | 11$^{00}$ | SOIL | 4 |  |  |  |  |  |  |  | X | X | X | X | X |  |  |  |
| TT-4 a Side walls (5) |  | 6/20 | 11$^{10}$ | SOIL | 4 | X | X |  |  | X | X |  |  |  |  |  | X |  |  |  |
| TT-4 MS/MSD |  | 6/20 | 11 | SOIL | 4 |  |  |  |  |  |  |  | X | X | X | X | X |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TT-43 (set 2) |  | 6/20 | 11$^{30}$ | SOIL | 4 | X H | X O | L | D | X | X |  |  |  |  |  | X |  |  |  |
|  |  |  |  |  |  | R | Released |  |  | 06/23/03 |  |  |  |  |  |  |  |  |  |  |
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Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
**Metals** - 8 RCRA metals

See QAPP ☐

TURNAROUND REQUIREMENTS
______ **RUSH** (SURCHARGES APPLY)
______ **24 hr** ______ **48 hr** ______ **5 day**
X **STANDARD**
**REQUESTED FAX DATE** ______________
**REQUESTED REPORT DATE** ______________

REPORT REQUIREMENTS
______ I. Results Only
______ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
______ III. Results + QC and Calibration Summaries
______ IV. Data Validation Report with Raw Data
______ V. Speicalized Forms / Custom Report
Edata ______ Yes ______ No

INVOICE INFORMATION
PO#
BILL TO: Bergmann Assoc
ATTN: Gary Eisnik
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: __________ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Edward J Jones |  |  |  |  |  |
| Signature Edward J Jones | Signature Heather Lovejoy | Signature | Signature | Signature | Signature |
| Printed Name Bergmann | Printed Name Heather Lovejoy | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm 06/20/03 12:15 | Firm CAS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 6/20/03 1215 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

PAGE 1 OF 1

SR # Janice Jaeger
CAS Contact

Project Name UST [illegible] 1200 East Main St.
Project Number 4453.02
Project Manager Gary Flink
Report CC
Company/Address Bergmann Associates
200 First Federal Plaza 28 E. Main St
Rochester, NY 14614
Phone # 585-232-5135
FAX# (585) 232-4652
Sampler's Signature
Sampler's Printed Name

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

PRESERVATIVE

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP | GC/MS SVOA's ☒ 8270 ☐ 625 ☐ CLP FULL SVOCS | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☒ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) 8 RCRA | METALS, DISSOLVED (List in comments below) | IG NITABILITY | | | | | | | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UST Sludge | | 6/20/03 | 0900 | Sludge | 5 | X | X | | | X | X | | X | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | |

Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
**Metals** 8 RCRA metals

See QAPP ☐

TURNAROUND REQUIREMENTS
____ **RUSH** (SURCHARGES APPLY)
____ **24 hr** ____ **48 hr** ____ **5 day**
X **STANDARD**
**REQUESTED FAX DATE** ______________
**REQUESTED REPORT DATE** ______________

REPORT REQUIREMENTS
X I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Speicalized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO# Bergmann Assoc.
BILL TO: [illegible]

SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: __________ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Edward J Jones | | | | | |
| Signature Edward J Jones | Signature | Signature | Signature | Signature | Signature |
| Printed Name Bergmann Assoc | Printed Name Heather Lovejoy | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm 6/20/03 1212 | Firm CAS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 6/20/03 1215 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

SCOC-1102-08

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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 1 OF 1

SR #

CAS Contact

Project Name [illegible] E. Main St

Project Number 4153.02

Project Manager [illegible]

Report CC

Company/Address [illegible] Associates
[illegible] Plaza 28 E. Main St.
[illegible], NY [illegible]

Phone # [illegible]

FAX# 585-232-1652

Sampler's Signature

Sampler's Printed Name J. [illegible]

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP | GC/MS SVOA's ☒ 8270 ☐ 625 ☐ CLP | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☒ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | [illegible] | | | | | | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRESERVATIVE | | | | | | 1 | 0 | | | 0 | 2 | | 0 | | | | | | |
| MW-6 | | 9/4/03 | 1325 | AQ | 7 | X | X | | | X | X | | X | | | | | | |
| MW 5 | | 9/4/03 | 1430 | AQ | | X | X | | | X | X | | X | | | | | | |
| MW-5 MS | | 9/4/03 | 1430 | AQ | | X | X | | | X | X | | X | | | | | | |
| MW-5 MSD | | 9/4/03 | 1430 | AQ | | X | X | | | X | X | | X | | | | | | |
| MW-12 | | 9/4/03 | 1630 | AQ | | X | | | | | | | | | | | | | [illegible] |
| | | | | | | | | | | | | | | | | | | | |
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Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
**Metals** [illegible]

[illegible]

See QAPP ☐

TURNAROUND REQUIREMENTS
______ **RUSH** (SURCHARGES APPLY)
______ **24 hr** ______ **48 hr** ______ **5 day**
X **STANDARD**
**REQUESTED FAX DATE**
______
**REQUESTED REPORT DATE**
______

REPORT REQUIREMENTS
______ I. Results Only
______ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
______ III. Results + QC and Calibration Summaries
______ IV. Data Validation Report with Raw Data
______ V. Speicalized Forms / Custom Report
Edata ______ Yes ______ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______

CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name [illegible] | Printed Name [illegible] | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm [illegible] | Firm [illegible] | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 9/4/03 1645 | Date/Time | Date/Time | Date/Time | Date/Time |

*Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client*

SCOC-1102-08

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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

PAGE 1 OF 1

SR #

CAS Contact

Project Name: CITY OF ROCHESTER 2[illegible] E. MAIN STREET

Project Number: 4453.02

Project Manager: [illegible]

Report CC:

Company/Address: BERGMANN ASSOCIATES
200 FIRST FEDERAL PLAZA 28 E. MAIN ST
ROCHESTER, NY 14614

Phone #: 585 232-5135

FAX#: 585-232-4652

Sampler's Signature:

Sampler's Printed Name: [illegible]

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☑ 8260 ☐ 624 ☐ CLP | GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☑ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | ETHYLENE GLYCOL | | | | | | | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRESERVATIVE | | | | | | 1 | 0 | | | 0 | 2 | | 0 | | | | | | | |
| MW-12 | | 9/5/03 | 0800 | AQ | 5 | | X | | | X | X | | X | | | | | | | Completion of Set From 9/4/03 |
| MW-8 | | 9/5/03 | 1030 | AQ | 8 | X | X | | | X | X | | X | | | | | | | |
| MW-10 | | 9/5/03 | 1150 | AQ | 8 | X | X | | | X | X | | X | | | | | | | |
| MW-11 | | 9/5/03 | 1320 | AQ | 8 | X | X | | | X | X | | X | | | | | | | |
| MW-9 | | 9/5/03 | 1435 | AQ | 8 | X | X | | | X | X | | X | | | | | | | |
| MW-2 | | 9/5/03 | 1610 | AQ | 8 | X | X | | | X | X | | X | | | | | | | |
| MW-10 DUP | | 9/5/03 | 1150 | AQ | 8 | X | X | | | X | X | | X | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS

**Metals** RCRA METALS

ASP B DELIVERABLES REQUIRED ON MW 12, 8, 10, 11 & 9 & MW-10 DUP

MW-2: SW-846 DELIVERABLES

See QAPP ☐

TURNAROUND REQUIREMENTS
____ **RUSH** (SURCHARGES APPLY)
____ **24 hr** ____ **48 hr** ____ **5 day**
X **STANDARD**
**REQUESTED FAX DATE** ____
**REQUESTED REPORT DATE** ____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Speicalized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ____ CUSTODY SEALS: Y N

| | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|---|
| Signature | | | | | | |
| Printed Name | [illegible] | [illegible] | | | | |
| Firm | BERGMANN ASSOC. | CAS | | | | |
| Date/Time | 9/5/03 @ 1650 | 9/5/03 1650 | | | | |

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SCOC-1102-08

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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

PAGE 1 OF ______

SR #

CAS Contact

Project Name [illegible]
Project Number 44530 2
Project Manager [illegible]
Report CC
Company/Address Bergmann [illegible]
Phone #
FAX#
Sampler's Signature
Sampler's Printed Name

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP | GC/MS SVOA's ☒ 8270 ☐ 625 ☐ CLP | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☒ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | [illegible] | [illegible] | | | | | | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRESERVATIVE | | | | | | | | | | | | | | | | | | | | |
| MW-1 | | [illegible] | 920 | water | 8 | X | X | | | X | X | | X | | | | | | | |
| MW-1 Filter | | [illegible] | 935 | [illegible] | 3 | | | | | | | | | X | | | | | | |
| MW-1 F3 | | [illegible] | [illegible] | water | 5 | X | X | | | | X | | | | | | | | | |
| MW-1 | | [illegible] | [illegible] | water | [illegible] | X | X | | | X | X | | X | | | | | | | |
| MW-3 Filter | | 09/08/03 | 12 | [illegible] | 3 | | | | | | | | | X | | | | | | |
| MW-3 | | [illegible] | 1340 | water | 8 | X | X | | | X | X | | X | | | | | | | |
| MW-7 Filter | | 09/08/03 | 1410 | [illegible] | 3 | | | | | | | | | X | | | | | | |
| MW-7 | | 09/08/03 | 1530 | water | [illegible] | X | X | | | X | X | | X | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
**Metals**

See QAPP ☐

TURNAROUND REQUIREMENTS
______ **RUSH** (SURCHARGES APPLY)
______ **24 hr** ______ **48 hr** ______ **5 day**
X **STANDARD**
**REQUESTED FAX DATE** ______
**REQUESTED REPORT DATE** ______

REPORT REQUIREMENTS
______ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
______ III. Results + QC and Calibration Summaries
______ IV. Data Validation Report with Raw Data
______ V. Speicalized Forms / Custom Report
Edata ______ Yes ______ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Edward J Jones | [illegible] Cook | | | | |
| Signature | Signature | Signature | Signature | Signature | Signature |
| Edward J Jones | K Cook | | | | |
| Printed Name | Printed Name | Printed Name | Printed Name | Printed Name | Printed Name |
| Bergmann Assoc. | [illegible] | | | | |
| Firm | Firm | Firm | Firm | Firm | Firm |
| 09/08/03 15:35 | 9/8/03 1535 | | | | |
| Date/Time | Date/Time | Date/Time | Date/Time | Date/Time | Date/Time |

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SCOC-1102-08

# APPENDIX 8

## 2004 Chain-of-Custody Forms

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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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PAGE 1 OF 1

SR #

CAS Contact

Project Name CITY OF ROCHESTER 1?? E MAIN ST

Project Number

Project Manager GARY FLUDNIK

Report CC

Company/Address BERGMANN ASSOCIATES
28 E MAIN ST SUITE 200
ROCHESTER, NY 1464

Phone # 585-232-5135

FAX# 585-232-4652

Sampler's Signature J. Marschner

Sampler's Printed Name J. MARSCHNER

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP +STARS | GC/MS SVOA's ☒ 8270 ☐ 625 ☐ CLP | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☐ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | | | | | | | | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRESERVATIVE | | | | | | 8 | 8 | | | | | | | | | | | | | |
| MW-5 | | 6/15/04 | 0840 | AQ | 4 | X | X | | | | | | | | | | | | | |
| MW-6 | | 6/15/04 | 0955 | AQ | 4 | X | X | | | | | | | | | | | | | |
| MW-13 | | 6/15/04 | 1125 | AQ | 8 | X | X | | | | | | | | | | | | | ASP SAMPLE ALSO FOR STARS. |
| MW-13 DUPLICATE | | 6/15/04 | 1125 | AQ | 4 | X | X | | | | | | | | | | | | | |
| MW-4 | | 6/15/04 | 1335 | AQ | 4 | X | X | | | | | | | | | | | | | ALL ASP SAMPLE ALSO FOR STARS [illegible] |
| MW-4 MS/MSD | | 6/15/04 | 1335 | AQ | 8 | X | X | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | |

Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
[✓ 8.] Other [illegible]

SPECIAL INSTRUCTIONS/COMMENTS
**Metals**

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
X STANDARD
REQUESTED FAX DATE ____
REQUESTED REPORT DATE ____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Speicalized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ____ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature Kathryn Cook | Signature | Signature | Signature | Signature |
| Printed Name | Printed Name K. COOK | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm | Firm CAS | Firm | Firm | Firm | Firm |
| Date/Time 1535 | Date/Time 6/15/04 1535 | Date/Time | Date/Time | Date/Time | Date/Time |

Distribution: White - Return to Originator; Yellow - Lab Copy; Pink - Retained by Client

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PAGE 1 OF 1

SR #

CAS Contact

Project Name [illegible]

Project Number

Project Manager [illegible]

Report CC

Company/Address
[illegible] Associates
[illegible] Suite 200
[illegible], NY [illegible]

Phone # [illegible]

FAX# 585.232.4652

Sampler's Signature [illegible]

Sampler's Printed Name J. MARSCHNER

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP +STARS | GC/MS SVOA's ☒ 8270 ☐ 625 ☐ CLP STARS ONLY | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☐ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | | | | | | | | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRESERVATIVE | | | | | | 1 | 0 | | | | | | | | | | | | | |
| MW-[illegible] | | 6/16/04 | 0930 | AQ | 4 | X | X | | | | | | | | | | | | | |
| MW-[illegible] | | 6/16/04 | 1105 | AQ | 4 | X | X | | | | | | | | | | | | | |
| MW-10 | | 6/16/04 | 1315 | AQ | 4 | X | X | | | | | | | | | | | | | |
| FIELD BLANK | | 6/16/04 | 1410 | AQ | 4 | X | X | | | | | | | | | | | | | |
| MW-11 | | 6/16/04 | 1520 | AQ | 4 | X | X | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | |

Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
**Metals**

See QAPP ☐

TURNAROUND REQUIREMENTS
______ **RUSH** (SURCHARGES APPLY)
______ **24 hr** ______ **48 hr** ______ **5 day**
X **STANDARD**
**REQUESTED FAX DATE** ______
**REQUESTED REPORT DATE** ______

REPORT REQUIREMENTS
______ I. Results Only
______ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
______ III. Results + QC and Calibration Summaries
______ IV. Data Validation Report with Raw Data
______ V. Speicalized Forms / Custom Report
Edata ______ Yes ______ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______

CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name | Printed Name Heather Loven[illegible] | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm [illegible] 1610 | Firm CAS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 6/16/04 1610 | Date/Time | Date/Time | Date/Time | Date/Time |

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SCOC-1102-08

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# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475

PAGE 1 OF 1

SR #

CAS Contact

Project Name [illegible]

Project Number

Project Manager [illegible]

Report CC

Company/Address [illegible]

Phone # 585.2[illegible]

FAX# 585.232.4652

Sampler's Signature

Sampler's Printed Name J. [illegible]

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☒ 8260 ☐ 624 ☐ CLP | GC/MS SVOA's ☒ 8270 ☐ 625 ☐ CLP | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☐ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | | | | | | | | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | PRESERVATIVE | | 1 | 0 | | | | | | | | | | | | | |
| MW-2 | | 6/7/04 | 0920 | AQ | 4 | X | X | | | | | | | | | | | | | |
| MW-1 | | 6/7/04 | 1120 | AQ | 4 | X | X | | | | | | | | | | | | | |
| MW-3 | | 6/7/04 | 1610 | AQ | 4 | X | X | | | | | | | | | | | | | |
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Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
**Metals**

See QAPP ☐

TURNAROUND REQUIREMENTS
____ **RUSH** (SURCHARGES APPLY)
____ **24 hr** ____ **48 hr** ____ **5 day**
X **STANDARD**
**REQUESTED FAX DATE** ______
**REQUESTED REPORT DATE** ______

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:

SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______

CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| Printed Name [illegible] | Printed Name [illegible] | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm 6/7/04 1650 | Firm CAS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 6/7/04 1650 | Date/Time | Date/Time | Date/Time | Date/Time |

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PAGE 1 OF 1

SR #

CAS Contact

Project Name [illegible]

Project Number

Project Manager [illegible]

Report CC

Company/Address [illegible]

Phone # [illegible]

FAX# 585 . 232 4652

Sampler's Signature

Sampler's Printed Name [illegible]

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP | GC/MS SVOA's ☐ 8270 ☐ 625 ☐ CLP | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☐ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | | | | | | | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRESERVATIVE | | | | | | 1 | 0 | | | | | | | | | | | | |
| MW-9 | | [illegible] | 1145 | AQ | 4 | X | X | | | | | | | | | | | | |
| [illegible] | | [illegible] | 1025 | AQ | 4 | X | X | | | | | | | | | | | | |
| MW 7 | | [illegible] | 1245 | AQ | 4 | X | X | | | | | | | | | | | | |
| [illegible] | | — | — | AQ | 3 | X | | | | | | | | | | | | | |
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Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS [illegible]
**Metals**

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 24 hr ____ 48 hr ____ 5 day
_X_ STANDARD
REQUESTED FAX DATE
______________
REQUESTED REPORT DATE
______________

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:

SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ________

CUSTODY SEALS: Y N

| | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
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| Signature | | [illegible] | | | | |
| Printed Name | [illegible] | [illegible] | | | | |
| Firm | [illegible] | CAS | | | | |
| Date/Time | | 6-18-01 1357 | | | | |

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PAGE 1 OF 1

SR #

CAS Contact

Project Name [illegible]

Project Number

Project Manager [illegible]

Report CC

Company/Address [illegible]

Phone # [illegible]

FAX# [illegible]

Sampler's Signature

Sampler's Printed Name [illegible]

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRESERVATIVE | | | | | | | 0 | | | | | | | | | | | | | |
| [illegible] | | [illegible] | [illegible] | | 1 | | ✓ | | | | | | | | | | | | | |
| [illegible] | | [illegible] | [illegible] | S | 3 | | ✓ | | | | | | | | | | | | | [illegible] |
| [illegible] | | [illegible] | [illegible] | S | 2 | | x | | | | | | | | | | | | | |
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Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
**Metals**
SSU-11 TO BE COLLECTED WHEN AUTHORIZED.
JW

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ **RUSH** (SURCHARGES APPLY)
_____ **24 hr** _____ **48 hr** _____ **5 day**
_____ **STANDARD**
**REQUESTED FAX DATE** __________
**REQUESTED REPORT DATE** __________

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Speicalized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: __________ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature | Signature | Signature | Signature | Signature |
| JIM [illegible]<br>Printed Name | [illegible]<br>Printed Name | Printed Name | Printed Name | Printed Name | Printed Name |
| [illegible] ASSOC<br>Firm | [illegible]<br>Firm CAS | Firm | Firm | Firm | Firm |
| 6/1/04 1535<br>Date/Time | Date/Time 6/1/04 1535 | Date/Time | Date/Time | Date/Time | Date/Time |

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SR #

CAS Contact

Project Name [illegible]

Project Number

Project Manager [illegible]

Report CC

Company/Address [illegible]
[illegible]
ROCH NY 14614

Phone # 232 5135

FAX# 232 4652

Sampler's Signature

Sampler's Printed Name MARSCHALL

**ANALYSIS REQUESTED** *(Include Method Number and Container Preservative)*

| CLIENT SAMPLE ID | FOR OFFICE USE ONLY LAB ID | SAMPLING DATE | SAMPLING TIME | MATRIX | NUMBER OF CONTAINERS | GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP | GC/MS SVOA's ☒ 8270 ☐ 625 ☐ CLP | GC VOA's ☐ 8021 ☐ 601/602 | PESTICIDES ☐ 8081 ☐ 608 ☐ CLP | PCB's ☐ 8082 ☐ 608 ☐ CLP | METALS, TOTAL (List in comments below) | METALS, DISSOLVED (List in comments below) | | | | | | | | REMARKS/ ALTERNATE DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRESERVATIVE | | | | | | | 0 | | | | | | | | | | | | | |
| SSO-11 | | 6/4/04 | 1215 | Soil | 1 | | X | | | | | | | | | | | | | |
| SSO-11 DUP | | 6/4/04 | 1215 | Soil | 1 | | X | | | | | | | | | | | | | |
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Preservative Key
0. NONE
1. HCL
2. $HNO_3$
3. $H_2SO_4$
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
**Metals**

See QAPP ☐

TURNAROUND REQUIREMENTS
____ **RUSH** (SURCHARGES APPLY)
____ **24 hr** ____ **48 hr** ____ **5 day**
____ **STANDARD**
**REQUESTED FAX DATE** ______
**REQUESTED REPORT DATE** ______

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Speicalized Forms / Custom Report
Edata ____ Yes ____ No

INVOICE INFORMATION
PO#
BILL TO:
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: ______ CUSTODY SEALS: Y N

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|---|---|
| Signature | Signature Christine M Kutzer | Signature | Signature | Signature | Signature |
| Printed Name [illegible] | Printed Name Christine M Kutzer | Printed Name | Printed Name | Printed Name | Printed Name |
| Firm [illegible] | Firm CAS | Firm | Firm | Firm | Firm |
| Date/Time | Date/Time 6 4 04 1300 | Date/Time | Date/Time | Date/Time | Date/Time |

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SCOC-1102-08

Recommended Order for Groundwater Sampling, 1200 East Main St., Rochester, NY
June 2004 Sampling program
Sampling order: lowest VOCs to highest concentration of VOCs. All samples for VOCs and SVOCs

| Sampling Order | Well Number | 2003 VOCs | Comments | | |
|---|---|---|---|---|---|
| ~~1~~ | ~~MW-6~~ | ND | | SW-846 | |
| ~~2~~ | ~~MW-5~~ | ND | | SW-846 | |
| ~~3~~ | ~~MW-12~~ | ND | | SW-846 | |
| ~~4~~ | ~~MW-14~~ | Not tested | New well, ASP | | MS-ASP, MSD-ASP: base ASP sample also for STARS |
| ~~5~~ | ~~MW-13~~ | Not tested | New well, ASP | | also a duplicate, standard: ASP sample also for STARS |
| ~~6~~ | ~~MW-8~~ | 282 ppb | | SW-846 | |
| ~~7~~ | ~~MW-11~~ | 1,371 ppb | | SW-846 | |
| 8 | MW-2 | 2,082 ppb | | SW-846 | |
| 9 | MW-1 | 3,856 ppb | | SW-846 | |
| ~~10~~ | ~~MW-10~~ | 9,251 ppb | | SW-846 | |
| 11 | MW-3 | 2,693 ppb | product | SW-846 | |
| 12 | MW-4 | 5,834 ppb | product | SW-846 | |
| 13 | MW-9 | 16,690 ppb | product | SW-846 | |
| 14 | MW-7 | 23,940 ppb | product | SW-846 | |

The 2 new wells for ASP analysis are also to be tested via STARS 8260 to pick up non-ASP STARS analytes

Also collect 1 field blank-rinsate for both VOCs and SVOCS analysis, standard SW-846
Submit 1 lab-prepared trip blank for both VOCs and SVOCs analysis, standard SW-846
Total of 19 samples to be submitted for analysis ( 1 TB, 1 FB, 14 well samples, 1 duplicate, 1 MS and 1 MSD)

The wells with free product are to be developed and sampled: collect samples below product layer.
3 well volumes to be removed via lowering the tubing below the free product layer
and collecting the samples directly from the tubing via low flow.
Do not use bailers to collect samples from wells with free product.

# APPENDIX 9

# 2000 Data Usability and Summary Report

**Data Validation Services**
**120 Cobble Creek Road P. O. Box 208**
**North Creek, N. Y. 12853**
**Phone 518-251-4429**
**Facsimile 518-251-4428**

November 17, 2000

Gary Flisnik
Bergmann Associates
One South Washington St.
Rochester, NY 14614

RE: **D**ata **U**sability **S**ummary **R**eport for 1200 Main St. Site Data Packages
Toxikon SDG Nos. 0006642, 0007089, and 0008029

Dear Mr. Flisnik:

Review has been completed for the three data packages generated by Toxikon, pertaining to samples collected at the 1200 Main St. Site. This report covers five soil samples collected 6/28/00 and 7/5/00, and five aqueous samples collected 8/1/00. All were processed for volatiles by EPA 8260, semivolatiles by EPA 8270, and RCRA metals. Other samples were reported for the project, but deliverables for validation were not required or provided.

The data packages submitted were to contain full deliverables for validation, and this usability report was to be generated from review of the summary form information, with random review of associated raw data. However, due to the errors observed in many of the form entries, including sample result forms, a significant amount of the raw data was also reviewed.

The data have been reviewed for application of validation qualifiers per USEPA CLP National Functional Guidelines for Data Review and the USEPA Region II SOPs HW-2 and HW-6. Those affecting the usability of the samples results are cited within this text. The following items were reviewed:

- Laboratory Narrative Discussion
- Custody Documentation
- Holding Times
- Surrogate and Internal Standard Recoveries
- Matrix Spike Recoveries/Duplicate Correlations
- Preparation/Calibration Blanks
- Control Spike/Laboratory Control Samples
- Instrumental Tunes
- Calibration Standards
- Instrument IDLs

**In summary**, numerous noncompliant processing issues and reporting errors were noted. Included in the concerns are loss of integrity of samples during collection/transit/laboratory receipt, and false positive volatile and semivolatile detections. Per client request, this report will summarize the general issues, and their impact on the data. Specific corrections to results and details of some of the concerns regarding nonvalidated samples will require additional review and reporting by the laboratory.

Copies of laboratory case narratives are attached to this text, and should be reviewed in conjunction with this report. Numerous missing pages were requested and resubmitted.

## General/Sample Receipt

Package documentation shows that jars for some of the samples collected between July 5 and July 10, 2000, and one jar for sample TP-3, were received broken. Some bottles had been taped where broken, although it is not evident at what stage that occured. The samples, most of which were not those requested for validation review, were transferred to new containers when received. The following samples were referenced in the documentation as being in broken jars; it is not known whether the list is complete: Soil #7, Soil #9, Soil #11, Soil #15, Soil #16, and TP-3.

The results of the volatile analytes for these samples, if in broken containers, are likely not usable due to potential losses. Many of the semivolatile components similarly may have also been lost during transit. Additionally, contamination of the exposed soil in the broken jars may have occurred. All data for these samples (only Soil #9 and TP-3 are covered in this report) are highly suspect and of borderline usability, and potentially not usable.

## Volatile Analyses by EPA 8260

EDITS TO TARGET COMPOUND ANALYTE RESULTS:

Numerous detections reported for the samples were incorrect, and should have been reported as nondetection. This is primarily due to erroneous identification of response (i.e. response reported as ethylbenzene is actually from xylene, etc) or incorrect spectral identification. These errors can be a result of inadequate technical review of mass spectra at analysis, or inadequate package review prior to reporting. Per discussion with the client, the specific analytes are not detailed within this text, but can be obtained by requesting proper laboratory processing. In all cases, the detected values were below the sample CRDLs (i.e. reported with the "J" flag). These errors only apply to false positive reporting. Reported nondetections are accurate (except where losses may have occured due to breakage).

ADDITIONAL EDITS AND QUALIFICATIONS

Please see the above comments regarding broken jars and potential losses/contamination.

Acetone and methylene chloride were detected in associated blanks at levels similar to those in the samples, and should be disregarded as sample components for this project. Results for these two analytes should be edited to reflect nondetection ("U") at the originally reported values, or at the CRDLs, whichever are greater.

OTHER QC ITEMS OF CONCERN

Accuracy and precision determinations were performed on aqueous sample MW-3 and produced acceptable values. Soil matrix spikes were performed on batch QC, and therefore project matrix effect is not evaluated.

Aqueous field duplicate correlation of MW-1 was acceptable.

## Semivolatile BNA Analyses by EPA8270

EDITS TO TARGET COMPOUND ANALYTE RESULTS:

Numerous detections reported for the samples were incorrect, and should have been reported as nondetection. This is primarily due to incorrect spectral identification. These errors can be a result of inadequate technical review of mass spectra at analysis, or inadequate package review prior to reporting. Per discussion with the client, the specific analytes are not detailed within this text, but can be obtained by requesting proper laboratory processing. In all cases, the detected values were below the sample CRDLs (i.e. reported with the "J" flag). These errors only apply to false positive reporting. Reported nondetections are accurate (except where losses may have occured due to breakage).

ADDITIONAL EDITS AND QUALIFICATIONS

Please see the above comments regarding broken jars and potential losses/contamination.

Results for 1,2,4-trichlorobenzene and 1,4-dichlorobenzene should be considered estimated ("J") in TP-3 and the aqueous samples due to noncompliant low response in the associated spiked blanks. These outliers should have been discussed in the case narrative.

The result for 1,2,4-trichlorobenzene should be considered estimated ("J") in SS-1 due to low matrix spike recovery.

OTHER QC ISSUES AND CONCERNS

Accuracy and precision determinations were performed on aqueous sample MW-3 and produced acceptable values. Soil matrix spikes were performed on SS-1, and showed acceptable recoveries, with the exception of low responses for 1,2,4-trichlorobenzene (23% and 20%, below 39% laboratory limit).

Aqueous field duplicate correlation of MW-1 was acceptable.

## RCRA Metals by 6000/7000

QUALIFICATIONS TO REPORTED RESULTS

Please see the above comments regarding broken jars and potential losses/contamination.

The mercury analysis of TP-3 and SS-9 were performed outside the allowable holding time (36 days and 29 days, respectively, beyond the 28 day holding time) and results are therefore considered estimated ("J"), possibly biased low. This noncompliance should have been noted in the case narrative.

Cadmium results for TP-3 and the soil samples are considered estimated ("J") due to low matrix spike recovery in TP-3 (68%).

Due to outlying ICP serial dilution correlation of TP-3, detected results for chromium (14%D) and lead (14%D) in TP-3 and the soil samples should be considered estimated ("J").

OTHER QC ISSUES AND CONCERNS

Results for the samples in SDG 000829 were reported for the TAL metals, rather than the requested RCRA target list. Only the RCRA element data were validated.

Accuracy and precision evaluations of MW-3 were acceptable, and the aqueous field duplicate correlation of MW-1 was acceptable.

The ICP serial dilution of MW-3 showed acceptable correlations.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

**Toxikon**

**Date:** *06-Sep-00*

**CLIENT:** Bergmann Associates
**Project:** 1200 EAST MAIN STREET
**Lab Order:** 0006642
**Date Received:** 6/30/00

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Collection Date |
|---|---|---|
| 0006642-01A | TP-3 | 6/28/00 1:40:00 PM |

SOP 7.1
Revision Number: 007
Effective Date: June 26, 2000

**Toxikon**

## Sample Receipt Checklist

Client Name: FISHER
Work Order Number 0006642
Matrix: SOIL

Date and Time Received: 6/30/00 9AM
Received by: WGM
Reviewed by: WGM 6/30/00
Initials Date

Carrier name: [✓ FEDEX] UPS USPS WALK-IN COURIER OTHER

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☐ | No ☑ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | N/A ☐ |
| Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA vials submitted ☑ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | N/A ☑ |

Adjusted? ______ Checked by ______

Checklist completed by: William G. McNamara 6/30/00
Signature Date

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: ______ Date contacted: ______ Person contacted: ______

Contacted by: ______ Regarding: ______

Comments: One jar Broken - pieces held together by tape around jar; contents transferred to new jar

Corrective Action:

**Toxikon**

**Date:** *06-Sep-00*

**CLIENT:** Bergmann Associates
**Project:** 1200 EAST MAIN STREET
**Lab Order:** 0006642
**Date Received:** 6/30/00

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Collection Date |
|---|---|---|
| 0006642-01A | TP-3 | 6/28/00 1:40:00 PM |

# SDG NARRATIVE

Laboratory: Toxikon Corp.
Work Order: 0006642

## VOLATILES DATA:

No problems were encountered

No sample was designated for MS/MSD. A sample from a different Work Order was used for the MS/MSD.

## SEMIVOLATILES DATA:

No problems were encountered.

No sample was designated for MS/MSD. A sample from a different Work Order was used for the MS/MSD.

# CASE NARRATIVE FOR METALS

Work Orders 0006642 and 0007089 (for metals only)

Cadmium demonstrated a matrix spike recovery out of control limits due to matrix interferences. This was confirmed by the analysis of a post digestion spike sample. Cadmium % recovery in the post digest sample demonstrated a recovery within control limits.

Several metals demonstrated serial dilution % RPD's out of control limits. However, all metals demonstrated % RPD's in control limits between the sample and its duplicate.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Sheeley

Douglas Sheeley
Laboratory Manager

9/6/00

Date

**Toxikon**

**Date:** *22-Sep-00*

**CLIENT:** Bergmann Associates
**Project:** 1200 EAST MAIN STREET
**Lab Order:** 0007089
**Date Received:** 7/7/00

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Collection Date |
|---|---|---|
| 0007089-01A | SS-1 | 7/6/00 10:24:00 AM |
| 0007089-02A | SS-7 | 7/5/00 2:32:00 PM |
| 0007089-03A | SS-10 | 7/5/00 12:30:00 PM |
| 0007089-04A | SS-12 | 7/5/00 1:35:00 PM |
| 0007089-05A | SS-14 | 7/6/00 8:05:00 AM |
| 0007089-06A | SS-16 | 7/6/00 10:20:00 AM |
| 0007089-07A | SS-17 | 7/6/00 11:05:00 AM |
| 0007089-08A | SS-18 | 7/6/00 11:35:00 AM |
| 0007089-09A | SS-19 | 7/6/00 12:10:00 PM |
| 0007089-10A | SS-20 | 7/6/00 12:40:00 PM |
| 0007089-11A | SS-21 | 7/6/00 1:15:00 PM |
| 0007089-12A | SO-17 | 7/9/00 8:07:00 AM |
| 0007089-13A | S0-18 | 7/7/00 8:12:00 AM |
| 0007089-14A | SS-2 | 7/7/00 10:05:00 AM |
| 0007089-15A | SS-9 | 7/5/00 11:45:00 AM |
| 0007089-16A | SS-14 | 7/6/00 |
| 0007089-17A | SO-19 | 7/7/00 8:20:00 AM |

# SDG NARRATIVE

Laboratory: Toxikon Corp.
Work Order: 0007089

Samples were analyzed in accordance with SW-846 for PCB's, Metals, Semivolatiles, Volatiles, and misc parameters. All samples were analyzed within the required holding times.

Samples that required a full ASP data package were received with samples that didn't require a full ASP data package. The non-ASP data package is the first section of this data package, the ASP data package is in the second section.

## VOLATILES:

No problems were encountered. The spike results are in the previous Work Order for this project.

## SEMIVOLATILES:

No problems were encountered. One sample required analysis at a dilution due to the sample matrix.

# CASE NARRATIVE FOR METALS

Work Orders 0007089

Cadmium demonstrated a matrix spike recovery out of control limits due to matrix interference. This was confirmed by the analysis of a post digestion spike sample. Cadmium demonstrated a % recovery in the post digest sample within control limits.

Several metals demonstrated serial dilution % RPD's out of control limits. However, all metals that demonstrated serial dilution % RPD's out of control limits demonstrated % RPD's within control limits between the sample and its duplicate.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Douglas Sheeley

9/22/00

Douglas Sheeley
Laboratory Manager

Date

Toxikon

## Sample Receipt Checklist

Client Name: FISHER ASSOCIATES
Work Order Number 00-07-089
Matrix: SOIL

Date and Time Received: 7/10/00 9:00AM
Received by: Scott Cooper

Reviewed by: ______ Initials | Date

Carrier name: [✓ FEDEX] UPS USPS WALK-IN COURIER OTHER

Shipping container/cooler in good condition? Yes ☑ No ☐ Not Present ☐
Custody seals intact on shippping container/cooler? Yes ☐ No ☐ Not Present ☑
Chain of custody present? Yes ☑ No ☐
Chain of custody signed when relinquished and received? Yes ☑ No ☐
Chain of custody agrees with sample labels? Yes ☑ No ☐
Samples in proper container/bottle? Yes ☑ No ☐
Sample containers intact? Yes ☐ No ☑
Sufficient sample volume for indicated test? Yes ☑ No ☐
All samples received within holding time? Yes ☑ No ☐
Container/Temp Blank temperature in compliance? Yes ☑ No ☐ N/A ☐
Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☑
Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☑

Adjusted? ______ Checked by ______

Checklist completed by: Scott Cooper 7/10/00
Signature | Date

**Any No and/or NA (not applicable) response must be detailed in the comments section below.**

Client contacted: ______ Date contacted: ______ Person contacted: ______

Contacted by: ______ Regarding: ______

Comments: SAMPLE CONTAINERS BROKEN IN TRANSIT: SAMPLE#7: 1 OF 3 JARS BROKEN. SAMPLE#9: 2 OF 3 JARS BROKEN. SAMPLE#11: 1 OF 2 JARS BROKEN. SAMPLE#15 1 OF 2 JARS BROKEN. SAMPLE#16 1 OF 5 JARS BROKE.

Corrective Action: All JARS BROKEN WERE TRANSFERRED INTO NEW CONTAINERS

**Toxikon**

**Date:** *25-Sep-00*

**CLIENT:** Bergmann Associates
**Project:** 1200 E. MAIN STREET
**Lab Order:** 0008029
**Date Received:** 8/2/00

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Collection Date |
|---|---|---|
| 0008029-01A | MW-1 | 8/1/00 1:30:00 PM |
| 0008029-02A | MW-1, FIELD DUP | 8/1/00 1:30:00 PM |
| 0008029-03A | MW-2 | 8/1/00 12:45:00 PM |
| 0008029-04A | MW-3 | 8/1/00 2:15:00 PM |
| 0008029-05A | MW-3 MS/MSD | 8/1/00 2:15:00 PM |
| 0008029-06A | MW-4 | 8/1/00 3:00:00 PM |
| 0008029-07A | TRIP BLANK | 8/1/00 |

# SDG NARRATIVE

Laboratory: Toxikon Corp.
Work Order: 0008029

Samples were analyzed in accordance with SW-846 for PCB's, Metals, Semivolatiles, and Volatiles. parameters. All samples were analyzed within the required holding times.

**VOLATILES:**

No problems were encountered.

**SEMIVOLATILES:**

No problems were encountered. Several samples required analysis at a dilution due to the sample matrix.

Data Validation Services
120 Cobble Creek Road P. O. Box 208
North Creek, NY 12853
Phone (518) 251-4429
Facsimile (518) 251-4428

# Facsimile Transmission

| | |
|---|---|
| TO: | Gary Flisnik |
| COMPANY: | Bergmann Associates |
| FAX NUMBER: | 716 232 4652 |
| FROM: | Judy Harry |
| DATE: | 11-05-00 |
| No. of pages (including cover): | 1 |

COMMENTS: RE: Missing pages from Toxicon package

The fax you sent on Friday was indeed missing some pages, even with the retransmission. Those that did not come across are:

7089: 228, 229, and 293

8029: all four (78, 131, 151, and 153)

And of course, we still await those three pages that Toxicon must forward

Hardcopy to follow? __X__ No ____ Yes

**BERGMANN ASSOCIATES**
**Engineers, Architects, Surveyors, P.C.**

One South Washington Street
Rochester, N.Y. 14614
Tel: (716) 232-5135
Fax: (716) 325-8306

**Date:** November ~~3~~ 6, 2000

**Page(s):** ~~24~~ 8

**Company:** Data Validation Services

**Attention:** Judy Harry

**Fax Number:** (518) 251-4428

**Subject:** ASP Missing Data Part 2 3

**From:** Gary Flisnik

From data package 6642, pages 187, 188, 190 and 191 were not in my set of originals. I called Toxikon and they will be faxing those to me once they locate. I will forward them ASAP.

Still have NOT Received

Remaining Sheets

**BERGMANN ASSOCIATES**

**Please call if you have difficulty receiving this transmittal.**

# APPENDIX 10

# 2003 Data Usability and Summary Report

# Data Validation Services

**120 Cobble Creek Road P. O. Box 208**
**North Creek, N. Y. 12853**
**Phone 518-251-4429**
**Facsimile 518-251-4428**

March 17, 2004

Edward Jones
Bergmann Associates
200 lst Federal Plaza
28 E. Main St.
Rochester, NY 14614

RE: **D**ata **U**sability **S**ummary **R**eport for 1200 E. Main St. site
CAS Sub. Nos. R2317242, R2317243, R2318289, and R2318312

Dear Mr. Jones:

Review has been completed for the data packages generated by Severn Trent Laboratories that pertain to soil samples collected 6/16/03 through 6/20/03 and aqueous samples collected 9/4/03 through 9/8/03 at the 1200 E. Main Street site. Thirteen aqueous samples were processed for TCL volatiles, TCL semivolatiles, TCL PCBs, RCRA Metals, and ethylene glycol. Nine of those samples and all of the PCBs were processed by the 2000 NYSDEC ASP, and four of those samples were by the USEPA SW846. Twenty four soil samples were processed for TCL volatiles, TCL semivolatiles, TCL PCBs, RCRA metals, and ethylene glycol. Eight of those samples weere processed by the 2000 NYSDEC ASP, and sixteen of those samples were by the USEPA SW846. Four soil samples were processed for TCL semivolatiles, RCRA metals, and ethylene glycol by SW846. Three aqueous product samples were analyzed for TPHs by method 310-13. Sample matrix spikes, and equipment and cooler blanks were also processed.

The field samples processed by NYSDEC 2000 ASP were reported with full laboratory deliverables, for which this DUSR review was performed. This evaluation involves review of all summary form information and sample raw data. Full validation of all QC results has not been performed. The remaining samples were processed by USEPA SW846 methodologies, and reduced, summary level data packages were produced. The summary forms in those data packages were reviewed, and any observed anomalies in QC are also discussed within this narrative. The data have been reviewed for application of validation qualifiers, per the USEPA Region 2 validation SOPs and the USEPA National Functional Guidelines for Data Review, as affects the usability of the sample data. The following items were reviewed:

- Laboratory Narrative Discussion
- Custody Documentation
- Holding Times
- Surrogate and Internal Standard Recoveries
- Matrix Spike Recoveries/Duplicate Correlations

- * Preparation/Calibration Blanks
- * Control Spike/Laboratory Control Samples
- * Instrumental Tunes and IDLs (ASP only)
- * ICP Serial Dilution (ASP only)
- * Calibration/CRA/CRI Standards (ASP only)
- * Sample Result Verification (ASP only)

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR review level.

**In summary**, the data are usable as reported, or usable with minor edit or qualification of some organic results as estimated.

Copies of the laboratory case narratives and sample summaries are attached to this text, and should be reviewed in conjunction with this report. Sample report forms from the data summary packages are also attached, and reflect final samples results with validation qualifiers/edits in red ink, as detailed below. It should be noted that the samples processed by SW846 (SDGs R2317242 and R2318312) reflect only the qualifiers evident with summary package review.

The following text discusses quality issues of concern.

## Data Completeness

Resubmission communications are attached. The laboratory resubmissions include a revision to the case narrative for a data package. Raw data items have been incorporated into the data packages.

## General

Blind field duplicates of soil samples TT-3 and TT-8 show good correlations, with all values falling within validation guidelines. The blind field duplicate correlation of aqueous sample MW-10 shows acceptable correlations for the fractions other than semivolatile. The semivolatile results do not compare well, with the parent sample showing no detections and the duplicate showing detection of naphthalene (at 160 ppb) and other target analytes. As noted in the laboratory case narrative, review and comparison of the volatile and semivolatile fractions of samples MW-10 and MW-12 indicate that there may have been an error in identification of those two samples. The origin of the error (collection or processing) is not known, as the originally submitted sample bottle containers were no longer available. However, it is not appropriate to assume that reversal. However, we can say that neither sample contains analyte concentrations above the highest of those reported in either, although we are uncertain of the constituency below those values. Therefore, for MW-10 and MW-12, results for analytes showing detection in either of the two samples are edited to reflect nondetection at elevated reporting limits corresponding to the highest of the originally reported concentrations (or CRDLs, whichever are greater). This results in elevated reporting limits for naphthalene (160 ppb) and 2-methylnaphthalene (52 ppb) in both samples. The field duplicate of MW-10 provides unedited data for that location, but location MW-12 has elevated reporting limits for those two analytes.

Aqueous and soil matrix spike accuracy and precision evaluations are generally within validation guidelines.

## TCL Volatiles by ASP CLP and SW846

The dilution analyses of samples MW-2 and MW-1 were performed at 15 and 26 days from collection, respectively, well beyond the required holding time of 10 days from VTSR. The results for analytes derived from these analyses (those initially flagged as "E") are to be qualified as estimated ("J"), with a low bias.

Due to low surrogate BFB recovery (39%, below 72%) in Foundation Sample #2, all volatile results for the sample are qualified as estimated ("UJ" or "J").

The reanalysis of Surface Sample SSU-2 should be used; the initial showed outlying surrogate and internal standard responses.

Due to slightly low recovery in the associated internal standard, results for seven analytes in sample Surface Sample SSU-7 are qualified as estimated, with a low bias.

Due to presence in associated method blanks, detected results for methylene chloride that are flagged as "B" in the soil samples are considered external contamination, and edited to nondetection ("U") at either the CRDL.

Results for analytes initially reported with the laboratory "E" flag are to be derived from dilution analyses. Unless noted specifically within this text, results for all analytes other than those noted above can be derived from the initial analyses of the samples.

Matrix spikes of aqueous sample MW-5 and soil sample TT-4 show acceptable accuracy and precision.

Calibrations standards were evaluated for the samples reported by ASP processing, and show acceptable responses, with the following exceptions, results for which are qualified as estimated in the designated samples:
bromomethane (37%D) in MW-5, MW-6, MW-8, and MW-12
4-methyl-2-pentanone (26%D) and 2-hexanone (26%D) in MW-7, MW-9, MW-10, and MW-11
acetone (40%D), 2-butanone (57%D), and 2-hexanone (51%D) in the Cooler Blank (SDG R2317243)
acetone (25%D), 2-butanone (37%D), 2-hexanone (31%D), methylene chloride (30%D), and 4-methyl-2-pentanone (26%D) in TT-13A.

Tentatively Identified Compounds (TICs) flagged as "B" by the laboratory are considered external contamination (indicated by presence in associated blanks), and results should be rejected as sample components.

The report form for sample TT-13A should reflect that a twofold dilution was used, as reflected by the raw data and the reported results.

## Semivolatile Analyses by ASP CLP or SW846

Sample Field Duplicate #1 TT-3 required reextraction due to loss during initial sample preparation. The reextraction was performed six days beyond the ten day allowable holding time from VTSR, and all results for the sample are therefore qualified as estimated ("UJ").

Elevated internal standard responses were observed for three samples. Reported results are unaffected in two of the samples because detections in those samples are already qualified as estimated due to values below CRDL. Results for five detected analytes are qualified as estimated in Surface Sample SSU-6.

Due to presence in associated method blanks for di-n-butylphthalate, and bis (2-ethylhexyl) phthalate in soil samples, and in aqueous samples with concentrations up to 20 ug/L are considered contamination, and are edited to reflect nondetection ("U"). Not all of these detections were correctly flagged as "B" when required by the laboratory.

Results for analytes initially reported with the laboratory "E" flag are to be derived from dilution analyses.

Calibrations standards were evaluated for the samples processed by ASP, and show acceptable responses, with the exception of the following:

2,4-dinitrophenol (32%D and 36%D) in MW-7, TT-11, TT-13A, SSU-6, and Foundation #1

Aqueous matrix spikes of MW-5 and the soil and aqueous LCSs show low recoveries for n-nitrosodi-n-propylamine (32% to 34%, below 41%). Results for this analyte in the soil and aqueous samples processed by ASP are qualified as estimated ("UJ"). Other accuracy and precision values were acceptable. Pyrene shows low recoveries in the spikes of TT-4, but they were processed at tenfold dilution and the result for that analyte in the parent sample is already qualified as estimated due to value below adjusted reporting limit.

TT-4 was processed at dilution due to non-target matrix responses. This results in elevated reporting limits for target analytes.

Tentatively Identified Compounds (TICs) flagged as "B" by the laboratory are considered external contamination (indicated by presence in associated blanks), and results should be rejected as sample components. Those identified as aldol condensates, flagged by the laboratory as "A", are analysis artifacts, and are similarly rejected.

## TCL PCB by CLP and SW846

Holding times and surrogate recoveries were meet requirements.

Matrix spikes of Aroclor 1254 in TT-4 and of Aroclor 1260 in MW-5 show acceptable accuracy and precision.

The reporting limits for Aroclor 1254 in Surface Sample SSU-2 and Surface Sample SSU-6 are qualified as estimated ("J") due to low level responses (albeit with poor pattern match) near the those limits.

## RCRA Metals CLP-M and SW846

Sample matrix spikes of soil sample TT-4 and aqueous sample MW-5 show recoveries and correlations within protocol and validation guidelines.

Although required by protocol, no site specific QC for the twenty one soil samples submitted for SW846 analyses was performed, and no batch QC was submitted in the data package.

The ICP serial dilution of soil sample TT-4 and aqueous sample MW-5 also show good correlations.

Elevated CRI and blank responses for selenium associated with soil sample do not affect the sample results, as they report no detection of that element.

## TPH and Ethylene Glycol Analyses

Holding times are met, and LCS recoveries meet within protocol requirements. Blanks show no contamination.

The matrix spikes of ethylene glycol on TT-4 and RW-5 show good recoveries and duplicate correlations. The laboratory case narrative incorrectly states the recovery for TT-4 as being an outlier.

Please do not hesitate to contact me if you have comments or questions regarding this report.

Very truly yours,

Judy Harry

# LABORATORY SAMPLE IDs AND CASE NARRATIVES

# CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG #: TT-1
SUBMISSION R2317242
CLIENT: Bergmann Associates, P.C.
CLIENT REP: Janice Jaeger
PROJECT: CITY OF ROCHESTER 1200 E M

BATCH COMPLETE: __yes__________
DISKETTE REQUESTED: Y__X_ N____
DATE: 02/19/04
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:
DATE DUE:
PROTOCOL: SW846
SHIPPING No.:
SUMMARY PKG: Y____X__ N

| CAS JOB # | CLIENT/EPA ID | MATRIX | REQUESTED PARAMETERS | DATE SAMPLED | DATE RECEIVED | pH (SOLIDS) | % SOLIDS | REMARKS AMPLE CONDITIO |
|---|---|---|---|---|---|---|---|---|
| 648781 | TT-1 | SOIL | 8260,8270,PCB,RCRA MET* | 6/18/03 | 6/18/03 | | | |
| 648782 | TT-2 | SOIL | 8260,8270,PCB,RCRA MET* | 6/17/03 | 6/17/03 | | | |
| 648784 | TT-5 | SOIL | 8260,8270,PCB,RCRA MET* | 6/17/03 | 6/17/03 | | | |
| 648785 | TT-7 | SOIL | 8260,8270,PCB,RCRA MET* | 6/16/03 | 6/16/03 | | | |
| 648786 | TT-8 | SOIL | 8260,8270,PCB,RCRA MET* | 6/16/03 | 6/16/03 | | | |
| 648787 | TT-9 | SOIL | 8260,8270,PCB,RCRA MET* | 6/16/03 | 6/16/03 | | | |
| 648788 | TT-10 | SOIL | 8260,8270,PCB,RCRA MET* | 6/16/03 | 6/16/03 | | | |
| 648789 | TT-12 | SOIL | 8260,8270,PCB,RCRA MET* | 6/17/03 | 6/17/03 | | | |
| 648790 | FIELD DUP #2 TT-8 | SOIL | 8260,8270,PCB,RCRA MET | 6/16/03 | 6/16/03 | | | |
| 648791 | TT-4A SIDE WALLS | SOIL | 8260,8270,PCB,RCRA MET* | 6/20/03 | 6/20/03 | | | |
| 648794 | FOUNDATION SAMPLE 2 | SOIL | 8260,8270,PCB,RCRA MET* | 6/18/03 | 6/18/03 | | | |
| 648797 | SURFACE SAMPLE SSU-7 | SOIL | 8260,8270,PCB,RCRA MET* | 6/20/03 | 6/20/03 | | | |
| 648798 | FOUNDATION SAMPLE 3 | SOIL | 8260,8270,PCB,RCRA MET* | 6/18/03 | 6/18/03 | | | |
| 648803 | SURFACE SAMPLE SSU-1 | SOIL | 8270,89-9,RCRA MET | 6/20/03 | 6/20/03 | | | |
| 648804 | SURFACE SAMPLE SSU-3 | SOIL | 8270,89-9,RCRA MET | 6/20/03 | 6/20/03 | | | |
| 648805 | SURFACE SAMPLE SSU-4 | SOIL | 8270,89-9,RCRA MET | 6/20/03 | 6/20/03 | | | |
| 648806 | SURFACE SAMPLE SSU-5 | SOIL | 8270,89-9,RCRA MET | 6/20/03 | 6/20/03 | | | |
| 648808 | TT-6 | SOIL | 8260,8270PCB,RCRA MET* | 6/17/03 | 6/17/03 | | | |
| 649650 | TT-12A | SOIL | 8260,8270PCB,RCRA MET* | 6/17/03 | 6/17/03 | | | |
| 650163 | TT-13 | SOIL | 8260,8270PCB,RCRA MET* | 6/18/03 | 6/18/03 | | | |
| 650927 | TT-4B | SOIL | 8260,8270PCB,RCRA MET* | 6/20/03 | 6/20/03 | | | |
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# CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG #: TT-3
SUBMISSION R2317243
CLIENT: Bergmann Associates, P.C.
CLIENT REP: Janice Jaeger
PROJECT: CITY OF ROCHESTER 1200 E. M

BATCH COMPLETE: __yes_________
DISKETTE REQUESTED: Y___ N____
DATE: 06/20/03
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:
DATE DUE: 07/18/03
PROTOCOL: ASP
SHIPPING No.:
SUMMARY PKG: Y___X__ N

| CAS JOB # | CLIENT/EPA ID | MATRIX | REQUESTED PARAMETERS | DATE SAMPLED | DATE RECEIVED | pH (SOLIDS) | % SOLIDS | REMARKS AMPLE CONDITIO |
|---|---|---|---|---|---|---|---|---|
| 648807 | TT-3 | SOIL | OLM/ILM VOA,SVOA,PCB* | 6/17/03 | 6/17/03 | | | |
| 648809 | TT-11 | SOIL | OLM/ILM VOA,SVOA,PCB* | 6/16/03 | 6/16/03 | | | |
| 648810 | FIELD DUP #1 TT-3 | SOIL | OLM/ILM VOA,SVOA,PCB* | 6/17/03 | 6/17/03 | | | |
| 648813 | FOUNDATION #1 | SOIL | OLM/ILM VOA,SVOA,PCB* | 6/18/03 | 6/18/03 | | | |
| 648814 | SURFACE SAMPLE SSU-2 | SOIL | OLM/ILM VOA,SVOA,PCB* | 6/20/03 | 6/20/03 | | | |
| 648817 | SURFACE SAMPLE SSU-6 | SOIL | OLM/ILM VOA,SVOA,PCB* | 6/20/03 | 6/20/03 | | | |
| 649407 | COOLER BLANK | WATER | OLM VOA | 6/17/03 | 6/17/03 | | | |
| 650164 | TT-13A | SOIL | OLM/ILM VOA,SVOA,PCB* | 6/18/03 | 6/18/03 | | | |
| 650718QC | TT-4 | SOIL | OLM/ILM VOA,SVOA,PCB* | 6/20/03 | 6/20/03 | | | |
| | | | | | | | | |
| | | | *RCRA metals, 89-9 | | | | | |

# CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG #: MW-6
SUBMISSION R2318289
CLIENT: Bergmann Associates, P.C.
CLIENT REP: Janice Jaeger
PROJECT: 1200 E. MAIN STREET, ROCHES

BATCH COMPLETE: __yes_________
DISKETTE REQUESTED: Y___ N__X__
DATE: 09/08/03
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:
DATE DUE: 10/06/03
PROTOCOL: ASP
SHIPPING No.:
SUMMARY PKG: Y___X_ N

| CAS JOB # | CLIENT/EPA ID | MATRIX | REQUESTED PARAMETERS | DATE SAMPLED | DATE RECEIVED | pH (SOLIDS) | % SOLIDS | REMARKS AMPLE CONDITION |
|---|---|---|---|---|---|---|---|---|
| 669544 | MW-6 | WATER | OLM/ILM VOA,SVOA,RCRA MET | 9/4/03 | 9/4/03 | | | |
| 669546QC | MW-5 | WATER | OLM/ILM VOA,SVOA,RCRA MET | 9/4/03 | 9/4/03 | | | |
| 669547 | MW-12 | WATER | OLM VOA | 9/4/03 | 9/4/03 | | | |
| 669548 | COOLER BLANK | WATER | OLM VOA | 9/4/03 | 9/4/03 | | | |
| 669974 | MW-12 | WATER | OLM/ILM SVOA,PCB,RCRA MET | 9/5/03 | 9/5/03 | | | |
| 669975 | MW-8 | WATER | OLM/ILM VOA,SVOA,RCRA MET | 9/5/03 | 9/5/03 | | | |
| 669976 | MW-10 | WATER | OLM/ILM VOA,SVOA,RCRA MET | 9/5/03 | 9/5/03 | | | |
| 669977 | MW-11 | WATER | OLM/ILM VOA,SVOA,RCRA MET | 9/5/03 | 9/5/03 | | | |
| 669978 | MW-9 | WATER | OLM/ILM VOA,SVOA,RCRA MET | 9/5/03 | 9/5/03 | | | |
| 669979 | MW-10 DUP | WATER | OLM/ILM VOA,SVOA,RCRA MET | 9/5/03 | 9/5/03 | | | |
| 669980 | MW-2 | WATER | OLM PCB | 9/5/03 | 9/5/03 | | | |
| 670296 | MW-1 | WATER | OLM PCB | 9/8/03 | 9/8/03 | | | |
| 670297 | MW-4 | WATER | OLM PCB | 9/8/03 | 9/8/03 | | | |
| 670298 | MW-3 | WATER | OLM PCB | 9/8/03 | 9/8/03 | | | |
| 670299 | MW-7 | WATER | OLM/ILM VOA,SVOA,RCRA MET | 9/8/03 | 9/8/03 | | | |
| | | | | | | | | |
| | | | All w/ PCB need Cooler Blank | | | | | |
| | | | *89-9 | | | | | |

# CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG #: MW-2
SUBMISSION R2318312
CLIENT: Bergmann Associates, P.C.
CLIENT REP: Janice Jaeger
PROJECT: 1200 E. MAIN STREET, ROCHES

BATCH COMPLETE: __yes__________
DISKETTE REQUESTED: Y___ N__X__
DATE: 02/18/04
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:
DATE DUE:
PROTOCOL: SW846
SHIPPING No.:
SUMMARY PKG: Y___X___ N

| CAS JOB # | CLIENT/EPA ID | MATRIX | REQUESTED PARAMETERS | DATE SAMPLED | DATE RECEIVED | pH (SOLIDS) | % SOLIDS | REMARKS AMPLE CONDITION |
|---|---|---|---|---|---|---|---|---|
| 669984 | MW-2 | WATER | 8260,8270,89-9,RCRA MET | 9/5/03 | 9/5/03 | | | |
| 670300 | MW-1 | WATER | 8260,8270,89-9,RCRA MET | 9/8/03 | 9/8/03 | | | |
| 670303 | MW-4 | WATER | 8260,8270,89-9,RCRA MET | 9/8/03 | 9/8/03 | | | |
| 670305 | MW-3 | WATER | 8260,8270,89-9,RCRA MET | 9/8/03 | 9/8/03 | | | |
| 670310 | MW-1 FB | WATER | 8260,8270,89-9,RCRA MET | 9/8/03 | 9/8/03 | | | |
| 670313 | MW-4 PRODUCT | NON-A | 310-13 | 9/8/03 | 9/8/03 | | | |
| 670316 | MW-3 PRODUCT | NON-A | 310-13 | 9/8/03 | 9/8/03 | | | |
| 670318 | MW-7 PRODUCT | NON-A | 310-13 | 9/8/03 | 9/8/03 | | | |

## CASE NARRATIVE

COMPANY: Bergmann Associates
City of Rochester 1200 E. Main Street Project #4453.02
SUBMISSION #: R231724~~3~~2

Bergmann samples were collected on 06/16-20/03 and received at CAS on 06/16-20/03 in good condition

.

## INORGANICS

Twenty one soil samples were analyzed for RCRA Metals by 6010/7000 from SW-846 and Ethylene Glycol by method 89-9.

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits. All RPD's were within limits.

No other analytical or QC problems were encountered.

## VOLATILE ORGANICS

Sixteen soil samples were analyzed for the new TCL list of Volatiles by Method 8260 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits except TT-4A Side Walls and Surface sample SSU-7. The sample were repeated and the internal standards were still outside limits. Both sets of results have been reported out.

All surrogate standard recoveries were within QC limits except Dibromofluoromethane for Foundation Sample 2 and has been flagged with an "*". An MS/MSD was performed on this sample and confirmed the surrogate being outside limits.

Site specific QC was not requested for these samples. All Reference spike recoveries were within limits. All RPD's were within limits.

The Laboratory blanks associated with these samples were free of contamination except the 07/02/03 blank contained a low level hit for Bromomethane. No data was affected.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

## SEMIVOLATILE ORGANICS

Twenty one soil samples were analyzed for TCL list of Semivolatiles by method 8270 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within limits except Terphenyl-d14 for Surface Sample SSU-5 and has been flagged with an "*". The sample was re-extracted outside the recommended holding time of 14 days and reanalyzed and the surrogate was within limits the Blank spike/Blank spike duplicate associated with the sample had Benzo(b)fluoranthene and Benzo(k)fluoranthene outside limits high for the LCS and Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene and Benzo(g,h,i)perylene outside limits high for the LCSD. Both sets of data have been reported out. All surrogates were diluted out for Foundation sample 2 and Surface Sample SSU-4 and have been flagged with a "D"

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries were within limits except as mentioned above. All RPD's were within limits.

TT-1 and TT-13 were analyzed at dilutions due to the preparation step yielding a dark extract.

The Laboratory Blanks associated with these analyses were free of contamination except the 07/16/03 blank contained a low level hit for Di-n-butylphthalate. No data was affected.

All samples were extracted and analyzed within holding times except as mentioned above.

No other analytical or QC problems were encountered.

## PCB's

Twenty one soil samples was analyzed for the TCL list of PCB's by method 8082 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits. All surrogates were diluted out for Foundation Sample 2 and has been flagged with a "D".

Site specific QC was not requested for these samples. All Blank spike/blank spike duplicate recoveries were within limits. All RPD's were within limits .

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.

# CASE NARRATIVE

COMPANY: Bergmann Associates
City of Rochester 1200 E. Main Street Project #4453.02
SUBMISSION #: R2317243

Bergmann samples were collected on 06/17-20/03 and received at CAS on 06/17-20/03 in good condition

## INORGANICS

Eight soil samples were analyzed for RCRA Metals by ASP methodology and Ethylene Glycol by method 89-9. Due to a laboratory error, The Field Dup #1 TT-3 was not analyzed for Ethylene Glycol.

Site specific QC was performed on TT-4. All MS recoveries were within limits. All Blank spike recoveries were within limits except Ethylene Glycol which was outside limits low and has been flagged with an "N". The Ethylene Glycol results may be biased low due to the low LCS. All RPD's were within limits.

No other analytical or QC problems were encountered.

## VOLATILE ORGANICS

Eight soil samples and one cooler blank were analyzed for the TCL list of Volatiles by Method OLM 4.2.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits except IS3 for SSU-2. The sample was repeated and IS3 was within limits. Both sets of results have been reported out and all outlying internal standards have been flagged with an "*".

All surrogate standard recoveries were within QC limits except SMC3 for SSU-2. The sample was repeated and the surrogate was within limits. Both sets of data have been reported out and all outlying surrogates have been flagged with an "*".

Site specific QC was performed on TT-4. All MS/MSD and Reference spike recoveries were within limits. All RPD's were within limits.

The Laboratory blanks associated with these samples were free of contamination except SOILBLK2 contained a low level hit for Methylene Chloride. No data was affected.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

## SEMIVOLATILE ORGANICS

Eight soil samples were analyzed for TCL list of Semivolatiles by method OLM 4.2.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits except IS4, IS5 and IS6 for FOUNDATION #1, SSU-6, TT-4MSD and TT-13A. The internal standards were within limits for TT-4 and TT-4MS. The other samples were repeated and the internal standards were still outside limits. Both sets of data have been reported out and all outlying internal standards have been flagged with an "*".

All surrogate standard recoveries were within limits except S4 for TT-11, TT-13ARE and Foundation #1. Foundation #1 was repeated and the surrogate was still outside limits and ton the original analysis of TT-13 the surrogate was within limits. TT-11 was not repeated due to CLP protocol allowing one surrogate per fraction to be outside limits. All outlying surrogates have been flagged with an "*".

Site specific QC was performed on TT-4. All MS/MSD recoveries were within limits except Pyrene and has been flagged with an "*". All Blank spike/Blank spike duplicate recoveries were within limits except N-Nitroso-Di-n-propylamine for SBLKLCS1 and 4-Nitrophenol and Pentachlorophenol for SBLK1LCSRE and SBLK1LCSDRE. The data was accepted for the samples associated with SBLK1LCS since the MS/MSD were within limits for this compound. No data was affected for the samples associated with SBLK1LCSRE/SBLK1LCSDRE. All RPD's were within limits except Pyrene and has been flagged with an "*".

The original extract performed within holding time for Field Dup #1 TT-3 was lost during the GPC cleanup due to an instrument failure. The sample was re-extracted six days outside the recommended holding time of ten days from VTSR and analyzed.

TT-4 was analyzed at a dilution due to the presence of nontarget analytes in the sample.

The Laboratory Blanks associated with these analyses were free of contamination except SBLK1RE contained a low level hit for Di-n-butylphthalate and SBLK1 contained a low level hit for Bis(2-ethylhexyl)phthalate. All affected data has been flagged with a "B".

All samples were extracted and analyzed within holding times except as mentioned above.

No other analytical or QC problems were encountered.

## PCB's

Eight soil samples was analyzed for the TCL list of PCB's by modified method OLM 4.2.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits.

Site specific QC was performed on TT-4. All MS/MSD recoveries were within limits. All Blank spike/blank spike duplicate recoveries were within limits. All RPD's were within limits .

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature. Lisa Reyes

## CASE NARRATIVE

COMPANY: Bergmann Associates
1200 E. Main Street, Rochester Project #4453.02
SUBMISSION #: R2318289

Bergmann samples were collected on 09/04-08/03 and received at CAS on 09/04-08/03 in good condition

.

## INORGANICS

Nine water samples were analyzed for RCRA Metals by ASP methodology and Ethylene Glycol by method 89-9.

Site specific QC was performed on MW-5. All MS recoveries were within limits. All Blank spike recoveries were within limits. All RPD's were within limits.

No other analytical or QC problems were encountered.

## VOLATILE ORGANICS

Nine water samples and one cooler blank were analyzed for the TCL list of Volatiles by Method OLM 4.2.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within QC limits.

Site specific QC was performed on MW-5. All MS/MSD and Reference spike recoveries were within limits. All RPD's were within limits.

The Laboratory blanks associated with these samples were free of contamination.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

## SEMIVOLATILE ORGANICS

Nine water samples were analyzed for TCL list of Semivolatiles by method OLM 4.2.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within limits.

Site specific QC was performed on MW-5. All MS/MSD recoveries were within limits except 4-Nitrophenol and 2,4-Dinitrotoluene and have been flagged with an "*". All Blank spike/Blank spike duplicate recoveries were within limits except N-Nitroso-Di-n-propylamine was outside limits low and 4-Nitrophenol was outside limits high and have been flagged with an "*". No sample remained to re-extract and reanalyze. All RPD's were within limits.

Various compounds for MW-12, MW-8 and MW-10 DUP have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

The results for MW-10 and MW-10 DUP don't correspond well with eachother. All internal documentation has been checked and verified and CAS no longer has the original sample bottles to check whether the sample was mislabeled. It appears from comparing the Volatile data to the Semivolatile data, that MW-10 and MW-12 could have been switched.

The Laboratory Blanks associated with these analyses were free of contamination except SBLK1 contained a low level hit for Di-n-butylphthalate and SBLK1 and SBLK2 contained a low level hit for Bis(2-ethylhexyl)phthalate. All affected data has been flagged with a "B".

All samples were extracted and analyzed within holding times.

No other analytical or QC problems were encountered.

## **PCB's**

Twelve water samples was analyzed for the TCL list of PCB's by modified method OLM 4.2.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits.

Site specific QC was performed on MW-5. All MS/MSD recoveries were within limits. All Blank spike/blank spike duplicate recoveries were within limits. All RPD's were within limits .

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

# CASE NARRATIVE

COMPANY: Bergmann Associates
1200 East Main Street, Rochester Project #4453.02
SUBMISSION #: R2318312

Bergmann samples were collected on 09/05-08/03 and received at CAS on 09/05-08/03 in good condition

.

## INORGANICS

Five water samples were analyzed for RCRA Metals by 6010B/7000 and Ethylene Glycol by method 89-9 by SW-846 methodology.

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits.

No other analytical or QC problems were encountered.

## VOLATILE ORGANICS

Five water samples were analyzed for the TCL list of Volatiles by Method 8260B from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within QC limits.

Site specific QC was not requested for these samples. All Reference spike recoveries were within limits.

Various compounds for MW-2 and MW-1 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

The Laboratory blanks associated with these samples were free of contamination.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

## SEMIVOLATILE ORGANICS

Five water samples were analyzed for TCL list of Semivolatiles by method 8270C from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within limits except MW-4. All surrogates were diluted out and have been flagged with a "D".

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries were within limits. All RPD's were within limits.

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were extracted and analyzed within holding times.

No other analytical or QC problems were encountered.

## TOTAL PETROLEUM HYDROCARBONS

Three product samples were analyzed for the Total Petroleum Hydrocarbons by NYSDOH method 310.13.

All the initial and continuing calibration criteria were met for all analytes.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries were within limits. All RPD's were within limits.

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.

# RESUBMISSION COMMUNICATIONS

# Data Validation Services

120 Cobble Creek Road P. O. Box 208
North Creek, NY 12853
Phone (518) 251-4429
Facsimile (518) 251-4428

## Facsimile Transmission

TO: Janice Jaeger

COMPANY: CAS

FAX NUMBER: 585 288 8475

FROM: Judy Harry

12
DATE: 02-~~1~~1-04

No. of pages (including cover): 2

COMMENTS: RE: Bergmann Associates -1200 E. Main St. site
CAS Sub Nos. R2317242, R2317243, R2318289, and R2318312

Review of the packages noted above is in progress. The following items are needed in order to complete the validation:

1. Although only reduced deliverables were required for Sub Nos. R2318312 and R2317242, the project requirements require validation review of the internal standard responses (especially in light of the outliers referenced in the narrative of -7242). So please provide VOA and SVOA Forms 8 for those two packages.

2. Please also provide your "Batch Summary Forms" for those two packages, as there is no other summary of the samples processed therein.
3. There is no indication in the package R2318312 as to whether volatile fractions of samples received 9/8/03 were preserved. Please forward any data (i.e. VOA analysis log) that may show the pHs of those samples.
4. Pages 1277 through 1284, inclusive, were not located in package R2318289. Please forward copies for review.

Thank you for your attention to these items. Please call me if you have comments/ questions, and please also send copies of all communications to Ed Jones at Bergmann.

cc: Ed Jones, Bergmann Associates

Original to follow: _X__No ___Yes

1 Mustard Street, Suite 250 Rochester, NY 14609-6925 (585) 288-5380 (585) 288-8475 fax

Columbia Analytical Services INC
An Employee - Owned Company

March 2, 2004

Ms. Judy Harry
Data Validation Services
120 Cobble Creek Road
P.O. Box 208
North Creek, New York 12853

Re: Bergmann Associates - 1200 E. Main Street site
Submission #R2317242, R2317243, R2318289 & R2318312 validation response

Dear Ms. Harry:

Enclosed are the responses to you questions received by fax on 02/12/04.

1. As we had discussed, I was going to provide the Form 8's for the locations that internal standards were outside limits. During the original analysis of TT-4A Sidewalls, all of the internal standards were outside limits. The sample was repeated and all of the internal standards were within limits so only the second analysis was reported, therefore it was an error on the case narrative that this location had internal standards outside limits. The Form 8's for Surface sample SSU-7 follow this letter.

2. The Batch Summary Forms for R2317242 and R2318312 follow this letter.

3. The run log for R2318312 includes the pH of the samples and follows this letter.

4. Pages 1277 through 1284 for R2318289 follow this letter.

Please contact me at (585) 288-5380 if you have any further questions or concerns.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Janice M. Jaeger
Project Chemist

cc: Mr Ed Jones - Bergmann Associates
cover letter only

# APPENDIX 11

# 2004 Data Usability and Summary Report

# Data Validation Services

120 Cobble Creek Road P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429
Facsimile 518-251-4428

SEP 22 2004

TO: Bergmann Associates

FROM: Judy Harry, Data Validation Services

DATE: 09-21-04

2004
DUSR
Hand corrected
pages from
DATA Validation inserted

RE: Invoice for DUSR of 1200 E. Main St. site data package
CAS Sub. Nos. R2421593, R2421594, R2421774, and R2421775
DUSR of 9-21-04

Please remit the following balance as outlined below:

| No. of Units* | Analytical Fraction | Unit Cost | Subtotal Due |
|---|---|---|---|
| 3 | TCL VOAs-ASP | $ 18 | $ 54 |
| 6 | TCL SVOAs-ASP | 18 | 108 |
| 12 | TCL VOAs-SW846 | 14 | 168 |
| 16 | TCL SVOAs-SW846 | 14 | 224 |
| | Total Due | | $ 554 |

* Includes field samples, field duplicates, and matrix spikes.

Vendor No. ____________
Invoice No. ____________
A/P Code ____________
Project Dept No. ____________
G/L Code ____________
Approved ____________

Data Validation Services
120 Cobble Creek Road P. O. Box 208
North Creek, NY 12853
Phone (518) 251-4429
Facsimile (518) 251-4428

# LETTER OF TRANSMITTAL

TO: Edward Jones

COMPANY: Bergmann Associates

FROM: Judy Harry

DATE: 09-21-04

ENCLOSED: DUSR for the 1200 E. Main St. site
CAS Sub. Nos. R2421593, R2421594, R2421774, and R2421775

Qualified report forms

Associated invoice

COMMENTS:

Ship via: US Express____ UPS ____ US Priority__X__Fed Ex____Other ___

# Data Validation Services

120 Cobble Creek Road   P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429
Facsimile 518-251-4428

September 21, 2004

Edward Jones
Bergmann Associates
200 lst Federal Plaza
28 E. Main St.
Rochester, NY 14614

RE: **Data Usability Summary Report** for 1200 E. Main St. site
CAS Sub. Nos. R2421593, R2421594, R2421774, and R2421775

Dear Mr. Jones:

Review has been completed for the data packages generated by Severn Trent Laboratories that pertain to samples collected 6/01/04 through 6/18/04 at the 1200 E. Main Street site. Three aqueous samples (including a field duplicate) were processed for TCL + STARS volatiles and TCL + STARS semivolatiles by the 2000 NYSDEC ASP, and one soil sample was analyzed for TCL + STARS semivolatiles by the 2000 NYSDEC ASP. Twelve aqueous samples were processed for TCL + STARS volatiles and PAHs by USEPA SW846, and three soil samples (including a field duplicate) were processe for TCL + STARS semivolatiles by USEPA SW846. Sample matrix spikes, and field and cooler blanks were also processed.

The field samples processed by NYSDEC 2000 ASP were reported with full laboratory deliverables upon which this DUSR review was performed. This evaluation involves review of all summary form information and sample raw data. Full validation of all QC results has not been performed. The remaining samples were processed by USEPA SW846 methodologies, and reduced, summary level data packages were produced. The summary forms in those data packages were reviewed, and any observed anomalies in QC are also discussed within this narrative. The data have been reviewed for application of validation qualifiers, per the USEPA Region 2 validation SOPs and the USEPA National Functional Guidelines for Data Review, as affects the usability of the sample data. The following items were reviewed:

- Laboratory Narrative Discussion
- Custody Documentation
- Holding Times
- Surrogate and Internal Standard Recoveries
- Matrix Spike Recoveries/Duplicate Correlations
- Blank Contamination
- Laboratory Control Samples
- Instrumental Tunes
- Calibration Standards
- Sample Result Verification (ASP only)

Those items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR review level.

**In summary**, the data are usable as reported, or usable with minor edit or qualification of some results as estimated.

Copies of the laboratory case narratives and sample summaries are attached to this text, and should be reviewed in conjunction with this report. Sample report forms from the data summary packages are also attached, and reflect final samples results with validation qualifiers/edits in red ink, as detailed below. It should be noted that the samples processed by SW846 (SDGs R2421594 and R2421774) reflect only the qualifiers evident with summary package review.

The following text discusses quality issues of concern.

## Data Completeness

No laboratory resubmissions were required.

## General

Field duplicates of TCL volatiles and semivolatile analytes on soil samples MW-13 and MW-13 DUP show good correlations, with all values falling within validation guidelines, with the exception of the detected concentrations of caprolactum (>±2XCRDL). Results for that compound in the sample and its duplicate are qualified as estimated ("J"). Field duplicate correlation of semivolatile analytes on SSU-11 were also good.

Aqueous and soil matrix spike accuracy and precision evaluations are generally within validation guidelines.

## TCL Volatiles by ASP CLP and SW846

Results for analytes initially reported with the laboratory "E" flag are to be derived from dilution analyses. Unless noted specifically within this text, results for all analytes other than those noted above can be derived from the initial analyses of the samples.

Matrix spikes of aqueous sample MW-14 show acceptable accuracy and precision.

Due to low recoveries (65% and 69%, below 70% limit) in the associated spiked blanks, the results for 1,1,2,2-tetrachloroethane in the twelve samples reported in SDG R2421774 are qualified as estimated ("UJ"). The compound also showed low response (32%D) in one of the associated calibration standards.

Other calibrations standards (evaluation was available for all samples) show acceptable responses, with the exception that 1,2,4-trichlorobenzene is to be qualified as estimated ("UJ") in the three samples reported in SDG R2421775.

## Semivolatile Analyses by ASP CLP or SW846

Sample SSU-11 exhibited surrogate recoveries about twice those expected, indicating a potential surorgate standard solution spiking error. That error would not affect sample detected values, but because spiking error is an assumption, all detected values are qualified as estimated ("J") in this sample. However, it should be noted that a field duplicate was evaluated at this same location, and those detected data are usable as reported. There was good correlation between results in the parent sample SSU-11 and the field duplicate.

Due to presence in associated method blanks, results for di-n-butylphthalate in the samples reported in SDG R2421775, and for bis(2-ethylhexyl)phthalate in the samples reported in SDG R2421593 and R2421594 are considered contamination, and are edited to reflect nondetection ("U").

Results for analytes initially reported with the laboratory "E" flag are to be derived from dilution analyses.

Holding times, instrument tunes, and internal standard responses meet protocol requirements.

Calibrations standards show acceptable responses, with the exception of the following analytes, results for which are qualified as estimated in the indicated samples:

- 2,4-dinitrophenol (26%D) in SSU-10
- 2,4-dinitrophenol (28%RSD) in the four soil samples reported in R2421594
- caprolactum (27%D) in MW-13

Matrix spikes of SSU-10 and MW-14 show acceptable recoveries and duplicate correlations, with the exception of slightly elevated recoveries (to 115%) for analytes not detected in the samples. Reported results are unaffected.

Tentatively Identified Compounds (TICs) flagged as "B" by the laboratory are considered external contamination (indicated by presence in associated blanks), and results should be rejected as sample components. Those identified as aldol condensates, flagged by the laboratory as "A", are analysis artifacts, and are similarly rejected.

Please do not hesitate to contact me if you have comments or questions regarding this report.

Very truly yours,

Judy Harry

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

| Customer Sample Code | Laboratory Sample Code | Analytical Requirements | | | | | |
|---|---|---|---|---|---|---|---|
| | | VOA GC/MS | BNA GC/MS | VOA GC | PEST PCBs | Metals | Other |
| SSU-10 | 731589 | | X | | | | |

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

| Customer Sample Code | Laboratory Sample Code | Analytical Requirements | | | | | |
|---|---|---|---|---|---|---|---|
| | | VOA GC/MS | BNA GC/MS | VOA GC | PEST PCBs | Metals | Other |
| SSU-8 | 731590 | | X | | | | X |
| SSU-9 | 731591 | | X | | | | X |
| SSU-11 | 732562 | | X | | | | X |
| SSU-11 DUP | 732563 | | X | | | | X |

# CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG #: SSU-10
SUBMISSION R2421593
CLIENT: Bergmann Associates, P.C.
CLIENT REP: Janice Jaeger
PROJECT: RVS - [illegible] E. MAIN STREET

BATCH COMPLETE: __yes__________
DISKETTE REQUESTED: Y___ N__X__
DATE: 06/02/04
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:
DATE DUE: 06/29/04
PROTOCOL: ASP
SHIPPING No.:
SUMMARY PKG: Y__X__ N

| CAS JOB # | CLIENT/EPA ID | MATRIX | REQUESTED PARAMETERS | DATE SAMPLED | DATE RECEIVED | pH (SOLIDS) | % SOLIDS | REMARKS SAMPLE CONDITION |
|---|---|---|---|---|---|---|---|---|
| 731589QC | SSU-10 | SOIL | OLM4.2 SVOA | 6/1/04 | 6/1/04 | | | |

# CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG #: SSU-8
SUBMISSION R2421594
CLIENT: Bergmann Associates, P.C.
CLIENT REP: Janice Jaeger
PROJECT: BVS - 1214 E. MAIN STREET

BATCH COMPLETE: __yes__________
DISKETTE REQUESTED: Y___ N__X__
DATE: 06/25/04
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:
DATE DUE: 07/02/04
PROTOCOL: CLP
SHIPPING No.:
SUMMARY PKG: Y___X__ N

| CAS JOB # | CLIENT/EPA ID | MATRIX | REQUESTED PARAMETERS | DATE SAMPLED | DATE RECEIVED | pH (SOLIDS) | % SOLIDS | REMARKS SAMPLE CONDITION |
|---|---|---|---|---|---|---|---|---|
| 731590 | SSU-8 | SOIL | OLM 4.2 SVOA | 6/1/04 | 6/1/04 | | | |
| 731591 | SSU-9 | SOIL | OLM 4.2 SVOA | 6/1/04 | 6/1/04 | | | |
| 732562 | SSU-11 | SOIL | OLM 4.2 SVOA | 6/4/04 | 6/4/04 | | | |
| 732563 | SSU-11 DUP | SOIL | OLM 4.2 SVOA | 6/4/04 | 6/4/04 | | | |
| | | | | | | | | |
| | | | FORMS ONLY | | | | | |
| | | | NO RAW DATA | | | | | |

# CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG #: MW-5
SUBMISSION R2421774
CLIENT: Bergmann Associates, P.C.
CLIENT REP: Janice Jaeger
PROJECT: CITY OF ROCHESTER - 1200 E.

BATCH COMPLETE: __yes__________
DISKETTE REQUESTED: Y__X_ N____
DATE: 07/09/04
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:
DATE DUE: 07/12/04
PROTOCOL: SW846
SHIPPING No.:
SUMMARY PKG: Y_____ N_X____

| CAS JOB # | CLIENT/EPA ID | MATRIX | REQUESTED PARAMETERS | DATE SAMPLED | DATE RECEIVED | pH (SOLIDS) | % SOLIDS | REMARKS AMPLE CONDITIO |
|---|---|---|---|---|---|---|---|---|
| 735601 | MW-5 | WATER | 8260/8270 | 6/15/04 | 6/15/04 | | | |
| 735602 | MW-6 | WATER | 8260/8270 | 6/15/04 | 6/15/04 | | | |
| 735812 | MW-12 | WATER | 8260/8270 | 6/16/04 | 6/16/04 | | | |
| 735813 | MW-8 | WATER | 8260/8270 | 6/16/04 | 6/16/04 | | | |
| 735814 | MW-10 | WATER | 8260/8270 | 6/16/04 | 6/16/04 | | | |
| 735815 | FIELD BLANK | WATER | 8260/8270 | 6/16/04 | 6/16/04 | | | |
| 735816 | MW-11 | WATER | 8260/8270 | 6/16/04 | 6/16/04 | | | |
| 736165 | MW-2 | WATER | 8260/8270 | 6/17/04 | 6/17/04 | | | |
| 736166 | MW-1 | WATER | 8260/8270 | 6/17/04 | 6/17/04 | | | |
| 736167 | MW-3 | WATER | 8260/8270 | 6/17/04 | 6/17/04 | | | |
| 736480 | MW-9 | WATER | 8260/8270 | 6/18/04 | 6/18/04 | | | |
| 736481 | MW-4 | WATER | 8260/8270 | 6/18/04 | 6/18/04 | | | |
| 736482 | MW-7 | WATER | 8260/8270 | 6/18/04 | 6/18/04 | | | |
| 736483 | TRIP BLANK | WATER | 8260 | 6/18/04 | 6/18/04 | | | |

# CAS ASP/CLP BATCHING FORM / LOGIN SHEET

SDG #: MW-13
SUBMISSION R2421775
CLIENT: Bergmann Associates, P.C.
CLIENT REP: Janice Jaeger
PROJECT: CITY OF ROCHESTER 1200 E.

BATCH COMPLETE: __yes__________
DISKETTE REQUESTED: Y___ N__X__
DATE: 06/16/04
CUSTODY SEAL: PRESENT/ABSENT:
CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:
DATE DUE: 07/13/04
PROTOCOL: ASP/SW846
SHIPPING No.:
SUMMARY PKG: Y___X___ N

| CAS JOB # | CLIENT/EPA ID | MATRIX | REQUESTED PARAMETERS | DATE SAMPLED | DATE RECEIVED | pH (SOLIDS) | % SOLIDS | REMARKS AMPLE CONDITIO |
|---|---|---|---|---|---|---|---|---|
| 735603 | MW-13 | WATER | OLM 4,2 VOA,SVOA | 6/15/04 | 6/15/04 | | | |
| 735604 | MW-13 DUPLICATE | WATER | OLM 4,2 VOA,SVOA | 6/15/04 | 6/15/04 | | | |
| 735605 | MW-14 QC | WATER | OLM 4,2 VOA,SVOA | 6/15/04 | 6/15/04 | | | |
| 735606 | COOLER BLANK | WATER | OLM 4.2 VOA | 6/15/04 | 6/15/04 | | | |
| 735607 | MW-13 STARS | WATER | 8260 | 6/15/04 | 6/15/04 | | | |
| 735608 | MW-14 STARS | WATER | 8260 | 6/15/04 | 6/15/04 | | | |

3

## CASE NARRATIVE

COMPANY: Bergmann Associates
BVS - 1214 E. Main Street
SUBMISSION #: R2421593

Bergmann sample was received at CAS on 06/01/04 in good condition

## SEMIVOLATILE ORGANICS

One soil sample was analyzed for TCL Semivolatiles by CLP method OLM4.2.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits except IS6 for SSU-10MS. IS6 was within limits for SSU-10 and SSU-10MSD.

All surrogate standard recoveries were within limits.

Site specific QC was not requested for this sample, however was performed. All outlying MS/MSD and Blank spike recoveries were have been flagged with an "*". No data was affected. All RPD's were within limits except Pyrene and has been flagged with an "*".

Various compounds for SSU-10 have been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

The Laboratory Blanks associated with these analyses were free of contamination except the 06/09/04 blank contained a low level hit for Bis(2-ethylhexyl)phthalate. All affected data has been flagged with a "B".

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

# CASE NARRATIVE

COMPANY: Bergmann Associates
BVS - 1214 E. Main Street
SUBMISSION #: R2421594

Bergmann samples were received at CAS on 06/01-04/04 in good condition

## SEMIVOLATILE ORGANICS

Four soil samples were analyzed for TCL Semivolatiles by CLP method OLM4.2.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within limits except seven out of eight surrogates were outside limits high for SSU-11 and have been flagged with an "*". The sample was repeated and again the surrogates were outside limits. It appears that the sample may have been double spiked with the surrogate solution. The sample could not be re-extracted within holding time.

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits except 4-Chloro-3-methylphenol, 2,4-Dinitrotoluene, 4-Nitrophenol and Pentachlorophenol were outside limits high and have been flagged with an "*". No data was affected.

The Laboratory Blanks associated with these analyses were free of contamination except the SBLK1 contained a low level hit for Bis(2-ethylhexyl)phthalate. All affected data has been flagged with a "B".

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.________________

# CASE NARRATIVE

COMPANY: Bergmann Associates
City of Rochester - 1200 E. Main Street
SUBMISSION #: R2421774

Bergmann samples were collected on 06/15-18/04 and received at CAS on 06/15-18/04 in good condition.

## VOLATILE ORGANICS

Fourteen water samples were analyzed for the TCL plus STARS list of Volatiles by method 8260B from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All Tuning criteria for BFB were met.

All surrogate standard recoveries were within QC limits.

Site specific QC was not requested for these samples. All Reference spike recoveries were within limits except 1,1,2,2-Tetrachloroethane was outside limits low for the 6/26/04 LCS and has been flagged with an "*". Due to a laboratory error, the samples associated with this LCS were not repeated. The samples possibly biased low for 1,1,2,2-Tetrachloroethane are MW-12, MW-8 and MW-10.

Various compounds for MW-8, MW-1, MW-4 and MW-7 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

The Laboratory blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

## SEMIVOLATILE ORGANICS

Thirteen water samples were analyzed for the STARS list of Semivolatiles by method 8270C from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All Tuning criteria were met for DFTPP.

All surrogate standard recoveries were within limits.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries were within limits. All RPD's were within limits

Various compounds for MW-2, MW-9 and MW-7 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

The Laboratory Blanks associated with these analyses were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature. Michael K. Perry

## CASE NARRATIVE

COMPANY: Bergmann Associates
City of Rochester - 1200 E. Main Street
SUBMISSION #: R2421775

Brown & Caldwell samples were sampled on 06/15/04 and received at CAS on 06/15/04 in good condition

### VOLATILE ORGANICS

Three water samples were analyzed for TCL Volatiles by CLP method OLM 4.2 and two water samples were analyzed for the STARS list of Volatiles by method 8260B from SW-846.

All the initial and continuing calibration criteria were met for all analytes except the minimum response factor for OLM 4.2 was not met for the 10 ppb standard for 1,3-Dichlorobenzene and 1,2,4-Trichlorobenzene. Two exceptions are allowed as per CLP protocol.

All internal standard areas were within QC limits.

All Tuning criteria for BFB were met.

All surrogate standard recoveries were within QC limits.

Site specific QC was performed on MW-14. All MS/MSD and Reference spike recoveries were within limits. All RPD's were within limits.

The Laboratory blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

### SEMIVOLATILE ORGANICS

Three water samples were analyzed for TCL Semivolatiles by CLP method OLM 4.2.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All Tuning criteria were met for DFTPP.

All surrogate standard recoveries were within limits.

Site specific QC was performed on MW-14. All MS/MSD and Blank spike recoveries were within limits except 4-Nitrophenol and Pentachlorophenol were outside limits high and have been flagged with an "*". No data was affected. All RPD's were within limits

The Laboratory Blanks associated with these analyses were free of contamination except SBLK1 contained a low level hit for Di-n-butylphthalate. All affected data has been flagged with a "B".

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature. Michael K. Perry

# APPENDIX 12

## 2000 - 2004 IAQ, Sub-Slab Soil Gas and BVS Effluent Laboratory Analysis And Inspection Forms

# CENTEK LABORATORIES, LLC

143 Midler Park Drive * Syracuse, New York 13206
Phone (315) 431-9730 * Fax (315) 431-9731

## *Chain of Custody*

NELAC No. 11830

Company Name: CITY OF ROCHESTER

Client Contact:

Site Name: 1200 E. MAIN ST

Phone #:

Project #: 4452.03

| | Send Report To: | Send Invoice To: |
|---|---|---|
| Name | JIM MARSCHNER | GARY FLISNIK |
| Company | BERGMANN ASSOCIATES | SAME |
| Address | 200 FIRST FEDERAL PLAZA<br>28 E. MAIN ST<br>ROCHESTER, NY 14614 | |
| Phone | 585.232.5135 | |
| Fax | 585.232.4652 | |
| e-mail | JMARSCHNER@BERGMANNPC.COM | |

**Payment Choice:**

Purchase order #

Authorization:

Credit Card (type)

Card #

Date exp:

**Turnaround Time Requested:**

| | | | | |
|---|---|---|---|---|
| Same Day: | Next Day (24hr) | Normal (5 business days)<br>STD | Other (specify) | |
| **Reporting units: Please circle choice/s** | **ppbV** | **ug/m3** | **mg/m3** | |

| 1214 E. MAIN ST<br>**Sample Identification** | **Date Sampled** | **Canister Number** | **Regulator Number** | **Analysis Requested** | **Comments** |
|---|---|---|---|---|---|
| 1ST FLOOR LIVING AREA | 10/14/04 | 131 | 47 | TO-15 * | |
| BASEMENT | 10/14/04 | 106 | 145 | TO-15 * | |
| BACKGROUND | 10/14/04 | 101 | 60 | TO-15 * | |
| | | | | | |
| | | | | | * SEE LAST SITE ANALYSIS FOR COMPLETE LIST AND REPORTING UNITS. |
| LOCATION: | START! | | END: | | |
| | Hg" | TIME | Hg" | TIME | |
| 1ST FLOOR LIVING AREA | -29.25" | 11:08 | -10.25" | 1508 | |
| BASEMENT | -29.0' | 11:10 | -11.5" | 1510 | |
| BACKGROUND | -28.25" | 11:16 | -12.5" | 1516 | |

Sampled By: (MARSCHNER)

Company: BERGMANN ASSOCIATES

Name of Courier: FED-EX

| | | | |
|---|---|---|---|
| Relinquished by: (sign) | Date 10/14/04 | Time 1610 | Received by: (sign) |
| Relinquished by: (sign) | Date | Time | Received by: (sign) |
| Relinquished by: (sign) | Date | Time | Received for lab by: (sign) |

# Centek Laboratories, LLC

**Date:** *19-Oct-04*

**CLIENT:** Bergman and Associates
**Lab Order:** C0410013
**Project:** 4452.03
**Lab ID:** C0410013-001A

**Client Sample ID:** 1st Floor Living Area
**Tag Number:** 131, 47
**Collection Date:** 10/14/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1,2-Trichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1-Dichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1-Dichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2,4-Trichlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2,4-Trimethylbenzene | 0.46 | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dibromoethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dichloropropane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,3,5-Trimethylbenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,3-butadiene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,3-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,4-Dichlorobenzene | 0.21 | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,4-Dioxane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 2,2,4-trimethylpentane | 0.17 | 0.15 | | ppbV | 1 | 10/16/2004 |
| 4-ethyltoluene | 0.17 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Acetone | 6.7 | 3.0 | | ppbV | 10 | 10/16/2004 |
| Allyl chloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Benzene | 0.62 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Benzyl chloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Bromodichloromethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Bromoform | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Bromomethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Carbon disulfide | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Carbon tetrachloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chloroform | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chloromethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| cis-1,2-Dichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| cis-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Cyclohexane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Dibromochloromethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Ethyl acetate | ND | 0.25 | | ppbV | 1 | 10/16/2004 |
| Ethylbenzene | 0.36 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Freon 11 | 0.19 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Freon 113 | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Freon 114 | ND | 0.15 | | ppbV | 1 | 10/16/2004 |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| JN | Non-routine analyte. Quantitation estimated. |
| E | Value above quantitation range |
| J | Analyte detected below quantitation limits |
| S | Spike Recovery outside accepted recovery limits |

**CLIENT:** Bergman and Associates
**Lab Order:** C0410013
**Project:** 4452.03
**Lab ID:** C0410013-001A

**Client Sample ID:** 1st Floor Living Area
**Tag Number:** 131, 47
**Collection Date:** 10/14/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Heptane | 0.26 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Hexachloro-1,3-butadiene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Hexane | 0.81 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Isopropyl alcohol | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| m-Xylene | 0.79 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Methyl Butyl Ketone | ND | 0.30 | | ppbV | 1 | 10/16/2004 |
| Methyl Ethyl Ketone | ND | 0.30 | | ppbV | 1 | 10/16/2004 |
| Methyl Isobutyl Ketone | ND | 0.30 | | ppbV | 1 | 10/16/2004 |
| Methyl tert-butyl ether | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Methylene chloride | 4.4 | 1.5 | | ppbV | 10 | 10/16/2004 |
| o-Xylene | 0.38 | 0.15 | | ppbV | 1 | 10/16/2004 |
| p-Xylene | 0.39 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Propylene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Styrene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Tetrachloroethylene | 0.19 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Tetrahydrofuran | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Toluene | 2.2 | 0.15 | | ppbV | 1 | 10/16/2004 |
| trans-1,2-Dichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| trans-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Trichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Vinyl acetate | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Vinyl Bromide | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Vinyl chloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Surr: Bromofluorobenzene | 0.98 | 0 | | ppbV | 1 | 10/16/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | S | Spike Recovery outside accepted recovery limits |
| JN | Non-routine analyte. Quantitation estimated. | | |

**CLIENT:** Bergman and Associates
**Lab Order:** C0410013
**Project:** 4452.03
**Lab ID:** C0410013-002A

**Client Sample ID:** Basement
**Tag Number:** 106, 145
**Collection Date:** 10/14/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1,2-Trichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1-Dichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1-Dichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2,4-Trichlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2,4-Trimethylbenzene | 1.2 | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dibromoethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dichloropropane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,3,5-Trimethylbenzene | 0.32 | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,3-butadiene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,3-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,4-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,4-Dioxane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 2,2,4-trimethylpentane | 0.30 | 0.15 | | ppbV | 1 | 10/16/2004 |
| 4-ethyltoluene | 0.41 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Acetone | 12 | 3.0 | | ppbV | 10 | 10/16/2004 |
| Allyl chloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Benzene | 1.2 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Benzyl chloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Bromodichloromethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Bromoform | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Bromomethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Carbon disulfide | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Carbon tetrachloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chloroform | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chloromethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| cis-1,2-Dichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| cis-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Cyclohexane | 0.40 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Dibromochloromethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Ethyl acetate | ND | 0.25 | | ppbV | 1 | 10/16/2004 |
| Ethylbenzene | 0.72 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Freon 11 | 0.34 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Freon 113 | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Freon 114 | ND | 0.15 | | ppbV | 1 | 10/16/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | S | Spike Recovery outside accepted recovery limits |
| JN | Non-routine analyte. Quantitation estimated. | | |

## Centek Laboratories, LLC

**Date:** *19-Oct-04*

**CLIENT:** Bergman and Associates
**Lab Order:** C0410013
**Project:** 4452.03
**Lab ID:** C0410013-002A

**Client Sample ID:** Basement
**Tag Number:** 106, 145
**Collection Date:** 10/14/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | 0.62 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Heptane | 0.63 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Hexachloro-1,3-butadiene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Hexane | 2.1 | 1.5 | | ppbV | 10 | 10/16/2004 |
| Isopropyl alcohol | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| m-Xylene | 1.7 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Methyl Butyl Ketone | ND | 0.30 | | ppbV | 1 | 10/16/2004 |
| Methyl Ethyl Ketone | ND | 0.30 | | ppbV | 1 | 10/16/2004 |
| Methyl Isobutyl Ketone | ND | 0.30 | | ppbV | 1 | 10/16/2004 |
| Methyl tert-butyl ether | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Methylene chloride | 4.8 | 1.5 | | ppbV | 10 | 10/16/2004 |
| o-Xylene | 0.91 | 0.15 | | ppbV | 1 | 10/16/2004 |
| p-Xylene | 0.80 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Propylene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Styrene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Tetrachloroethylene | 0.16 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Tetrahydrofuran | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Toluene | 3.7 | 1.5 | | ppbV | 10 | 10/16/2004 |
| trans-1,2-Dichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| trans-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Trichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Vinyl acetate | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Vinyl Bromide | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Vinyl chloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Surr: Bromofluorobenzene | 1.0 | 0 | | ppbV | 1 | 10/16/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | S | Spike Recovery outside accepted recovery limits |
| JN | Non-routine analyte. Quantitation estimated. | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | Background |
| **Lab Order:** | C0410013 | **Tag Number:** | 101, 60 |
| **Project:** | 4452.03 | **Collection Date:** | 10/14/2004 |
| **Lab ID:** | C0410013-003A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1,2-Trichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1-Dichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,1-Dichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2,4-Trichlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2,4-Trimethylbenzene | 1.2 | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dibromoethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dichloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,2-Dichloropropane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,3,5-Trimethylbenzene | 0.31 | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,3-butadiene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,3-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,4-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 1,4-Dioxane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| 2,2,4-trimethylpentane | 0.28 | 0.15 | | ppbV | 1 | 10/16/2004 |
| 4-ethyltoluene | 0.43 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Acetone | 12 | 3.0 | | ppbV | 10 | 10/16/2004 |
| Allyl chloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Benzene | 1.1 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Benzyl chloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Bromodichloromethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Bromoform | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Bromomethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Carbon disulfide | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Carbon tetrachloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chlorobenzene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chloroethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chloroform | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Chloromethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| cis-1,2-Dichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| cis-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Cyclohexane | 0.35 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Dibromochloromethane | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Ethyl acetate | ND | 0.25 | | ppbV | 1 | 10/16/2004 |
| Ethylbenzene | 0.74 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Freon 11 | 0.33 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Freon 113 | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Freon 114 | ND | 0.15 | | ppbV | 1 | 10/16/2004 |

| **Qualifiers:** | | | | |
|---|---|---|---|---|
| | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike Recovery outside accepted recovery limits |
| | JN | Non-routine analyte. Quantitation estimated. | | |

## Centek Laboratories, LLC

**Date:** *19-Oct-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | Background |
| **Lab Order:** | C0410013 | **Tag Number:** | 101, 60 |
| **Project:** | 4452.03 | **Collection Date:** | 10/14/2004 |
| **Lab ID:** | C0410013-003A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | 0.51 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Heptane | 0.47 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Hexachloro-1,3-butadiene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Hexane | 2.7 | 1.5 | | ppbV | 10 | 10/16/2004 |
| Isopropyl alcohol | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| m-Xylene | 1.8 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Methyl Butyl Ketone | ND | 0.30 | | ppbV | 1 | 10/16/2004 |
| Methyl Ethyl Ketone | ND | 0.30 | | ppbV | 1 | 10/16/2004 |
| Methyl Isobutyl Ketone | ND | 0.30 | | ppbV | 1 | 10/16/2004 |
| Methyl tert-butyl ether | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Methylene chloride | 4.7 | 1.5 | | ppbV | 10 | 10/16/2004 |
| o-Xylene | 0.92 | 0.15 | | ppbV | 1 | 10/16/2004 |
| p-Xylene | 0.70 | 0.15 | | ppbV | 1 | 10/16/2004 |
| Propylene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Styrene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Tetrachloroethylene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Tetrahydrofuran | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Toluene | 5.7 | 1.5 | | ppbV | 10 | 10/16/2004 |
| trans-1,2-Dichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| trans-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Trichloroethene | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Vinyl acetate | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Vinyl Bromide | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Vinyl chloride | ND | 0.15 | | ppbV | 1 | 10/16/2004 |
| Surr: Bromofluorobenzene | 0.99 | 0 | | ppbV | 1 | 10/16/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | S | Spike Recovery outside accepted recovery limits |
| JN | Non-routine analyte. Quantitation estimated. | | |

# Centek Laboratories, LLC

**Date:** *19-Oct-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | 1st Floor Living Area |
| **Lab Order:** | C0410013 | **Tag Number:** | 131, 47 |
| **Project:** | 4452.03 | **Collection Date:** | 10/14/2004 |
| **Lab ID:** | C0410013-001A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 10/16/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | | ug/m3 | 1 | 10/16/2004 |
| 1,1,2-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 10/16/2004 |
| 1,1-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 10/16/2004 |
| 1,1-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 10/16/2004 |
| 1,2,4-Trichlorobenzene | ND | 1.1 | | ug/m3 | 1 | 10/16/2004 |
| 1,2,4-Trimethylbenzene | 2.3 | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dibromoethane | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dichloropropane | ND | 0.70 | | ug/m3 | 1 | 10/16/2004 |
| 1,3,5-Trimethylbenzene | ND | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| 1,3-butadiene | ND | 0.34 | | ug/m3 | 1 | 10/16/2004 |
| 1,3-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| 1,4-Dichlorobenzene | 1.3 | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| 1,4-Dioxane | ND | 0.55 | | ug/m3 | 1 | 10/16/2004 |
| 2,2,4-trimethylpentane | 0.81 | 0.71 | | ug/m3 | 1 | 10/16/2004 |
| 4-ethyltoluene | 0.85 | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| Acetone | 16 | 7.2 | | ug/m3 | 10 | 10/16/2004 |
| Allyl chloride | ND | 0.48 | | ug/m3 | 1 | 10/16/2004 |
| Benzene | 2.0 | 0.49 | | ug/m3 | 1 | 10/16/2004 |
| Benzyl chloride | ND | 0.88 | | ug/m3 | 1 | 10/16/2004 |
| Bromodichloromethane | ND | 1.0 | | ug/m3 | 1 | 10/16/2004 |
| Bromoform | ND | 1.6 | | ug/m3 | 1 | 10/16/2004 |
| Bromomethane | ND | 0.59 | | ug/m3 | 1 | 10/16/2004 |
| Carbon disulfide | ND | 0.47 | | ug/m3 | 1 | 10/16/2004 |
| Carbon tetrachloride | ND | 0.96 | | ug/m3 | 1 | 10/16/2004 |
| Chlorobenzene | ND | 0.70 | | ug/m3 | 1 | 10/16/2004 |
| Chloroethane | ND | 0.40 | | ug/m3 | 1 | 10/16/2004 |
| Chloroform | ND | 0.74 | | ug/m3 | 1 | 10/16/2004 |
| Chloromethane | ND | 0.31 | | ug/m3 | 1 | 10/16/2004 |
| cis-1,2-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 10/16/2004 |
| cis-1,3-Dichloropropene | ND | 0.69 | | ug/m3 | 1 | 10/16/2004 |
| Cyclohexane | ND | 0.52 | | ug/m3 | 1 | 10/16/2004 |
| Dibromochloromethane | ND | 1.3 | | ug/m3 | 1 | 10/16/2004 |
| Ethyl acetate | ND | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| Ethylbenzene | 1.6 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| Freon 11 | 1.1 | 0.86 | | ug/m3 | 1 | 10/16/2004 |
| Freon 113 | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| Freon 114 | ND | 1.1 | | ug/m3 | 1 | 10/16/2004 |

| **Qualifiers:** | | | | |
|---|---|---|---|---|
| | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike Recovery outside accepted recovery limits |
| | JN | Non-routine analyte. Quantitation estimated. | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | 1st Floor Living Area |
| **Lab Order:** | C0410013 | **Tag Number:** | 131, 47 |
| **Project:** | 4452.03 | **Collection Date:** | 10/14/2004 |
| **Lab ID:** | C0410013-001A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | ND | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| Heptane | 1.1 | 0.62 | | ug/m3 | 1 | 10/16/2004 |
| Hexachloro-1,3-butadiene | ND | 1.6 | | ug/m3 | 1 | 10/16/2004 |
| Hexane | 2.9 | 0.54 | | ug/m3 | 1 | 10/16/2004 |
| Isopropyl alcohol | ND | 0.37 | | ug/m3 | 1 | 10/16/2004 |
| m-Xylene | 3.5 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| Methyl Butyl Ketone | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| Methyl Ethyl Ketone | ND | 0.90 | | ug/m3 | 1 | 10/16/2004 |
| Methyl Isobutyl Ketone | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| Methyl tert-butyl ether | ND | 0.55 | | ug/m3 | 1 | 10/16/2004 |
| Methylene chloride | 16 | 5.3 | | ug/m3 | 10 | 10/16/2004 |
| o-Xylene | 1.7 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| p-Xylene | 1.7 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| Propylene | ND | 0.26 | | ug/m3 | 1 | 10/16/2004 |
| Styrene | ND | 0.65 | | ug/m3 | 1 | 10/16/2004 |
| Tetrachloroethylene | 1.3 | 1.0 | | ug/m3 | 1 | 10/16/2004 |
| Tetrahydrofuran | ND | 0.45 | | ug/m3 | 1 | 10/16/2004 |
| Toluene | 8.3 | 0.57 | | ug/m3 | 1 | 10/16/2004 |
| trans-1,2-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 10/16/2004 |
| trans-1,3-Dichloropropene | ND | 0.69 | | ug/m3 | 1 | 10/16/2004 |
| Trichloroethene | ND | 0.82 | | ug/m3 | 1 | 10/16/2004 |
| Vinyl acetate | ND | 0.54 | | ug/m3 | 1 | 10/16/2004 |
| Vinyl Bromide | ND | 0.67 | | ug/m3 | 1 | 10/16/2004 |
| Vinyl chloride | ND | 0.39 | | ug/m3 | 1 | 10/16/2004 |

| | | | | |
|---|---|---|---|---|
| **Qualifiers:** | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike Recovery outside accepted recovery limits |
| | JN | Non-routine analyte. Quantitation estimated. | | |

# Centek Laboratories, LLC

**Date:** *19-Oct-04*

**CLIENT:** Bergman and Associates
**Lab Order:** C0410013
**Project:** 4452.03
**Lab ID:** C0410013-002A

**Client Sample ID:** Basement
**Tag Number:** 106, 145
**Collection Date:** 10/14/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 10/16/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | | ug/m3 | 1 | 10/16/2004 |
| 1,1,2-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 10/16/2004 |
| 1,1-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 10/16/2004 |
| 1,1-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 10/16/2004 |
| 1,2,4-Trichlorobenzene | ND | 1.1 | | ug/m3 | 1 | 10/16/2004 |
| 1,2,4-Trimethylbenzene | 6.0 | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dibromoethane | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dichloropropane | ND | 0.70 | | ug/m3 | 1 | 10/16/2004 |
| 1,3,5-Trimethylbenzene | 1.6 | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| 1,3-butadiene | ND | 0.34 | | ug/m3 | 1 | 10/16/2004 |
| 1,3-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| 1,4-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| 1,4-Dioxane | ND | 0.55 | | ug/m3 | 1 | 10/16/2004 |
| 2,2,4-trimethylpentane | 1.4 | 0.71 | | ug/m3 | 1 | 10/16/2004 |
| 4-ethyltoluene | 2.0 | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| Acetone | 29 | 7.2 | | ug/m3 | 10 | 10/16/2004 |
| Allyl chloride | ND | 0.48 | | ug/m3 | 1 | 10/16/2004 |
| Benzene | 4.0 | 0.49 | | ug/m3 | 1 | 10/16/2004 |
| Benzyl chloride | ND | 0.88 | | ug/m3 | 1 | 10/16/2004 |
| Bromodichloromethane | ND | 1.0 | | ug/m3 | 1 | 10/16/2004 |
| Bromoform | ND | 1.6 | | ug/m3 | 1 | 10/16/2004 |
| Bromomethane | ND | 0.59 | | ug/m3 | 1 | 10/16/2004 |
| Carbon disulfide | ND | 0.47 | | ug/m3 | 1 | 10/16/2004 |
| Carbon tetrachloride | ND | 0.96 | | ug/m3 | 1 | 10/16/2004 |
| Chlorobenzene | ND | 0.70 | | ug/m3 | 1 | 10/16/2004 |
| Chloroethane | ND | 0.40 | | ug/m3 | 1 | 10/16/2004 |
| Chloroform | ND | 0.74 | | ug/m3 | 1 | 10/16/2004 |
| Chloromethane | ND | 0.31 | | ug/m3 | 1 | 10/16/2004 |
| cis-1,2-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 10/16/2004 |
| cis-1,3-Dichloropropene | ND | 0.69 | | ug/m3 | 1 | 10/16/2004 |
| Cyclohexane | 1.4 | 0.52 | | ug/m3 | 1 | 10/16/2004 |
| Dibromochloromethane | ND | 1.3 | | ug/m3 | 1 | 10/16/2004 |
| Ethyl acetate | ND | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| Ethylbenzene | 3.2 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| Freon 11 | 1.9 | 0.86 | | ug/m3 | 1 | 10/16/2004 |
| Freon 113 | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| Freon 114 | ND | 1.1 | | ug/m3 | 1 | 10/16/2004 |

| | | | | |
|---|---|---|---|---|
| **Qualifiers:** | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike Recovery outside accepted recovery limits |
| | JN | Non-routine analyte. Quantitation estimated. | | |

**CLIENT:** Bergman and Associates
**Lab Order:** C0410013
**Project:** 4452.03
**Lab ID:** C0410013-002A

**Client Sample ID:** Basement
**Tag Number:** 106, 145
**Collection Date:** 10/14/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | 3.1 | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| Heptane | 2.6 | 0.62 | | ug/m3 | 1 | 10/16/2004 |
| Hexachloro-1,3-butadiene | ND | 1.6 | | ug/m3 | 1 | 10/16/2004 |
| Hexane | 7.5 | 5.4 | | ug/m3 | 10 | 10/16/2004 |
| Isopropyl alcohol | ND | 0.37 | | ug/m3 | 1 | 10/16/2004 |
| m-Xylene | 7.3 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| Methyl Butyl Ketone | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| Methyl Ethyl Ketone | ND | 0.90 | | ug/m3 | 1 | 10/16/2004 |
| Methyl Isobutyl Ketone | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| Methyl tert-butyl ether | ND | 0.55 | | ug/m3 | 1 | 10/16/2004 |
| Methylene chloride | 17 | 5.3 | | ug/m3 | 10 | 10/16/2004 |
| o-Xylene | 4.0 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| p-Xylene | 3.5 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| Propylene | ND | 0.26 | | ug/m3 | 1 | 10/16/2004 |
| Styrene | ND | 0.65 | | ug/m3 | 1 | 10/16/2004 |
| Tetrachloroethylene | 1.1 | 1.0 | | ug/m3 | 1 | 10/16/2004 |
| Tetrahydrofuran | ND | 0.45 | | ug/m3 | 1 | 10/16/2004 |
| Toluene | 14 | 5.7 | | ug/m3 | 10 | 10/16/2004 |
| trans-1,2-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 10/16/2004 |
| trans-1,3-Dichloropropene | ND | 0.69 | | ug/m3 | 1 | 10/16/2004 |
| Trichloroethene | ND | 0.82 | | ug/m3 | 1 | 10/16/2004 |
| Vinyl acetate | ND | 0.54 | | ug/m3 | 1 | 10/16/2004 |
| Vinyl Bromide | ND | 0.67 | | ug/m3 | 1 | 10/16/2004 |
| Vinyl chloride | ND | 0.39 | | ug/m3 | 1 | 10/16/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | S | Spike Recovery outside accepted recovery limits |
| JN | Non-routine analyte. Quantitation estimated. | | |

## Centek Laboratories, LLC

**Date:** *19-Oct-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | Background |
| **Lab Order:** | C0410013 | **Tag Number:** | 101, 60 |
| **Project:** | 4452.03 | **Collection Date:** | 10/14/2004 |
| **Lab ID:** | C0410013-003A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 10/16/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | | ug/m3 | 1 | 10/16/2004 |
| 1,1,2-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 10/16/2004 |
| 1,1-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 10/16/2004 |
| 1,1-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 10/16/2004 |
| 1,2,4-Trichlorobenzene | ND | 1.1 | | ug/m3 | 1 | 10/16/2004 |
| 1,2,4-Trimethylbenzene | 5.7 | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dibromoethane | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 10/16/2004 |
| 1,2-Dichloropropane | ND | 0.70 | | ug/m3 | 1 | 10/16/2004 |
| 1,3,5-Trimethylbenzene | 1.5 | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| 1,3-butadiene | ND | 0.34 | | ug/m3 | 1 | 10/16/2004 |
| 1,3-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| 1,4-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| 1,4-Dioxane | ND | 0.55 | | ug/m3 | 1 | 10/16/2004 |
| 2,2,4-trimethylpentane | 1.3 | 0.71 | | ug/m3 | 1 | 10/16/2004 |
| 4-ethyltoluene | 2.1 | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| Acetone | 28 | 7.2 | | ug/m3 | 10 | 10/16/2004 |
| Allyl chloride | ND | 0.48 | | ug/m3 | 1 | 10/16/2004 |
| Benzene | 3.5 | 0.49 | | ug/m3 | 1 | 10/16/2004 |
| Benzyl chloride | ND | 0.88 | | ug/m3 | 1 | 10/16/2004 |
| Bromodichloromethane | ND | 1.0 | | ug/m3 | 1 | 10/16/2004 |
| Bromoform | ND | 1.6 | | ug/m3 | 1 | 10/16/2004 |
| Bromomethane | ND | 0.59 | | ug/m3 | 1 | 10/16/2004 |
| Carbon disulfide | ND | 0.47 | | ug/m3 | 1 | 10/16/2004 |
| Carbon tetrachloride | ND | 0.96 | | ug/m3 | 1 | 10/16/2004 |
| Chlorobenzene | ND | 0.70 | | ug/m3 | 1 | 10/16/2004 |
| Chloroethane | ND | 0.40 | | ug/m3 | 1 | 10/16/2004 |
| Chloroform | ND | 0.74 | | ug/m3 | 1 | 10/16/2004 |
| Chloromethane | ND | 0.31 | | ug/m3 | 1 | 10/16/2004 |
| cis-1,2-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 10/16/2004 |
| cis-1,3-Dichloropropene | ND | 0.69 | | ug/m3 | 1 | 10/16/2004 |
| Cyclohexane | 1.2 | 0.52 | | ug/m3 | 1 | 10/16/2004 |
| Dibromochloromethane | ND | 1.3 | | ug/m3 | 1 | 10/16/2004 |
| Ethyl acetate | ND | 0.92 | | ug/m3 | 1 | 10/16/2004 |
| Ethylbenzene | 3.3 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| Freon 11 | 1.9 | 0.86 | | ug/m3 | 1 | 10/16/2004 |
| Freon 113 | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| Freon 114 | ND | 1.1 | | ug/m3 | 1 | 10/16/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | S | Spike Recovery outside accepted recovery limits |
| JN | Non-routine analyte. Quantitation estimated. | | |

# Centek Laboratories, LLC

**Date:** *19-Oct-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | Background |
| **Lab Order:** | C0410013 | **Tag Number:** | 101, 60 |
| **Project:** | 4452.03 | **Collection Date:** | 10/14/2004 |
| **Lab ID:** | C0410013-003A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | 2.6 | 0.75 | | ug/m3 | 1 | 10/16/2004 |
| Heptane | 2.0 | 0.62 | | ug/m3 | 1 | 10/16/2004 |
| Hexachloro-1,3-butadiene | ND | 1.6 | | ug/m3 | 1 | 10/16/2004 |
| Hexane | 9.7 | 5.4 | | ug/m3 | 10 | 10/16/2004 |
| Isopropyl alcohol | ND | 0.37 | | ug/m3 | 1 | 10/16/2004 |
| m-Xylene | 8.0 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| Methyl Butyl Ketone | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| Methyl Ethyl Ketone | ND | 0.90 | | ug/m3 | 1 | 10/16/2004 |
| Methyl Isobutyl Ketone | ND | 1.2 | | ug/m3 | 1 | 10/16/2004 |
| Methyl tert-butyl ether | ND | 0.55 | | ug/m3 | 1 | 10/16/2004 |
| Methylene chloride | 17 | 5.3 | | ug/m3 | 10 | 10/16/2004 |
| o-Xylene | 4.1 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| p-Xylene | 3.1 | 0.66 | | ug/m3 | 1 | 10/16/2004 |
| Propylene | ND | 0.26 | | ug/m3 | 1 | 10/16/2004 |
| Styrene | ND | 0.65 | | ug/m3 | 1 | 10/16/2004 |
| Tetrachloroethylene | ND | 1.0 | | ug/m3 | 1 | 10/16/2004 |
| Tetrahydrofuran | ND | 0.45 | | ug/m3 | 1 | 10/16/2004 |
| Toluene | 22 | 5.7 | | ug/m3 | 10 | 10/16/2004 |
| trans-1,2-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 10/16/2004 |
| trans-1,3-Dichloropropene | ND | 0.69 | | ug/m3 | 1 | 10/16/2004 |
| Trichloroethene | ND | 0.82 | | ug/m3 | 1 | 10/16/2004 |
| Vinyl acetate | ND | 0.54 | | ug/m3 | 1 | 10/16/2004 |
| Vinyl Bromide | ND | 0.67 | | ug/m3 | 1 | 10/16/2004 |
| Vinyl chloride | ND | 0.39 | | ug/m3 | 1 | 10/16/2004 |

| **Qualifiers:** | | | | |
|---|---|---|---|---|
| | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | S | Spike Recovery outside accepted recovery limits |
| | JN | Non-routine analyte. Quantitation estimated. | | |

**CENTEK LABORATORIES, LLC**

143 Midler Park Drive * Syracuse, NY 13206

Phone (315) 431-9730 * Fax (315) 431-9731 * Emergency 24/7 (315) 416-2751

NELAC Certifacate No. 11830

www.CentekLabs.com

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Tuesday, September 14, 2004

Mr. Gary Flisnik
Bergman and Associates
28 E. Main Street
Suite 200
Rochester, NY 14614

TEL: (585) 232-5135
FAX (585) 232-4652

RE: 4452.03

Dear Mr. Gary Flisnik:

Order No.: C0409005

Centek Laboratories, LLC received 1 sample(s) on 9/9/2004 for the analyses presented in the following report.

Centek Laboratories analyzes the samples as received from the client. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service.

Please contact your client service representative, Michael Palmer at (315) 431-9730, if you would like any additional information regarding this report.

Thank you for using Centek Laboratories. This report can not be reproduced except in its entirety, without prior written authorization.

Sincerely,

M. Palmer

Michael Palmer

4452 .02
Corn/GAF

Copies to

RECEIVED
SEP 20 2004
BERGMANN ASSOCIATES

**Centek Laboratories, LLC** **Date:** *14-Sep-04*

**CLIENT:** Bergman and Associates
**Project:** 4452.03
**Lab Order:** C0409005

# CASE NARRATIVE

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

## CENTEK LABORATORIES, LLC

143 Midler Park Drive * Syracuse, New York 13206
Phone (315) 431-9730 * Fax (315) 431-9731

## *Chain of Custody*

NELAC No. 11830

| | |
|---|---|
| Company Name: BERGMANN ASSOCIATES | Site Name 1214 E. MAIN ST |
| Client Contact: GARY FLISNIK | Phone # / Project #: 4452.03 |

| | Send Report To: | Send Invoice To: |
|---|---|---|
| Name | BERGMANN ASSOCIATES | SAME |
| Company | | |
| Address | 200 FIRST FEDERAL PLAZA<br>28 E. MAIN ST ROCH 14614 | |
| Phone | 585 232-5135 | |
| Fax | 585 232-4652 | |
| e-mail | JMARSCHNER@BERGMANNPC.COM | |

**Payment Choice:**

| | | |
|---|---|---|
| Purchase order # | Credit Card (type) | |
| Authorization: | Card # | Date exp: |

**Turnaround Time Requested:**

| | | | | |
|---|---|---|---|---|
| Same Day: | Next Day (24hr) | Normal (5 business days) ✓ | | Other (specify) |
| **Reporting units: Please circle choice/s** | **ppbV** | **ug/m3** | **mg/m3** | |

| Sample Identification | Date Sampled | Canister Number | Regulator Number | Analysis Requested | Comments |
|---|---|---|---|---|---|
| BNS EFFLUENT | 9/8/04 | 88 | 109 | TO-15 | SEE LAST ANALYSIS |
| | | | | | FOR COMPLETE LIST |
| | | | | | AND REPORTING |
| | | | | | UNITS. |
| | | | | | |
| | | | | | |
| | | | | | |
| NOTES: | | | | | |
| | START | | | | |
| "Hg | TIME | END | | | |
| START ~29.25 | 0800 | 1150 @ 4.5"Hg | | #109 REGULATOR | |
| | 3HRS | 50MIN | | #88 SUMMA CAN | |
| | | | | | |

| | |
|---|---|
| Sampled By: MARSCHNER | Name of Courier |
| Company: BERGMANN ASSOC | FED-EX 845874943432 |

| | | | |
|---|---|---|---|
| Relinquished by: (sign) | Date 9/8/04 | Time 1700 | Received by: (sign) |
| Relinquished by: (sign) | Date | Time | Received by: (sign) |
| Relinquished by: (sign) | Date | Time | Received for lab by: (sign) 9/9/04 9:48am |

## Centek Laboratories, LLC

**Date:** *14-Sep-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | BVS Effluent |
| **Lab Order:** | C0409005 | **Tag Number:** | 88 |
| **Project:** | 4452.03 | **Collection Date:** | 9/8/2004 |
| **Lab ID:** | C0409005-001A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,1,2-Trichloroethane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,1-Dichloroethane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,1-Dichloroethene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,2,4-Trichlorobenzene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,2,4-Trimethylbenzene | 1.2 | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,2-Dibromoethane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,2-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,2-Dichloroethane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,2-Dichloropropane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,3,5-Trimethylbenzene | 1.1 | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,3-butadiene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,3-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,4-Dichlorobenzene | 1.7 | 0.15 | | ppbV | 1 | 9/12/2004 |
| 1,4-Dioxane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 2,2,4-trimethylpentane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| 4-ethyltoluene | 0.43 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Acetone | 22 | 6.0 | | ppbV | 20 | 9/13/2004 |
| Allyl chloride | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Benzene | 0.25 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Benzyl chloride | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Bromodichloromethane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Bromoform | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Bromomethane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Carbon disulfide | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Carbon tetrachloride | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Chlorobenzene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Chloroethane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Chloroform | 0.82 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Chloromethane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| cis-1,2-Dichloroethene | 1.3 | 0.15 | | ppbV | 1 | 9/12/2004 |
| cis-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Cyclohexane | 0.23 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Dibromochloromethane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Ethyl acetate | ND | 0.25 | | ppbV | 1 | 9/12/2004 |
| Ethylbenzene | 0.25 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Freon 11 | 0.33 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Freon 113 | 0.64 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Freon 114 | ND | 0.15 | | ppbV | 1 | 9/12/2004 |

| | | | | |
|---|---|---|---|---|
| **Qualifiers:** | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| | S | Spike Recovery outside accepted recovery limits | | |

# Centek Laboratories, LLC

**Date:** *14-Sep-04*

**CLIENT:** Bergman and Associates
**Lab Order:** C0409005
**Project:** 4452.03
**Lab ID:** C0409005-001A

**Client Sample ID:** BVS Effluent
**Tag Number:** 88
**Collection Date:** 9/8/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | 0.64 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Heptane | 1.7 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Hexachloro-1,3-butadiene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Hexane | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Isopropyl alcohol | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| m-Xylene | 0.98 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Methyl Butyl Ketone | ND | 0.30 | | ppbV | 1 | 9/12/2004 |
| Methyl Ethyl Ketone | ND | 0.30 | | ppbV | 1 | 9/12/2004 |
| Methyl Isobutyl Ketone | ND | 0.30 | | ppbV | 1 | 9/12/2004 |
| Methyl tert-butyl ether | 0.53 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Methylene chloride | 1.8 | 0.15 | | ppbV | 1 | 9/12/2004 |
| o-Xylene | 0.97 | 0.15 | | ppbV | 1 | 9/12/2004 |
| p-Xylene | 0.37 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Propylene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Styrene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Tetrachloroethylene | 0.35 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Tetrahydrofuran | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Toluene | 1.8 | 0.15 | | ppbV | 1 | 9/12/2004 |
| trans-1,2-Dichloroethene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| trans-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Trichloroethene | 0.73 | 0.15 | | ppbV | 1 | 9/12/2004 |
| Vinyl acetate | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Vinyl Bromide | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Vinyl chloride | ND | 0.15 | | ppbV | 1 | 9/12/2004 |
| Surr: Bromofluorobenzene | 117 | 70-130 | | %REC | 1 | 9/12/2004 |

| **Qualifiers:** | | | | |
|---|---|---|---|---|
| | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| | S | Spike Recovery outside accepted recovery limits | | |

# Centek Laboratories, LLC

**Date:** *14-Sep-04*

**CLIENT:** Bergman and Associates
**Lab Order:** C0409005
**Project:** 4452.03
**Lab ID:** C0409005-001A

**Client Sample ID:** BVS Effluent
**Tag Number:** 88
**Collection Date:** 9/8/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 9/12/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | | ug/m3 | 1 | 9/12/2004 |
| 1,1,2-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 9/12/2004 |
| 1,1-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 9/12/2004 |
| 1,1-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 9/12/2004 |
| 1,2,4-Trichlorobenzene | ND | 1.1 | | ug/m3 | 1 | 9/12/2004 |
| 1,2,4-Trimethylbenzene | 6.2 | 0.75 | | ug/m3 | 1 | 9/12/2004 |
| 1,2-Dibromoethane | ND | 1.2 | | ug/m3 | 1 | 9/12/2004 |
| 1,2-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 9/12/2004 |
| 1,2-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 9/12/2004 |
| 1,2-Dichloropropane | ND | 0.70 | | ug/m3 | 1 | 9/12/2004 |
| 1,3,5-Trimethylbenzene | 5.6 | 0.75 | | ug/m3 | 1 | 9/12/2004 |
| 1,3-butadiene | ND | 0.34 | | ug/m3 | 1 | 9/12/2004 |
| 1,3-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 9/12/2004 |
| 1,4-Dichlorobenzene | 11 | 0.92 | | ug/m3 | 1 | 9/12/2004 |
| 1,4-Dioxane | ND | 0.55 | | ug/m3 | 1 | 9/12/2004 |
| 2,2,4-trimethylpentane | ND | 0.71 | | ug/m3 | 1 | 9/12/2004 |
| 4-ethyltoluene | 2.1 | 0.75 | | ug/m3 | 1 | 9/12/2004 |
| Acetone | 54 | 14 | | ug/m3 | 20 | 9/13/2004 |
| Allyl chloride | ND | 0.48 | | ug/m3 | 1 | 9/12/2004 |
| Benzene | 0.81 | 0.49 | | ug/m3 | 1 | 9/12/2004 |
| Benzyl chloride | ND | 0.88 | | ug/m3 | 1 | 9/12/2004 |
| Bromodichloromethane | ND | 1.0 | | ug/m3 | 1 | 9/12/2004 |
| Bromoform | ND | 1.6 | | ug/m3 | 1 | 9/12/2004 |
| Bromomethane | ND | 0.59 | | ug/m3 | 1 | 9/12/2004 |
| Carbon disulfide | ND | 0.47 | | ug/m3 | 1 | 9/12/2004 |
| Carbon tetrachloride | ND | 0.96 | | ug/m3 | 1 | 9/12/2004 |
| Chlorobenzene | ND | 0.70 | | ug/m3 | 1 | 9/12/2004 |
| Chloroethane | ND | 0.40 | | ug/m3 | 1 | 9/12/2004 |
| Chloroform | 4.1 | 0.74 | | ug/m3 | 1 | 9/12/2004 |
| Chloromethane | ND | 0.31 | | ug/m3 | 1 | 9/12/2004 |
| cis-1,2-Dichloroethene | 5.2 | 0.60 | | ug/m3 | 1 | 9/12/2004 |
| cis-1,3-Dichloropropene | ND | 0.69 | | ug/m3 | 1 | 9/12/2004 |
| Cyclohexane | 0.80 | 0.52 | | ug/m3 | 1 | 9/12/2004 |
| Dibromochloromethane | ND | 1.3 | | ug/m3 | 1 | 9/12/2004 |
| Ethyl acetate | ND | 0.92 | | ug/m3 | 1 | 9/12/2004 |
| Ethylbenzene | 1.1 | 0.66 | | ug/m3 | 1 | 9/12/2004 |
| Freon 11 | 1.9 | 0.86 | | ug/m3 | 1 | 9/12/2004 |
| Freon 113 | 5.0 | 1.2 | | ug/m3 | 1 | 9/12/2004 |
| Freon 114 | ND | 1.1 | | ug/m3 | 1 | 9/12/2004 |

| | | | | |
|---|---|---|---|---|
| **Qualifiers:** | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| | S | Spike Recovery outside accepted recovery limits | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | BVS Effluent |
| **Lab Order:** | C0409005 | **Tag Number:** | 88 |
| **Project:** | 4452.03 | **Collection Date:** | 9/8/2004 |
| **Lab ID:** | C0409005-001A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | 3.2 | 0.75 | | ug/m3 | 1 | 9/12/2004 |
| Heptane | 7.0 | 0.62 | | ug/m3 | 1 | 9/12/2004 |
| Hexachloro-1,3-butadiene | ND | 1.6 | | ug/m3 | 1 | 9/12/2004 |
| Hexane | ND | 0.54 | | ug/m3 | 1 | 9/12/2004 |
| Isopropyl alcohol | ND | 0.37 | | ug/m3 | 1 | 9/12/2004 |
| m-Xylene | 4.3 | 0.66 | | ug/m3 | 1 | 9/12/2004 |
| Methyl Butyl Ketone | ND | 1.2 | | ug/m3 | 1 | 9/12/2004 |
| Methyl Ethyl Ketone | ND | 0.90 | | ug/m3 | 1 | 9/12/2004 |
| Methyl Isobutyl Ketone | ND | 1.2 | | ug/m3 | 1 | 9/12/2004 |
| Methyl tert-butyl ether | 1.9 | 0.55 | | ug/m3 | 1 | 9/12/2004 |
| Methylene chloride | 6.3 | 0.53 | | ug/m3 | 1 | 9/12/2004 |
| o-Xylene | 4.3 | 0.66 | | ug/m3 | 1 | 9/12/2004 |
| p-Xylene | 1.6 | 0.66 | | ug/m3 | 1 | 9/12/2004 |
| Propylene | ND | 0.26 | | ug/m3 | 1 | 9/12/2004 |
| Styrene | ND | 0.65 | | ug/m3 | 1 | 9/12/2004 |
| Tetrachloroethylene | 2.4 | 1.0 | | ug/m3 | 1 | 9/12/2004 |
| Tetrahydrofuran | ND | 0.45 | | ug/m3 | 1 | 9/12/2004 |
| Toluene | 6.8 | 0.57 | | ug/m3 | 1 | 9/12/2004 |
| trans-1,2-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 9/12/2004 |
| trans-1,3-Dichloropropene | ND | 0.69 | | ug/m3 | 1 | 9/12/2004 |
| Trichloroethene | 4.0 | 0.82 | | ug/m3 | 1 | 9/12/2004 |
| Vinyl acetate | ND | 0.54 | | ug/m3 | 1 | 9/12/2004 |
| Vinyl Bromide | ND | 0.67 | | ug/m3 | 1 | 9/12/2004 |
| Vinyl chloride | ND | 0.39 | | ug/m3 | 1 | 9/12/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

**CENTEK LABORATORIES, LLC**

143 Midler Park Drive * Syracuse, NY 13206

Phone (315) 431-9730 * Fax (315) 431-9731 * Emergency 24/7 (315) 416-2751

NELAC Certifacate No. 11830

www.CentekLabs.com

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Tuesday, August 17, 2004

Mr. Gary Flisnik
Bergman and Associates
28 E. Main Street
Suite 200
Rochester, NY 14614

TEL: (585) 232-5135
FAX (585) 232-4652

RE:

Dear Mr. Gary Flisnik: Order No.: C0408003

Centek Laboratories, LLC received 2 sample(s) on 8/10/2004 for the analyses presented in the following report.

Centek Laboratories analyzes the samples as received from the client. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service.

Please contact your client service representative, Michael Palmer at (315) 431-9730, if you would like any additional information regarding this report.

Thank you for using Centek Laboratories. This report can not be reproduced except in its entirety, without prior written authorization.

Sincerely,

M. Palmer

Michael Palmer

AUG 2 0
BERGMANN ASSOCIATES

Ol. No. 4453
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opies to

**Centek Laboratories, LLC** **Date:** *17-Aug-04*

**CLIENT:** Bergman and Associates
**Project:**
**Lab Order:** C0408003

# CASE NARRATIVE

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

**CENTEK LABORATORIES, LLC**

143 Midler Park Drive * Syracuse, New York 13206
Phone (315) 431-9730 * Fax (315) 431-9731

## Chain of Custody

NELAC No. 11830

| | | | |
|---|---|---|---|
| Company Name: CITY OF ROCHESTER | | Site Name 1200 E. MAIN ST | |
| Client Contact: | | Phone # | Project #: |

| | Send Report To: | Send Invoice To: |
|---|---|---|
| Name | GARY FUSNIK | SAME |
| Company | BERGMANN ASSOCIATES | |
| Address | 28 E. MAIN ST<br>ROCHESTER, NY 14614 | |
| Phone | 585-232-5135 | |
| Fax | 585-232-4652 | |
| e-mail | | |

**Payment Choice:**

| | | |
|---|---|---|
| Purchase order # | Credit Card (type) | |
| Authorization: | Card # | Date exp: |

**Turnaround Time Requested:**

| | | | | |
|---|---|---|---|---|
| Same Day: | Next Day (24hr) | [✓ Normal (5 business days)] | Other (specify) | |
| **Reporting units: Please circle choice/s** | [✓ **ppbV**] | **ug/m3** | **mg/m3** | |

| Sample Identification | Date Sampled | Canister Number | Regulator Number | Analysis Requested | Comments |
|---|---|---|---|---|---|
| BUS SAMPLE EFFLUENT | 8/9/04 | 100 | 79 | TO-15 + MTBE | |
| BASEMENT AMBIENT | 8/9/04 | 101 | 109 | TO-15 + MTBE | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| NOTES! | STARTING VAC. | ENDING VAC. | START TIME | END TIME | |
| BUS EFF | >-30" | -13" | 11:00 | 1500 | |
| BASEMENT AMB. | -29.5" | -9.5" | 1050 | 1450 | |
| | | | | | |

| | | | |
|---|---|---|---|
| Sampled By: MARSCHNER | | Name of Courier FED-EX | |
| Company: BERGMANN ASSOC | | # 8467 3558 6901 | |
| Relinquished by: (sign) | Date 8/9/04 | Time 1730 | Received by: (sign) FED EX |
| Relinquished by: (sign) | Date | Time | Received by: (sign) 8/10/04 |
| Relinquished by: (sign) | Date | Time | Received for lab by: (sign) |

# Centek Laboratories, LLC

**Date:** *17-Aug-04*

**CLIENT:** Bergman and Associates
**Lab Order:** C0408003
**Project:**
**Lab ID:** C0408003-001A

**Client Sample ID:** BVS Sample Efflunet
**Tag Number:** 100
**Collection Date:** 8/9/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | TO-15 | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,1,2-Trichloroethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,1-Dichloroethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,1-Dichloroethene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2,4-Trichlorobenzene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2,4-Trimethylbenzene | 0.93 | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2-Dibromoethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2-Dichloroethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2-Dichloropropane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,3,5-Trimethylbenzene | 0.49 | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,3-butadiene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,3-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,4-Dichlorobenzene | 0.26 | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,4-Dioxane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 2,2,4-trimethylpentane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 4-ethyltoluene | 0.30 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Acetone | 670 | 40 | | ppbV | 270 | 8/14/2004 |
| Allyl chloride | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Benzene | 0.60 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Benzyl chloride | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Bromodichloromethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Bromoform | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Bromomethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Carbon disulfide | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Carbon tetrachloride | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Chlorobenzene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Chloroethane | 1.3 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Chloroform | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Chloromethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| cis-1,2-Dichloroethene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| cis-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Cyclohexane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Dibromochloromethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Ethyl acetate | ND | 0.25 | | ppbV | 1 | 8/14/2004 |
| Ethylbenzene | 0.62 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Freon 11 | 0.64 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Freon 113 | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Freon 114 | ND | 0.15 | | ppbV | 1 | 8/14/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

# Centek Laboratories, LLC

**Date:** *17-Aug-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | BVS Sample Efflunet |
| **Lab Order:** | C0408003 | **Tag Number:** | 100 |
| **Project:** | | **Collection Date:** | 8/9/2004 |
| **Lab ID:** | C0408003-001A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | 1.5 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Heptane | 26 | 4.5 | | ppbV | 30 | 8/14/2004 |
| Hexachloro-1,3-butadiene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Hexane | 14 | 1.5 | | ppbV | 10 | 8/14/2004 |
| Isopropyl alcohol | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| m-Xylene | 1.6 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Methyl Butyl Ketone | ND | 0.30 | | ppbV | 1 | 8/14/2004 |
| Methyl Ethyl Ketone | ND | 0.30 | | ppbV | 1 | 8/14/2004 |
| Methyl Isobutyl Ketone | 1.9 | 0.30 | | ppbV | 1 | 8/14/2004 |
| Methyl tert-butyl ether | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Methylene chloride | 1.2 | 0.15 | | ppbV | 1 | 8/14/2004 |
| o-Xylene | 0.93 | 0.15 | | ppbV | 1 | 8/14/2004 |
| p-Xylene | 0.50 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Propylene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Styrene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Tetrachloroethylene | 0.78 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Tetrahydrofuran | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Toluene | 1.9 | 0.15 | | ppbV | 1 | 8/14/2004 |
| trans-1,2-Dichloroethene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| trans-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Trichloroethene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Vinyl acetate | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Vinyl Bromide | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Vinyl chloride | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Surr: Bromofluorobenzene | 105 | 70-130 | | %REC | 1 | 8/14/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

## Centek Laboratories, LLC

**Date:** *17-Aug-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | Basement Ambient |
| **Lab Order:** | C0408003 | **Tag Number:** | 101 |
| **Project:** | | **Collection Date:** | 8/9/2004 |
| **Lab ID:** | C0408003-002A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,1,2-Trichloroethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,1-Dichloroethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,1-Dichloroethene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2,4-Trichlorobenzene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2,4-Trimethylbenzene | 1.4 | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2-Dibromoethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2-Dichloroethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,2-Dichloropropane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,3,5-Trimethylbenzene | 1.6 | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,3-butadiene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,3-Dichlorobenzene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,4-Dichlorobenzene | 4.0 | 0.15 | | ppbV | 1 | 8/14/2004 |
| 1,4-Dioxane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| 2,2,4-trimethylpentane | 1.3 | 0.15 | | ppbV | 1 | 8/14/2004 |
| 4-ethyltoluene | 1.2 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Acetone | 22 | 1.5 | | ppbV | 10 | 8/14/2004 |
| Allyl chloride | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Benzene | 2.3 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Benzyl chloride | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Bromodichloromethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Bromoform | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Bromomethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Carbon disulfide | 0.32 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Carbon tetrachloride | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Chlorobenzene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Chloroethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Chloroform | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Chloromethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| cis-1,2-Dichloroethene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| cis-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Cyclohexane | 1.6 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Dibromochloromethane | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Ethyl acetate | ND | 0.25 | | ppbV | 1 | 8/14/2004 |
| Ethylbenzene | 0.66 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Freon 11 | 0.61 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Freon 113 | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Freon 114 | ND | 0.15 | | ppbV | 1 | 8/14/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

# Centek Laboratories, LLC

**Date:** *17-Aug-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | Basement Ambient |
| **Lab Order:** | C0408003 | **Tag Number:** | 101 |
| **Project:** | | **Collection Date:** | 8/9/2004 |
| **Lab ID:** | C0408003-002A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | 1.6 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Heptane | 0.84 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Hexachloro-1,3-butadiene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Hexane | 5.6 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Isopropyl alcohol | 14 | 1.5 | | ppbV | 10 | 8/14/2004 |
| m-Xylene | 1.6 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Methyl Butyl Ketone | ND | 0.30 | | ppbV | 1 | 8/14/2004 |
| Methyl Ethyl Ketone | ND | 0.30 | | ppbV | 1 | 8/14/2004 |
| Methyl Isobutyl Ketone | ND | 0.30 | | ppbV | 1 | 8/14/2004 |
| Methyl tert-butyl ether | 0.89 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Methylene chloride | 6.4 | 1.5 | | ppbV | 10 | 8/14/2004 |
| o-Xylene | 1.7 | 0.15 | | ppbV | 1 | 8/14/2004 |
| p-Xylene | 0.73 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Propylene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Styrene | 1.2 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Tetrachloroethylene | 0.27 | 0.15 | | ppbV | 1 | 8/14/2004 |
| Tetrahydrofuran | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Toluene | 11 | 1.5 | | ppbV | 10 | 8/14/2004 |
| trans-1,2-Dichloroethene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| trans-1,3-Dichloropropene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Trichloroethene | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Vinyl acetate | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Vinyl Bromide | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Vinyl chloride | ND | 0.15 | | ppbV | 1 | 8/14/2004 |
| Surr: Bromofluorobenzene | 111 | 70-130 | | %REC | 1 | 8/14/2004 |

| **Qualifiers:** | | | | |
|---|---|---|---|---|
| | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| | S | Spike Recovery outside accepted recovery limits | | |

## Centek Laboratories, LLC

**Date:** *17-Aug-04*

**CLIENT:** Bergman and Associates
**Lab Order:** C0408003
**Project:**
**Lab ID:** C0408003-001A

**Client Sample ID:** BVS Sample Efflunet
**Tag Number:** 100
**Collection Date:** 8/9/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 8/14/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | | ug/m3 | 1 | 8/14/2004 |
| 1,1,2-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 8/14/2004 |
| 1,1-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 8/14/2004 |
| 1,1-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 8/14/2004 |
| 1,2,4-Trichlorobenzene | ND | 1.1 | | ug/m3 | 1 | 8/14/2004 |
| 1,2,4-Trimethylbenzene | 4.6 | 0.75 | | ug/m3 | 1 | 8/14/2004 |
| 1,2-Dibromoethane | ND | 1.2 | | ug/m3 | 1 | 8/14/2004 |
| 1,2-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 8/14/2004 |
| 1,2-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 8/14/2004 |
| 1,2-Dichloropropane | ND | 0.70 | | ug/m3 | 1 | 8/14/2004 |
| 1,3,5-Trimethylbenzene | 2.4 | 0.75 | | ug/m3 | 1 | 8/14/2004 |
| 1,3-butadiene | ND | 0.34 | | ug/m3 | 1 | 8/14/2004 |
| 1,3-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 8/14/2004 |
| 1,4-Dichlorobenzene | 1.6 | 0.92 | | ug/m3 | 1 | 8/14/2004 |
| 1,4-Dioxane | ND | 0.55 | | ug/m3 | 1 | 8/14/2004 |
| 2,2,4-trimethylpentane | ND | 0.71 | | ug/m3 | 1 | 8/14/2004 |
| 4-ethyltoluene | 1.5 | 0.75 | | ug/m3 | 1 | 8/14/2004 |
| Acetone | 1600 | 97 | | ug/m3 | 270 | 8/14/2004 |
| Allyl chloride | ND | 0.48 | | ug/m3 | 1 | 8/14/2004 |
| Benzene | 1.9 | 0.49 | | ug/m3 | 1 | 8/14/2004 |
| Benzyl chloride | ND | 0.88 | | ug/m3 | 1 | 8/14/2004 |
| Bromodichloromethane | ND | 1.0 | | ug/m3 | 1 | 8/14/2004 |
| Bromoform | ND | 1.6 | | ug/m3 | 1 | 8/14/2004 |
| Bromomethane | ND | 0.59 | | ug/m3 | 1 | 8/14/2004 |
| Carbon disulfide | ND | 0.47 | | ug/m3 | 1 | 8/14/2004 |
| Carbon tetrachloride | ND | 0.96 | | ug/m3 | 1 | 8/14/2004 |
| Chlorobenzene | ND | 0.70 | | ug/m3 | 1 | 8/14/2004 |
| Chloroethane | 3.6 | 0.40 | | ug/m3 | 1 | 8/14/2004 |
| Chloroform | ND | 0.74 | | ug/m3 | 1 | 8/14/2004 |
| Chloromethane | ND | 0.31 | | ug/m3 | 1 | 8/14/2004 |
| cis-1,2-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 8/14/2004 |
| cis-1,3-Dichloropropene | ND | 0.69 | | ug/m3 | 1 | 8/14/2004 |
| Cyclohexane | ND | 0.52 | | ug/m3 | 1 | 8/14/2004 |
| Dibromochloromethane | ND | 1.3 | | ug/m3 | 1 | 8/14/2004 |
| Ethyl acetate | ND | 0.92 | | ug/m3 | 1 | 8/14/2004 |
| Ethylbenzene | 2.7 | 0.66 | | ug/m3 | 1 | 8/14/2004 |
| Freon 11 | 3.7 | 0.86 | | ug/m3 | 1 | 8/14/2004 |
| Freon 113 | ND | 1.2 | | ug/m3 | 1 | 8/14/2004 |
| Freon 114 | ND | 1.1 | | ug/m3 | 1 | 8/14/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

|  |  |  |  |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | BVS Sample Efflunet |
| **Lab Order:** | C0408003 | **Tag Number:** | 100 |
| **Project:** |  | **Collection Date:** | 8/9/2004 |
| **Lab ID:** | C0408003-001A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** |  | **TO-15** |  |  |  | Analyst: **RJP** |
| Freon 12 | 7.7 | 0.75 |  | ug/m3 | 1 | 8/14/2004 |
| Heptane | 110 | 19 |  | ug/m3 | 30 | 8/14/2004 |
| Hexachloro-1,3-butadiene | ND | 1.6 |  | ug/m3 | 1 | 8/14/2004 |
| Hexane | 51 | 5.4 |  | ug/m3 | 10 | 8/14/2004 |
| Isopropyl alcohol | ND | 0.37 |  | ug/m3 | 1 | 8/14/2004 |
| m-Xylene | 7.2 | 0.66 |  | ug/m3 | 1 | 8/14/2004 |
| Methyl Butyl Ketone | ND | 1.2 |  | ug/m3 | 1 | 8/14/2004 |
| Methyl Ethyl Ketone | ND | 0.90 |  | ug/m3 | 1 | 8/14/2004 |
| Methyl Isobutyl Ketone | 7.9 | 1.2 |  | ug/m3 | 1 | 8/14/2004 |
| Methyl tert-butyl ether | ND | 0.55 |  | ug/m3 | 1 | 8/14/2004 |
| Methylene chloride | 4.1 | 0.53 |  | ug/m3 | 1 | 8/14/2004 |
| o-Xylene | 4.1 | 0.66 |  | ug/m3 | 1 | 8/14/2004 |
| p-Xylene | 2.2 | 0.66 |  | ug/m3 | 1 | 8/14/2004 |
| Propylene | ND | 0.26 |  | ug/m3 | 1 | 8/14/2004 |
| Styrene | ND | 0.65 |  | ug/m3 | 1 | 8/14/2004 |
| Tetrachloroethylene | 5.4 | 1.0 |  | ug/m3 | 1 | 8/14/2004 |
| Tetrahydrofuran | ND | 0.45 |  | ug/m3 | 1 | 8/14/2004 |
| Toluene | 7.2 | 0.57 |  | ug/m3 | 1 | 8/14/2004 |
| trans-1,2-Dichloroethene | ND | 0.60 |  | ug/m3 | 1 | 8/14/2004 |
| trans-1,3-Dichloropropene | ND | 0.69 |  | ug/m3 | 1 | 8/14/2004 |
| Trichloroethene | ND | 0.82 |  | ug/m3 | 1 | 8/14/2004 |
| Vinyl acetate | ND | 0.54 |  | ug/m3 | 1 | 8/14/2004 |
| Vinyl Bromide | ND | 0.67 |  | ug/m3 | 1 | 8/14/2004 |
| Vinyl chloride | ND | 0.39 |  | ug/m3 | 1 | 8/14/2004 |
| Surr: Bromofluorobenzene | 0 | 0 |  | ug/m3 | 1 | 8/14/2004 |

# Centek Laboratories, LLC

**Date:** *17-Aug-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | Basement Ambient |
| **Lab Order:** | C0408003 | **Tag Number:** | 101 |
| **Project:** | | **Collection Date:** | 8/9/2004 |
| **Lab ID:** | C0408003-002A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 8/14/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | | ug/m3 | 1 | 8/14/2004 |
| 1,1,2-Trichloroethane | ND | 0.83 | | ug/m3 | 1 | 8/14/2004 |
| 1,1-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 8/14/2004 |
| 1,1-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 8/14/2004 |
| 1,2,4-Trichlorobenzene | ND | 1.1 | | ug/m3 | 1 | 8/14/2004 |
| 1,2,4-Trimethylbenzene | 7.2 | 0.75 | | ug/m3 | 1 | 8/14/2004 |
| 1,2-Dibromoethane | ND | 1.2 | | ug/m3 | 1 | 8/14/2004 |
| 1,2-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 8/14/2004 |
| 1,2-Dichloroethane | ND | 0.62 | | ug/m3 | 1 | 8/14/2004 |
| 1,2-Dichloropropane | ND | 0.70 | | ug/m3 | 1 | 8/14/2004 |
| 1,3,5-Trimethylbenzene | 7.7 | 0.75 | | ug/m3 | 1 | 8/14/2004 |
| 1,3-butadiene | ND | 0.34 | | ug/m3 | 1 | 8/14/2004 |
| 1,3-Dichlorobenzene | ND | 0.92 | | ug/m3 | 1 | 8/14/2004 |
| 1,4-Dichlorobenzene | 25 | 0.92 | | ug/m3 | 1 | 8/14/2004 |
| 1,4-Dioxane | ND | 0.55 | | ug/m3 | 1 | 8/14/2004 |
| 2,2,4-trimethylpentane | 6.1 | 0.71 | | ug/m3 | 1 | 8/14/2004 |
| 4-ethyltoluene | 5.9 | 0.75 | | ug/m3 | 1 | 8/14/2004 |
| Acetone | 52 | 3.6 | | ug/m3 | 10 | 8/14/2004 |
| Allyl chloride | ND | 0.48 | | ug/m3 | 1 | 8/14/2004 |
| Benzene | 7.4 | 0.49 | | ug/m3 | 1 | 8/14/2004 |
| Benzyl chloride | ND | 0.88 | | ug/m3 | 1 | 8/14/2004 |
| Bromodichloromethane | ND | 1.0 | | ug/m3 | 1 | 8/14/2004 |
| Bromoform | ND | 1.6 | | ug/m3 | 1 | 8/14/2004 |
| Bromomethane | ND | 0.59 | | ug/m3 | 1 | 8/14/2004 |
| Carbon disulfide | 1.0 | 0.47 | | ug/m3 | 1 | 8/14/2004 |
| Carbon tetrachloride | ND | 0.96 | | ug/m3 | 1 | 8/14/2004 |
| Chlorobenzene | ND | 0.70 | | ug/m3 | 1 | 8/14/2004 |
| Chloroethane | ND | 0.40 | | ug/m3 | 1 | 8/14/2004 |
| Chloroform | ND | 0.74 | | ug/m3 | 1 | 8/14/2004 |
| Chloromethane | ND | 0.31 | | ug/m3 | 1 | 8/14/2004 |
| cis-1,2-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 8/14/2004 |
| cis-1,3-Dichloropropene | ND | 0.69 | | ug/m3 | 1 | 8/14/2004 |
| Cyclohexane | 5.5 | 0.52 | | ug/m3 | 1 | 8/14/2004 |
| Dibromochloromethane | ND | 1.3 | | ug/m3 | 1 | 8/14/2004 |
| Ethyl acetate | ND | 0.92 | | ug/m3 | 1 | 8/14/2004 |
| Ethylbenzene | 2.9 | 0.66 | | ug/m3 | 1 | 8/14/2004 |
| Freon 11 | 3.5 | 0.86 | | ug/m3 | 1 | 8/14/2004 |
| Freon 113 | ND | 1.2 | | ug/m3 | 1 | 8/14/2004 |
| Freon 114 | ND | 1.1 | | ug/m3 | 1 | 8/14/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

# Centek Laboratories, LLC

**Date:** *17-Aug-04*

**CLIENT:** Bergman and Associates
**Lab Order:** C0408003
**Project:**
**Lab ID:** C0408003-002A

**Client Sample ID:** Basement Ambient
**Tag Number:** 101
**Collection Date:** 8/9/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15_1UG/M3** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | 8.2 | 0.75 | | ug/m3 | 1 | 8/14/2004 |
| Heptane | 3.5 | 0.62 | | ug/m3 | 1 | 8/14/2004 |
| Hexachloro-1,3-butadiene | ND | 1.6 | | ug/m3 | 1 | 8/14/2004 |
| Hexane | 20 | 0.54 | | ug/m3 | 1 | 8/14/2004 |
| Isopropyl alcohol | 36 | 3.7 | | ug/m3 | 10 | 8/14/2004 |
| m-Xylene | 7.2 | 0.66 | | ug/m3 | 1 | 8/14/2004 |
| Methyl Butyl Ketone | ND | 1.2 | | ug/m3 | 1 | 8/14/2004 |
| Methyl Ethyl Ketone | ND | 0.90 | | ug/m3 | 1 | 8/14/2004 |
| Methyl Isobutyl Ketone | 1.2 | 1.2 | | ug/m3 | 1 | 8/14/2004 |
| Methyl tert-butyl ether | 3.3 | 0.55 | | ug/m3 | 1 | 8/14/2004 |
| Methylene chloride | 23 | 5.3 | | ug/m3 | 10 | 8/14/2004 |
| o-Xylene | 7.6 | 0.66 | | ug/m3 | 1 | 8/14/2004 |
| p-Xylene | 3.2 | 0.66 | | ug/m3 | 1 | 8/14/2004 |
| Propylene | ND | 0.26 | | ug/m3 | 1 | 8/14/2004 |
| Styrene | 5.4 | 0.65 | | ug/m3 | 1 | 8/14/2004 |
| Tetrachloroethylene | 1.9 | 1.0 | | ug/m3 | 1 | 8/14/2004 |
| Tetrahydrofuran | ND | 0.45 | | ug/m3 | 1 | 8/14/2004 |
| Toluene | 42 | 5.7 | | ug/m3 | 10 | 8/14/2004 |
| trans-1,2-Dichloroethene | ND | 0.60 | | ug/m3 | 1 | 8/14/2004 |
| trans-1,3-Dichloropropene | ND | 0.69 | | ug/m3 | 1 | 8/14/2004 |
| Trichloroethene | ND | 0.82 | | ug/m3 | 1 | 8/14/2004 |
| Vinyl acetate | ND | 0.54 | | ug/m3 | 1 | 8/14/2004 |
| Vinyl Bromide | ND | 0.67 | | ug/m3 | 1 | 8/14/2004 |
| Vinyl chloride | ND | 0.39 | | ug/m3 | 1 | 8/14/2004 |
| Surr: Bromofluorobenzene | 0 | 0 | | ug/m3 | 1 | 8/14/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

**CENTEK LABORATORIES, LLC**

143 Midler Park Drive * Syracuse, New York 13206
Phone (315) 431-9730 * Fax (315) 431-9731

# *Chain of Custody*

NELAC No. 11830

Company Name: BERGMANN ASSOCIATES

Site Name: 1200 E. MAIN STREET

Client Contact: GARY FLISNIK

Phone #: 585.232.5135

Project #: 4453.03

| | Send Report To: | Send Invoice To: |
|---|---|---|
| Name | JIM MARSCHNER | SAME |
| Company | BERGMANN ASSOCIATES | |
| Address | 28 E. MAIN ST. SUITE 200<br>ROCHESTER, NY 14614 | |
| Phone | 585.232.5135 | |
| Fax | 585.232.4652 | |
| e-mail | JMARSCHNER@BERGMANNPC.COM | |

## Payment Choice:

| | |
|---|---|
| Purchase order # 4453.03 | Credit Card (type) |
| Authorization: | Card # / Date exp: |

## Turnaround Time Requested:

| | | | |
|---|---|---|---|
| Same Day: | Next Day (24hr) | Normal (5 business days) ☒ | Other (specify) |

Reporting units: Please circle choice/s — ppbV ☒ — ug/m3 ☒ — mg/m3

| Sample Identification | Date Sampled | Canister Number | Regulator Number | Analysis Requested | Comments |
|---|---|---|---|---|---|
| BVS-EFFLUENT | 7/8/04 | 26 | 112 | TO-15 | } TO 1ppbV |
| BACKGROUND | 7/8/04 | 37 | 49 | TO-15 | } DETECTION LIMIT |
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| #37 ~28.5" Hg @ 0810 | | | | @ 1210 | CAN #37 = -10" Hg @ END OF |
| #26 ~28.25" Hg @ 0815 | | | | @ 1215 | CAN #26 = -10" Hg @ END |
| | | | | | |

Sampled By: (MARSCHNER)

Company: BERGMANN ASSOCIATES

Name of Courier: FED-EX #8467 3558 5353

| | | | |
|---|---|---|---|
| Relinquished by: (sign) | Date 7/8/04 | Time 1400 | Received by: (sign) |
| Relinquished by: (sign) | Date | Time | Received by: (sign) |
| Relinquished by: (sign) | Date | Time | Received for lab by: (sign) |

## Centek Laboratories, LLC

**Date:** *14-Jul-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | BVS- Effluent |
| **Lab Order:** | C0407003 | **Tag Number:** | 26 |
| **Project:** | 4453.03 | **Collection Date:** | 7/8/2004 |
| **Lab ID:** | C0407003-001A | **Matrix:** | AIR |

| **Analyses** | **Result** | **Limit** | **Qual** | **Units** | **DF** | **Date Analyzed** |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 5.55 | | ug/m3 | 1 | 7/12/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 6.98 | | ug/m3 | 1 | 7/12/2004 |
| 1,1,2-Trichloroethane | ND | 5.55 | | ug/m3 | 1 | 7/12/2004 |
| 1,1-Dichloroethane | ND | 4.11 | | ug/m3 | 1 | 7/12/2004 |
| 1,1-Dichloroethene | ND | 4.03 | | ug/m3 | 1 | 7/12/2004 |
| 1,2,4-Trichlorobenzene | ND | 7.54 | | ug/m3 | 1 | 7/12/2004 |
| 1,2,4-Trimethylbenzene | 12.4 | 5.00 | | ug/m3 | 1 | 7/12/2004 |
| 1,2-Dibromoethane | ND | 7.81 | | ug/m3 | 1 | 7/12/2004 |
| 1,2-Dichlorobenzene | ND | 6.11 | | ug/m3 | 1 | 7/12/2004 |
| 1,2-Dichloroethane | ND | 4.11 | | ug/m3 | 1 | 7/12/2004 |
| 1,2-Dichloropropane | ND | 4.70 | | ug/m3 | 1 | 7/12/2004 |
| 1,3,5-Trimethylbenzene | ND | 5.00 | | ug/m3 | 1 | 7/12/2004 |
| 1,3-butadiene | ND | 2.25 | | ug/m3 | 1 | 7/12/2004 |
| 1,3-Dichlorobenzene | ND | 6.11 | | ug/m3 | 1 | 7/12/2004 |
| 1,4-Dichlorobenzene | ND | 6.11 | | ug/m3 | 1 | 7/12/2004 |
| 1,4-Dioxane | ND | 3.66 | | ug/m3 | 1 | 7/12/2004 |
| 2,2,4-trimethylpentane | ND | 4.75 | | ug/m3 | 1 | 7/12/2004 |
| 4-ethyltoluene | ND | 5.00 | | ug/m3 | 1 | 7/12/2004 |
| Acetone | 75.3 | 9.66 | | ug/m3 | 4 | 7/14/2004 |
| Allyl chloride | ND | 3.18 | | ug/m3 | 1 | 7/12/2004 |
| Benzene | 3.57 | 3.25 | | ug/m3 | 1 | 7/12/2004 |
| Benzyl chloride | ND | 5.84 | | ug/m3 | 1 | 7/12/2004 |
| Bromodichloromethane | ND | 6.81 | | ug/m3 | 1 | 7/12/2004 |
| Bromoform | ND | 10.5 | | ug/m3 | 1 | 7/12/2004 |
| Bromomethane | ND | 3.95 | | ug/m3 | 1 | 7/12/2004 |
| Carbon disulfide | ND | 3.17 | | ug/m3 | 1 | 7/12/2004 |
| Carbon tetrachloride | ND | 6.40 | | ug/m3 | 1 | 7/12/2004 |
| Chlorobenzene | ND | 4.68 | | ug/m3 | 1 | 7/12/2004 |
| Chloroethane | ND | 2.68 | | ug/m3 | 1 | 7/12/2004 |
| Chloroform | ND | 4.96 | | ug/m3 | 1 | 7/12/2004 |
| Chloromethane | ND | 2.10 | | ug/m3 | 1 | 7/12/2004 |
| cis-1,2-Dichloroethene | ND | 4.03 | | ug/m3 | 1 | 7/12/2004 |
| cis-1,3-Dichloropropene | ND | 4.61 | | ug/m3 | 1 | 7/12/2004 |
| Cyclohexane | ND | 3.50 | | ug/m3 | 1 | 7/12/2004 |
| Dibromochloromethane | ND | 8.66 | | ug/m3 | 1 | 7/12/2004 |
| Ethyl acetate | ND | 3.66 | | ug/m3 | 1 | 7/12/2004 |
| Ethylbenzene | 8.78 | 4.41 | | ug/m3 | 1 | 7/12/2004 |
| Freon 11 | ND | 5.71 | | ug/m3 | 1 | 7/12/2004 |
| Freon 113 | ND | 7.79 | | ug/m3 | 1 | 7/12/2004 |
| Freon 114 | ND | 7.11 | | ug/m3 | 1 | 7/12/2004 |

| **Qualifiers:** | | | | |
|---|---|---|---|---|
| | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| | S | Spike Recovery outside accepted recovery limits | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman and Associates | **Client Sample ID:** | BVS- Effluent |
| **Lab Order:** | C0407003 | **Tag Number:** | 26 |
| **Project:** | 4453.03 | **Collection Date:** | 7/8/2004 |
| **Lab ID:** | C0407003-001A | **Matrix:** | AIR |

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | ND | 5.03 | | ug/m3 | 1 | 7/12/2004 |
| Heptane | 5.37 | 4.17 | | ug/m3 | 1 | 7/12/2004 |
| Hexachloro-1,3-butadiene | ND | 10.8 | | ug/m3 | 1 | 7/12/2004 |
| Hexane | 11.9 | 3.58 | | ug/m3 | 1 | 7/12/2004 |
| Isopropyl alcohol | ND | 2.50 | | ug/m3 | 1 | 7/12/2004 |
| m-Xylene | 23.2 | 4.41 | | ug/m3 | 1 | 7/12/2004 |
| Methyl Butyl Ketone | ND | 4.16 | | ug/m3 | 1 | 7/12/2004 |
| Methyl Ethyl Ketone | ND | 3.00 | | ug/m3 | 1 | 7/12/2004 |
| Methyl Isobutyl Ketone | ND | 4.16 | | ug/m3 | 1 | 7/12/2004 |
| Methyl tert-butyl ether | ND | 3.66 | | ug/m3 | 1 | 7/12/2004 |
| Methylene chloride | ND | 3.53 | | ug/m3 | 1 | 7/12/2004 |
| o-Xylene | 8.34 | 4.41 | | ug/m3 | 1 | 7/12/2004 |
| p-Xylene | 7.28 | 4.41 | | ug/m3 | 1 | 7/12/2004 |
| Propylene | ND | 1.75 | | ug/m3 | 1 | 7/12/2004 |
| Styrene | 5.11 | 4.33 | | ug/m3 | 1 | 7/12/2004 |
| Tetrachloroethylene | 38.5 | 6.89 | | ug/m3 | 1 | 7/12/2004 |
| Tetrahydrofuran | ND | 3.00 | | ug/m3 | 1 | 7/12/2004 |
| Toluene | 28.3 | 3.83 | | ug/m3 | 1 | 7/12/2004 |
| trans-1,2-Dichloroethene | ND | 4.03 | | ug/m3 | 1 | 7/12/2004 |
| trans-1,3-Dichloropropene | ND | 4.61 | | ug/m3 | 1 | 7/12/2004 |
| Trichloroethene | ND | 5.46 | | ug/m3 | 1 | 7/12/2004 |
| Vinyl acetate | ND | 3.58 | | ug/m3 | 1 | 7/12/2004 |
| Vinyl Bromide | ND | 4.45 | | ug/m3 | 1 | 7/12/2004 |
| Vinyl chloride | ND | 2.60 | | ug/m3 | 1 | 7/12/2004 |

| **Qualifiers:** | | | | |
|---|---|---|---|---|
| | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| | S | Spike Recovery outside accepted recovery limits | | |

# Centek Laboratories, LLC

**Date:** *14-Jul-04*

**CLIENT:** Bergman and Associates
**Lab Order:** C0407003
**Project:** 4453.03
**Lab ID:** C0407003-002A

**Client Sample ID:** Background
**Tag Number:** 37
**Collection Date:** 7/8/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 5.55 | | ug/m3 | 1 | 7/12/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 6.98 | | ug/m3 | 1 | 7/12/2004 |
| 1,1,2-Trichloroethane | ND | 5.55 | | ug/m3 | 1 | 7/12/2004 |
| 1,1-Dichloroethane | ND | 4.11 | | ug/m3 | 1 | 7/12/2004 |
| 1,1-Dichloroethene | ND | 4.03 | | ug/m3 | 1 | 7/12/2004 |
| 1,2,4-Trichlorobenzene | ND | 7.54 | | ug/m3 | 1 | 7/12/2004 |
| 1,2,4-Trimethylbenzene | 6.90 | 5.00 | | ug/m3 | 1 | 7/12/2004 |
| 1,2-Dibromoethane | ND | 7.81 | | ug/m3 | 1 | 7/12/2004 |
| 1,2-Dichlorobenzene | ND | 6.11 | | ug/m3 | 1 | 7/12/2004 |
| 1,2-Dichloroethane | ND | 4.11 | | ug/m3 | 1 | 7/12/2004 |
| 1,2-Dichloropropane | ND | 4.70 | | ug/m3 | 1 | 7/12/2004 |
| 1,3,5-Trimethylbenzene | ND | 5.00 | | ug/m3 | 1 | 7/12/2004 |
| 1,3-butadiene | ND | 2.25 | | ug/m3 | 1 | 7/12/2004 |
| 1,3-Dichlorobenzene | ND | 6.11 | | ug/m3 | 1 | 7/12/2004 |
| 1,4-Dichlorobenzene | ND | 6.11 | | ug/m3 | 1 | 7/12/2004 |
| 1,4-Dioxane | ND | 3.66 | | ug/m3 | 1 | 7/12/2004 |
| 2,2,4-trimethylpentane | ND | 4.75 | | ug/m3 | 1 | 7/12/2004 |
| 4-ethyltoluene | ND | 5.00 | | ug/m3 | 1 | 7/12/2004 |
| Acetone | 26.3 | 2.41 | | ug/m3 | 1 | 7/12/2004 |
| Allyl chloride | ND | 3.18 | | ug/m3 | 1 | 7/12/2004 |
| Benzene | ND | 3.25 | | ug/m3 | 1 | 7/12/2004 |
| Benzyl chloride | ND | 5.84 | | ug/m3 | 1 | 7/12/2004 |
| Bromodichloromethane | ND | 6.81 | | ug/m3 | 1 | 7/12/2004 |
| Bromoform | ND | 10.5 | | ug/m3 | 1 | 7/12/2004 |
| Bromomethane | ND | 3.95 | | ug/m3 | 1 | 7/12/2004 |
| Carbon disulfide | ND | 3.17 | | ug/m3 | 1 | 7/12/2004 |
| Carbon tetrachloride | ND | 6.40 | | ug/m3 | 1 | 7/12/2004 |
| Chlorobenzene | ND | 4.68 | | ug/m3 | 1 | 7/12/2004 |
| Chloroethane | ND | 2.68 | | ug/m3 | 1 | 7/12/2004 |
| Chloroform | ND | 4.96 | | ug/m3 | 1 | 7/12/2004 |
| Chloromethane | ND | 2.10 | | ug/m3 | 1 | 7/12/2004 |
| cis-1,2-Dichloroethene | ND | 4.03 | | ug/m3 | 1 | 7/12/2004 |
| cis-1,3-Dichloropropene | ND | 4.61 | | ug/m3 | 1 | 7/12/2004 |
| Cyclohexane | ND | 3.50 | | ug/m3 | 1 | 7/12/2004 |
| Dibromochloromethane | ND | 8.66 | | ug/m3 | 1 | 7/12/2004 |
| Ethyl acetate | ND | 3.66 | | ug/m3 | 1 | 7/12/2004 |
| Ethylbenzene | ND | 4.41 | | ug/m3 | 1 | 7/12/2004 |
| Freon 11 | ND | 5.71 | | ug/m3 | 1 | 7/12/2004 |
| Freon 113 | ND | 7.79 | | ug/m3 | 1 | 7/12/2004 |
| Freon 114 | ND | 7.11 | | ug/m3 | 1 | 7/12/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

# Centek Laboratories, LLC

**Date:** *14-Jul-04*

**CLIENT:** Bergman and Associates
**Lab Order:** C0407003
**Project:** 4453.03
**Lab ID:** C0407003-002A

**Client Sample ID:** Background
**Tag Number:** 37
**Collection Date:** 7/8/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15** | | TO-15 | | | | Analyst: **RJP** |
| Freon 12 | ND | 5.03 | | ug/m3 | 1 | 7/12/2004 |
| Heptane | ND | 4.17 | | ug/m3 | 1 | 7/12/2004 |
| Hexachloro-1,3-butadiene | ND | 10.8 | | ug/m3 | 1 | 7/12/2004 |
| Hexane | ND | 3.58 | | ug/m3 | 1 | 7/12/2004 |
| Isopropyl alcohol | ND | 2.50 | | ug/m3 | 1 | 7/12/2004 |
| m-Xylene | 7.64 | 4.41 | | ug/m3 | 1 | 7/12/2004 |
| Methyl Butyl Ketone | ND | 4.16 | | ug/m3 | 1 | 7/12/2004 |
| Methyl Ethyl Ketone | ND | 3.00 | | ug/m3 | 1 | 7/12/2004 |
| Methyl Isobutyl Ketone | ND | 4.16 | | ug/m3 | 1 | 7/12/2004 |
| Methyl tert-butyl ether | ND | 3.66 | | ug/m3 | 1 | 7/12/2004 |
| Methylene chloride | ND | 3.53 | | ug/m3 | 1 | 7/12/2004 |
| o-Xylene | ND | 4.41 | | ug/m3 | 1 | 7/12/2004 |
| p-Xylene | ND | 4.41 | | ug/m3 | 1 | 7/12/2004 |
| Propylene | ND | 1.75 | | ug/m3 | 1 | 7/12/2004 |
| Styrene | ND | 4.33 | | ug/m3 | 1 | 7/12/2004 |
| Tetrachloroethylene | ND | 6.89 | | ug/m3 | 1 | 7/12/2004 |
| Tetrahydrofuran | ND | 3.00 | | ug/m3 | 1 | 7/12/2004 |
| Toluene | 13.6 | 3.83 | | ug/m3 | 1 | 7/12/2004 |
| trans-1,2-Dichloroethene | ND | 4.03 | | ug/m3 | 1 | 7/12/2004 |
| trans-1,3-Dichloropropene | ND | 4.61 | | ug/m3 | 1 | 7/12/2004 |
| Trichloroethene | ND | 5.46 | | ug/m3 | 1 | 7/12/2004 |
| Vinyl acetate | ND | 3.58 | | ug/m3 | 1 | 7/12/2004 |
| Vinyl Bromide | ND | 4.45 | | ug/m3 | 1 | 7/12/2004 |
| Vinyl chloride | ND | 2.60 | | ug/m3 | 1 | 7/12/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

[illegible]

# CENTEK LABORATORIES, LLC

143 Midler Park Drive * Syracuse, New York 13206
Phone (315) 431-9730 * Fax (315) 431-9731

## *Chain of Custody*

NELAC No. 11830

Company Name: BERGMANN ASSOCIATES

Site Name: BVS - 1214 E. MAIN ST

Client Contact: GARY FUSNIK / JIM MARSCHNER

Phone #:

Project #:

| | Send Report To: | Send Invoice To: |
|---|---|---|
| Name | GARY FUSNIK | SAME |
| Company | BERGMANN ASSOCIATES | |
| Address | 28 E. MAIN ST SUITE 200<br>ROCHESTER, NY 14614 | |
| Phone | 585 · 232 · 5135 | |
| Fax | 585 · 232 - 4652 | |
| e-mail | MARSCHNER@BERGMANNPC.COM | |

**Payment Choice:**

Purchase order #:

Authorization:

Credit Card (type):

Card #:

Date exp:

**Turnaround Time Requested:**

| | | | |
|---|---|---|---|
| Same Day: | Next Day (24hr) | Normal (5 business days)<br>STD | Other (specify) |
| **Reporting units: Please circle choice/s** | [✓ **ppbV**] | [✓ **ug/m3**] | ~~mg/m3~~ |

| **Sample Identification** | **Date Sampled** | **Canister Number** | **Regulator Number** | **Analysis Requested** | **Comments** |
|---|---|---|---|---|---|
| BVS-EFFLUENT | 6/1/04 | 40 | 10 | TO-15 | START ~29.25<br>END ~29.75 |
| | | | | | SAMPLE 12:00 TO 1600 |
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Sampled By: JIM MARSCHNER

Company: BERGMANN ASSOCIATES

Name of Courier: FED EX

| | | | |
|---|---|---|---|
| Relinquished by: (sign) | Date<br>6/2/04 | Time<br>1600 | Received by: (sign) |
| Relinquished by: (sign) | Date | Time | Received by: (sign) |
| Relinquished by: (sign) | Date | Time | Received for lab by: (sign) |

## Centek Laboratories, LLC

**Date:** *04-Jun-04*

| | | | |
|---|---|---|---|
| **CLIENT:** | Bergman Associates | **Client Sample ID:** | BVS-Efflunet |
| **Lab Order:** | C0406004 | **Tag Number:** | 40 |
| **Project:** | BVS-1214 E. Main St | **Collection Date:** | 6/1/2004 |
| **Lab ID:** | C0406004-001A | **Matrix:** | AIR |

| **Analyses** | **Result** | **Limit** | **Qual** | **Units** | **DF** | **Date Analyzed** |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,1,2-Trichloroethane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,1-Dichloroethane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,1-Dichloroethene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,2,4-Trichlorobenzene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,2,4-Trimethylbenzene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,2-Dibromoethane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,2-Dichlorobenzene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,2-Dichloroethane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,2-Dichloropropane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,3,5-Trimethylbenzene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,3-butadiene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,3-Dichlorobenzene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,4-Dichlorobenzene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 1,4-Dioxane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 2,2,4-trimethylpentane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| 4-ethyltoluene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Acetone | 77 | 5.0 | | ppbV | 1 | 6/3/2004 |
| Allyl chloride | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Benzene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Benzyl chloride | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Bromodichloromethane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Bromoform | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Bromomethane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Carbon disulfide | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Carbon tetrachloride | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Chlorobenzene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Chloroethane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Chloroform | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Chloromethane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| cis-1,2-Dichloroethene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| cis-1,3-Dichloropropene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Cyclohexane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Dibromochloromethane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Ethyl acetate | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Ethylbenzene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Freon 11 | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Freon 113 | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Freon 114 | ND | 5.0 | | ppbV | 1 | 6/3/2004 |

| **Qualifiers:** | | | | |
|---|---|---|---|---|
| | * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| | J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| | S | Spike Recovery outside accepted recovery limits | | |

# Centek Laboratories, LLC

**Date:** *04-Jun-04*

**CLIENT:** Bergman Associates

**Lab Order:** C0406004

**Project:** BVS-1214 E. Main St

**Lab ID:** C0406004-001A

**Client Sample ID:** BVS-Efflunet

**Tag Number:** 40

**Collection Date:** 6/1/2004

**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Heptane | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Hexachloro-1,3-butadiene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Hexane | 5.9 | 5.0 | | ppbV | 1 | 6/3/2004 |
| Isopropyl alcohol | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| m-Xylene | 6.7 | 5.0 | | ppbV | 1 | 6/3/2004 |
| Methyl Butyl Ketone | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Methyl Ethyl Ketone | 14 | 5.0 | | ppbV | 1 | 6/3/2004 |
| Methyl Isobutyl Ketone | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Methyl tert-butyl ether | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Methylene chloride | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| o-Xylene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| p-Xylene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Propylene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Styrene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Tetrachloroethylene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Tetrahydrofuran | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Toluene | 12 | 5.0 | | ppbV | 1 | 6/3/2004 |
| trans-1,2-Dichloroethene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| trans-1,3-Dichloropropene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Trichloroethene | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Vinyl acetate | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Vinyl Bromide | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Vinyl chloride | ND | 5.0 | | ppbV | 1 | 6/3/2004 |
| Surr: Bromofluorobenzene | 98.5 | 91.3-108 | | %REC | 1 | 6/3/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

# Centek Laboratories, LLC

**Date:** *04-Jun-04*

**CLIENT:** Bergman Associates
**Lab Order:** C0406004
**Project:** BVS-1214 E. Main St
**Lab ID:** C0406004-001A

**Client Sample ID:** BVS-Efflunet
**Tag Number:** 40
**Collection Date:** 6/1/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15** | | **TO-15** | | | | Analyst: **RJP** |
| 1,1,1-Trichloroethane | ND | 28 | | ug/m3 | 1 | 6/3/2004 |
| 1,1,2,2-Tetrachloroethane | ND | 35 | | ug/m3 | 1 | 6/3/2004 |
| 1,1,2-Trichloroethane | ND | 28 | | ug/m3 | 1 | 6/3/2004 |
| 1,1-Dichloroethane | ND | 21 | | ug/m3 | 1 | 6/3/2004 |
| 1,1-Dichloroethene | ND | 20 | | ug/m3 | 1 | 6/3/2004 |
| 1,2,4-Trichlorobenzene | ND | 38 | | ug/m3 | 1 | 6/3/2004 |
| 1,2,4-Trimethylbenzene | ND | 25 | | ug/m3 | 1 | 6/3/2004 |
| 1,2-Dibromoethane | ND | 39 | | ug/m3 | 1 | 6/3/2004 |
| 1,2-Dichlorobenzene | ND | 31 | | ug/m3 | 1 | 6/3/2004 |
| 1,2-Dichloroethane | ND | 21 | | ug/m3 | 1 | 6/3/2004 |
| 1,2-Dichloropropane | ND | 23 | | ug/m3 | 1 | 6/3/2004 |
| 1,3,5-Trimethylbenzene | ND | 25 | | ug/m3 | 1 | 6/3/2004 |
| 1,3-butadiene | ND | 11 | | ug/m3 | 1 | 6/3/2004 |
| 1,3-Dichlorobenzene | ND | 31 | | ug/m3 | 1 | 6/3/2004 |
| 1,4-Dichlorobenzene | ND | 31 | | ug/m3 | 1 | 6/3/2004 |
| 1,4-Dioxane | ND | 18 | | ug/m3 | 1 | 6/3/2004 |
| 2,2,4-trimethylpentane | ND | 24 | | ug/m3 | 1 | 6/3/2004 |
| 4-ethyltoluene | ND | 25 | | ug/m3 | 1 | 6/3/2004 |
| Acetone | 190 | 12 | | ug/m3 | 1 | 6/3/2004 |
| Allyl chloride | ND | 16 | | ug/m3 | 1 | 6/3/2004 |
| Benzene | ND | 16 | | ug/m3 | 1 | 6/3/2004 |
| Benzyl chloride | ND | 29 | | ug/m3 | 1 | 6/3/2004 |
| Bromodichloromethane | ND | 34 | | ug/m3 | 1 | 6/3/2004 |
| Bromoform | ND | 53 | | ug/m3 | 1 | 6/3/2004 |
| Bromomethane | ND | 20 | | ug/m3 | 1 | 6/3/2004 |
| Carbon disulfide | ND | 16 | | ug/m3 | 1 | 6/3/2004 |
| Carbon tetrachloride | ND | 32 | | ug/m3 | 1 | 6/3/2004 |
| Chlorobenzene | ND | 23 | | ug/m3 | 1 | 6/3/2004 |
| Chloroethane | ND | 13 | | ug/m3 | 1 | 6/3/2004 |
| Chloroform | ND | 25 | | ug/m3 | 1 | 6/3/2004 |
| Chloromethane | ND | 10 | | ug/m3 | 1 | 6/3/2004 |
| cis-1,2-Dichloroethene | ND | 20 | | ug/m3 | 1 | 6/3/2004 |
| cis-1,3-Dichloropropene | ND | 23 | | ug/m3 | 1 | 6/3/2004 |
| Cyclohexane | ND | 17 | | ug/m3 | 1 | 6/3/2004 |
| Dibromochloromethane | ND | 43 | | ug/m3 | 1 | 6/3/2004 |
| Ethyl acetate | ND | 18 | | ug/m3 | 1 | 6/3/2004 |
| Ethylbenzene | ND | 22 | | ug/m3 | 1 | 6/3/2004 |
| Freon 11 | ND | 29 | | ug/m3 | 1 | 6/3/2004 |
| Freon 113 | ND | 39 | | ug/m3 | 1 | 6/3/2004 |
| Freon 114 | ND | 36 | | ug/m3 | 1 | 6/3/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

## Centek Laboratories, LLC

**Date:** *04-Jun-04*

**CLIENT:** Bergman Associates
**Lab Order:** C0406004
**Project:** BVS-1214 E. Main St
**Lab ID:** C0406004-001A

**Client Sample ID:** BVS-Efflunet
**Tag Number:** 40
**Collection Date:** 6/1/2004
**Matrix:** AIR

| Analyses | Result | Limit | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **AIR TOXIC TO15** | | **TO-15** | | | | Analyst: **RJP** |
| Freon 12 | ND | 25 | | ug/m3 | 1 | 6/3/2004 |
| Heptane | ND | 21 | | ug/m3 | 1 | 6/3/2004 |
| Hexachloro-1,3-butadiene | ND | 54 | | ug/m3 | 1 | 6/3/2004 |
| Hexane | 21 | 18 | | ug/m3 | 1 | 6/3/2004 |
| Isopropyl alcohol | ND | 12 | | ug/m3 | 1 | 6/3/2004 |
| m-Xylene | 30 | 22 | | ug/m3 | 1 | 6/3/2004 |
| Methyl Butyl Ketone | ND | 21 | | ug/m3 | 1 | 6/3/2004 |
| Methyl Ethyl Ketone | 41 | 15 | | ug/m3 | 1 | 6/3/2004 |
| Methyl Isobutyl Ketone | ND | 21 | | ug/m3 | 1 | 6/3/2004 |
| Methyl tert-butyl ether | ND | 18 | | ug/m3 | 1 | 6/3/2004 |
| Methylene chloride | ND | 18 | | ug/m3 | 1 | 6/3/2004 |
| o-Xylene | ND | 22 | | ug/m3 | 1 | 6/3/2004 |
| p-Xylene | ND | 22 | | ug/m3 | 1 | 6/3/2004 |
| Propylene | ND | 8.7 | | ug/m3 | 1 | 6/3/2004 |
| Styrene | ND | 22 | | ug/m3 | 1 | 6/3/2004 |
| Tetrachloroethylene | ND | 34 | | ug/m3 | 1 | 6/3/2004 |
| Tetrahydrofuran | ND | 15 | | ug/m3 | 1 | 6/3/2004 |
| Toluene | 46 | 19 | | ug/m3 | 1 | 6/3/2004 |
| trans-1,2-Dichloroethene | ND | 20 | | ug/m3 | 1 | 6/3/2004 |
| trans-1,3-Dichloropropene | ND | 23 | | ug/m3 | 1 | 6/3/2004 |
| Trichloroethene | ND | 27 | | ug/m3 | 1 | 6/3/2004 |
| Vinyl acetate | ND | 18 | | ug/m3 | 1 | 6/3/2004 |
| Vinyl Bromide | ND | 22 | | ug/m3 | 1 | 6/3/2004 |
| Vinyl chloride | ND | 13 | | ug/m3 | 1 | 6/3/2004 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| S | Spike Recovery outside accepted recovery limits | | |

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 2 of 2

**Client:** **Bergmann Associates**
**Client Sample ID:** **1214/1216 SS-1**
**Client Project ID:** **City of Rochester, 1200 E. Main Street/4453.02**

CAS Project ID: P2302016
CAS Sample ID: P2302016-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00245

Date Collected: 9/18/03
Date Received: 9/22/03
Date Analyzed: 9/29/03
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -1.3 Pf 1 = 3.5

D.F. = 1.36

| CAS # | Compound | Result $\mu g/m^3$ | MRL $\mu g/m^3$ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 79-01-6 | Trichloroethene | **12** | 1.4 | **2.3** | 0.25 | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 1.4 | ND | 0.30 | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 1.4 | ND | 0.33 | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 1.4 | ND | 0.30 | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.4 | ND | 0.25 | |
| 108-88-3 | Toluene | **18** | 1.4 | **4.7** | 0.36 | |
| 591-78-6 | 2-Hexanone | **1.4** | 1.4 | **0.35** | 0.33 | |
| 124-48-1 | Dibromochloromethane | ND | 1.4 | ND | 0.16 | |
| 106-93-4 | 1,2-Dibromoethane | ND | 1.4 | ND | 0.18 | |
| 127-18-4 | Tetrachloroethene | **38** | 1.4 | **5.7** | 0.20 | |
| 108-90-7 | Chlorobenzene | ND | 1.4 | ND | 0.30 | |
| 100-41-4 | Ethylbenzene | **3.0** | 1.4 | **0.70** | 0.31 | |
| 136777-61-2 | *m,p*-Xylenes | **11** | 1.4 | **2.6** | 0.31 | |
| 75-25-2 | Bromoform | ND | 1.4 | ND | 0.13 | |
| 100-42-5 | Styrene | **3.2** | 1.4 | **0.75** | 0.32 | |
| 95-47-6 | o-Xylene | **3.8** | 1.4 | **0.88** | 0.31 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 1.4 | ND | 0.20 | |
| 108-67-8 | 1,3,5-Trimethylbenzene | **2.2** | 1.4 | **0.44** | 0.28 | |
| 95-63-6 | 1,2,4-Trimethylbenzene | **8.7** | 1.4 | **1.8** | 0.28 | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 1.4 | ND | 0.23 | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 1.4 | ND | 0.23 | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 1.4 | ND | 0.23 | |

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:__________________ Date:____________

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS
Page 1 of 2

**Client:** **Bergmann Associates**
**Client Sample ID:** **1214/1216 SS-1**
**Client Project ID:** **City of Rochester, 1200 E. Main Street/4453.02**

CAS Project ID: P2302016
CAS Sample ID: P2302016-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3
Analyst: Svetlana Walsh
Sampling Media: Summa Canister
Test Notes:
Container ID: SC00245

Date Collected: 9/18/03
Date Received: 9/22/03
Date Analyzed: 9/29/03
Volume(s) Analyzed: 1.00 Liter(s)

Pi 1 = -1.3 Pf 1 = 3.5

D.F. = 1.36

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 74-87-3 | Chloromethane | ND | 1.4 | ND | 0.66 | |
| 75-01-4 | Vinyl Chloride | ND | 1.4 | ND | 0.53 | |
| 74-83-9 | Bromomethane | ND | 1.4 | ND | 0.35 | |
| 75-00-3 | Chloroethane | ND | 1.4 | ND | 0.52 | |
| 67-64-1 | Acetone | **18** | 6.8 | **7.4** | 2.9 | |
| 75-69-4 | Trichlorofluoromethane | **2.0** | 1.4 | **0.35** | 0.24 | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.4 | ND | 0.34 | |
| 75-09-2 | Methylene chloride | **1.5** | 1.4 | **0.44** | 0.39 | |
| 76-13-1 | Trichlorotrifluoroethane | **8.6** | 1.4 | **1.1** | 0.18 | |
| 75-15-0 | Carbon Disulfide | **12** | 1.4 | **3.9** | 0.44 | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.4 | ND | 0.34 | |
| 75-34-3 | 1,1-Dichloroethane | ND | 1.4 | ND | 0.34 | |
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 1.4 | ND | 0.38 | |
| 108-05-4 | Vinyl Acetate | **4.6** | 1.4 | **1.3** | 0.39 | **M** |
| 78-93-3 | 2-Butanone (MEK) | **4.9** | 1.4 | **1.7** | 0.46 | |
| 156-59-2 | cis-1,2-Dichloroethene | **1.9** | 1.4 | **0.48** | 0.34 | |
| 67-66-3 | Chloroform | **26** | 1.4 | **5.3** | 0.28 | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.4 | ND | 0.34 | |
| 71-55-6 | 1,1,1-Trichloroethane | **4.3** | 1.4 | **0.79** | 0.25 | |
| 71-43-2 | Benzene | **1.8** | 1.4 | **0.56** | 0.43 | |
| 56-23-5 | Carbon Tetrachloride | ND | 1.4 | ND | 0.22 | |
| 78-87-5 | 1,2-Dichloropropane | ND | 1.4 | ND | 0.29 | |
| 75-27-4 | Bromodichloromethane | **1.9** | 1.4 | **0.28** | 0.20 | |

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
M = Matrix interference; results may be biased high.

Verified By:____________________ Date:______________

# NEW YORK STATE DEPARTMENT OF HEALTH
# DIVISION OF ENVIRONMENTAL HEALTH ASSESSMENT
# BUREAU OF TOXIC SUBSTANCE ASSESSMENT

## INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY

This form must be completed for each residence involved in indoor air testing.

Preparer's Name JIM MARZSCHNER Date Prepared 10/12/04

Preparer's Affiliation BERGMANN ASSOC Phone No. 232-5135 (2860)

**1. OCCUPANT**

Name: VACANT AT TIME OF INVENTORY

Address: ____________

____________

County: ____________

Home Phone No. ____________ Office Phone No ____________

**2. OWNER OR LANDLORD:**
(If different than occupant)

Name: KEVIN CREGO

Address: ____________

____________

Phone No. 506-7151

## A. Building Construction Characteristics

Type (circle appropriate responses): Single Family [✓ Multiple Dwelling] Commercial

Ranch
Raised Ranch
Split Level
Colonial
Mobile Home

2-Family
Duplex
[✓ Apartment House] 4 Units
Number of floors 2 + BASEMENT
Other specify ____________

Residence Age ____________ General Description of Building Construction Materials WOOD FRAME ON BRICK BLOCK BASEMENT

Is the building insulated? [✓ Yes] No How air tight is the building OLD STYLE WINDOWS W/ STORMS

**OSR-3 (continued)**

**B.** **Basement construction characteristics (circle all that apply):**

1. [✓ Full basement,] crawlspace, slab on grade, other __________
2. Basement floor: [✓ concrete,] dirt, other __________
3. Concrete floor: [✓ unsealed,] painted, covered; with __________
4. Foundation walls: poured concrete, block, [✓ laid up stone,] other Brick
5. The basement is: wet, damp, [✓ dry] ________ Sump present? ~~y~~ [✓ n] ____ Water in sump? y [✓ n] —
6. The basement is: finished, [✓ unfinished] __________
7. Identify potential soil vapor entry points (e.g., cracks, utility ports etc.)
   CRACKS IN FLOOR SURFACE
8. Describe how air tight the basement is WINDOWS BOARDED UP & BASEMENT DOOR IS KEPT CLOSED BY ORDER OF FIRE MARSHAL

**C.** **HVAC (circle all that apply):**

1. The type of heating system(s) used in this residence is/are:

| | |
|---|---|
| [✓ Hot Air Circulation] | Heat Pump |
| Hot Water Radiation | Unvented Kerosene Heater |
| Steam Radiation | Wood stove |
| Electric Baseboard | Other (specify) __________ |

2. The type(s) of fuel(s) used is/are: [✓ Natural Gas,] Fuel Oil, Electric, Wood Coal Solar
   Other (specify) __________.
3. Is the heating system's power plant located in the basement or another area: BASEMENT.
4. Is there air-conditioning? Yes / [✓ No] Central Air or Window Units?
   Specify the location __________
5. Are there air distribution ducts present? [✓ Yes] / No
6. Describe the supply and cold air return duct work in the basement including whether there is a cold air return, the tightness of duct joints
   COLD AIR RETURN TO HVAC UNIT DUCT (METAL) SLIP FIT TOGETHER.
   ONE FLOOR VENT NO DUCT WORK

1 FLOOR VENT WOOD GRATE - CAN SEE THROUGH FROM BASEMENT TO FIRST FLOOR APT.

**OSR-3 (continued)**

## D. Potential Indoor Sources of Pollution

1. Has the house ever had a fire? Yes / No ?
2. Is there an attached garage? Yes [✓ No]
3. Is a vehicle normally parked in the garage? ~~Yes / No~~
4. Is there a kerosene heater present? Yes [✓ No]
5. Is there a workshop, hobby or craft area in the residence? Yes [✓ No]
6. An inventory of all products used or stored in the home should be performed. Any products that contain volatile organic compounds or chemicals similar to the target compounds should be listed. The attached product inventory form should be used for this purpose.
7. Is there a kitchen exhaust fan? Yes [✓ No] Where is it vented? ____________________
8. Has the house ever been fumigated? If [✓ yes] describe date, type and location of treatment.
   MOUSE|RATS IN BASEMENT PRE 2002

## E. Water and Sewage (Circle the appropriate response)

**Source of Water**

[✓ Public Water] Drilled Well Driven Well Dug Well Other (Specify) ______________

**Water Well Specifications:**

Well Diameter __________________________ Grouted or Ungrouted ______________

Well Depth ____________________________ Type of Storage Tank ______________

Depth to Bedrock _______________________ Size of Storage Tank ______________

Feet of Casing __________________________ Describe type(s) of Treatment _______

____________________________________________________________________________

**Water Quality:**

Taste and/or odor problems? y / n If so, describe ________________________________________

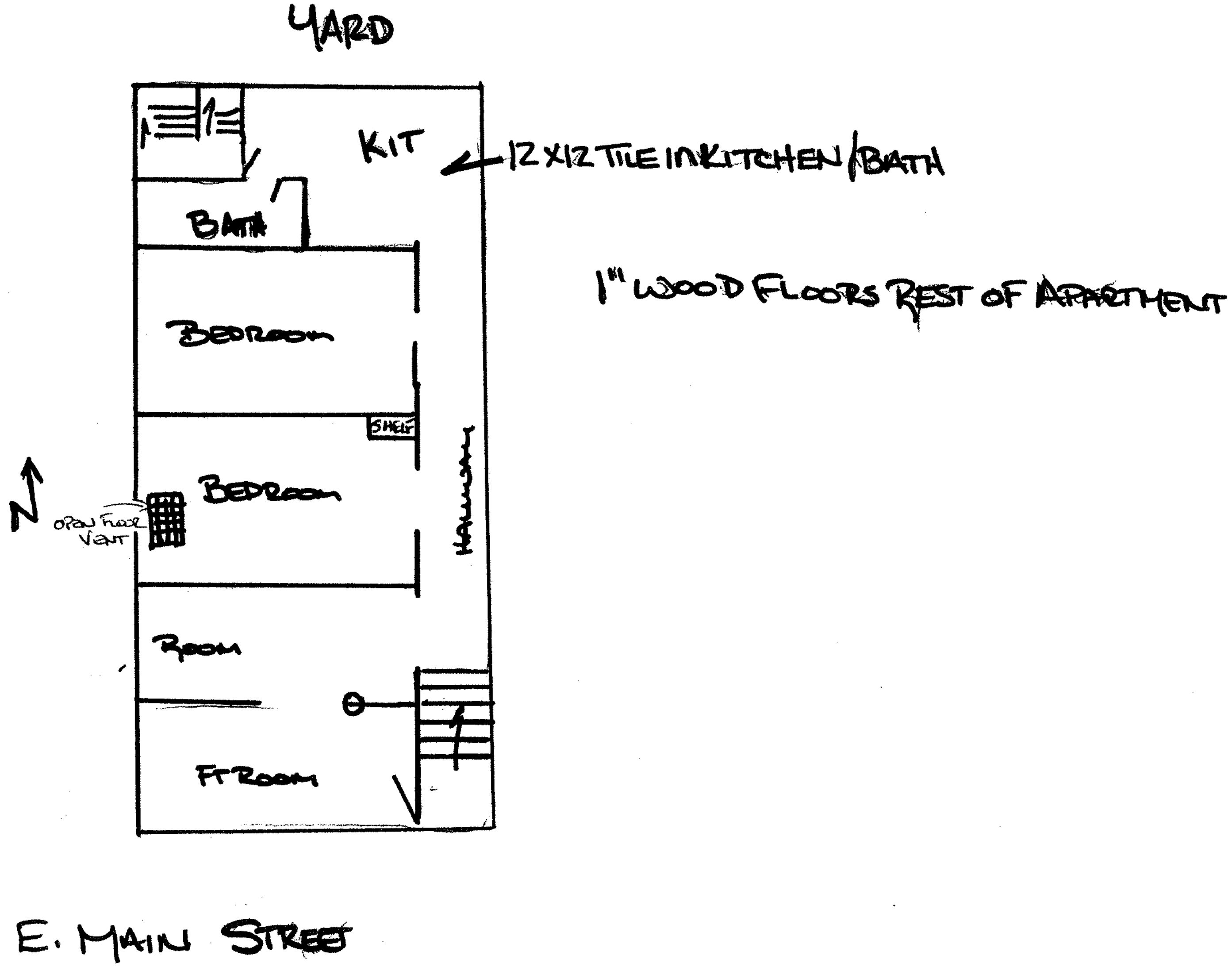
How long has the taste and/or odor been present? ____________________________________

**Sewage Disposal:** [✓ Public Sewer] Septic Tank Leach Field Other (Specify) ____________________

Distance from well to septic system ________ Type of septic tank additive _______________

## F. Plan View

Draw a plan view sketch for each floor of the residence and if applicable, indicate air sampling locations, possible indoor air pollution sources and PID meter readings.



**OSR-3 (continued)**

## G. Potential Outdoor Sources of Pollution

Draw a sketch of the area surrounding the residence being sampled. If applicable, provide information on the spill location (if known), potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system if applicable, and a qualifying statement to help locate the site on a topographical map.

12/14/04 SAMPLE INFO

NOTES: 52°F

CLOUDY W/ OCCASIONAL SPRINKLE OF RAIN

LITTLE TO NO BREEZE

1ST FLOOR SAMPLE = SOUTHERN BEDROOM ON SHELF BUILT INTO WALL

BASEMENT SAMPLE = MID TO NORTH END OF BASEMENT HUNG ON WALL
NORTH OF FURNACE EQUIPMENT

BACKGROUND = SAMPLE COLLECTED ~3.5' OFF GROUND SURFACE
SUMMA HUNG ON FENCE IN MIDDLE OF THE SITE

BVS FAN IS OFF
↳ POWER SHUT OFF TO 1ST FLOOR APPT.

## Household Products Inventory

Occupant / residence VACANT

Investigator: J. MARSCHNER Date: 10/12/04

| Product description (dispenser, size, manufacturer …) | VOC Ingredients | PID Reading |
|---|---|---|
| PINESOL 15FLOZ, CLOROX CO | | |
| OLD DUTCH CLEANSER, 21 OZ, FITZPATRICK | | |
| WHITE VINEGAR | | |
| | | |
| NATURAL GAS TO 2 HOT $H_2O$ TANKS | | |
| & TO 2 HVAC UNITS (HEAT ONLY) | | |
| (2) 275 GALLON FUEL OIL TANKS | APPEAR EMPTY | |
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| | | |

1ST FLOOR

BASEM

City of Rochester Environmental Restoration Program
1200 East Main Street
1214 Basement Ventilation System Inspection Log

| Date | Time | Inspector | Fan Exhaust |  | Communication Point Readings (Inches of Water) |  |  | Fan Operation | Samples Collected | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
|  |  |  | * Air Flow (SCFM) ("$H_2O$) | PID (PPM) | No. 1 | No. 2 | No. 3 |  |  |  |
| 5/13/04 | PM | JM | — | 0 | — | — | — | Y | N | MEMO REGARDING INST |
| 5/14/04 | AM | JM | — | ~ 0.1 | 0.09 | 0.02 | 0.03 | Y | N | — |
| 6/1 | AM | JM | AVG 35 CFM<br>-1.5" $H_2O$ | 0 | 0.08 | 0.07 | 0.05 | Y | Y | 1ST SAMPLE<br>BVS SAMPLE |
| 7/11 | AM | JM | -1.5 $H_2O$ | NR | 0.08 | 0.09 | 0.06 | Y | Y | BACKGROUND &<br>BVS SAMPLE |
| 8/9 | AM | JM | AVG 32 ft³/min<br>-1.5 $H_2O$ | NR | 0.07 | 0.09 | 0.06 | Y | Y | 0.7 • BASEMENT, AMBIENT & BVS EFF |
| 9/8 | AM | JM | -1.5" $H_2O$ | NR | 0.07 | 0.09 | 0.06 | Y | Y | RUN 1 BVS SAMPLE |
| 10/14 | AM/PM | JM | OFF (POWER OFF TO APARTMENT & SYSTEM) |  |  |  |  |  |  | — |
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Fantech Model HP2190

| Pressure Inches of Water | Flow Cubic Feet per Minute |
|---|---|
| 0.1 | 0.55 |
| 0.2 | 0.50 |
| 0.3 | 0.40 |
| 0.4 | 0.35 |

* "$H_2O$ TAKEN w/ DIGITAL MANOMETER.

4 POSSIBLE SAMPLE LOCS

- BVS EFFLUENT
- BACKGROUND (ON FENCE MID OF 1200 E. MAIN
- BASEMENT AMBIENT
- BASEMENT SUBSLAB

Created by Bergmann Associates (May 14, 2004)

# APPENDIX 13

## 2003 Slug Test and Hydraulic Conductivity Results

Data Set: C:\Program Files\HydroSOLVE\AQTESOLV for Windows Standard 3.0\1200 East Main St. MW-5.aqt
Title: Slug Test
Date: 07/19/05
Time: 16:01:50

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Location: 1200 East Main St.
Test Date: September 11, 2003
Test Well: MW-5

## AQUIFER DATA

Saturated Thickness: 10.2 cm
Anisotropy Ratio (Kz/Kr): 0.01

## SLUG TEST WELL DATA

Initial Displacement: 0.864 cm
Casing Radius: 0.083 cm
Wellbore Radius: 0.161 cm
Well Skin Radius: 0.161 cm
Screen Length: 12. cm
Total Well Penetration Depth: 10.2 cm
Gravel Pack Porosity: 0.3

No. of observations: 20

Observation Data

| Time (sec) | Displacement (cm) | Time (sec) | Displacement (cm) |
|---|---|---|---|
| 1. | 0.864 | 11. | 0.04 |
| 2. | 0.657 | 12. | 0.038 |
| 3. | 0.524 | 13. | 0.036 |
| 4. | 0.253 | 14. | 0.034 |
| 5. | 0.128 | 15. | 0.032 |
| 6. | 0.082 | 20. | 0.025 |
| 7. | 0.064 | 30. | 0.018 |
| 8. | 0.055 | 40. | 0.015 |
| 9. | 0.048 | 50. | 0.014 |
| 10. | 0.044 | 60. | 0.013 |

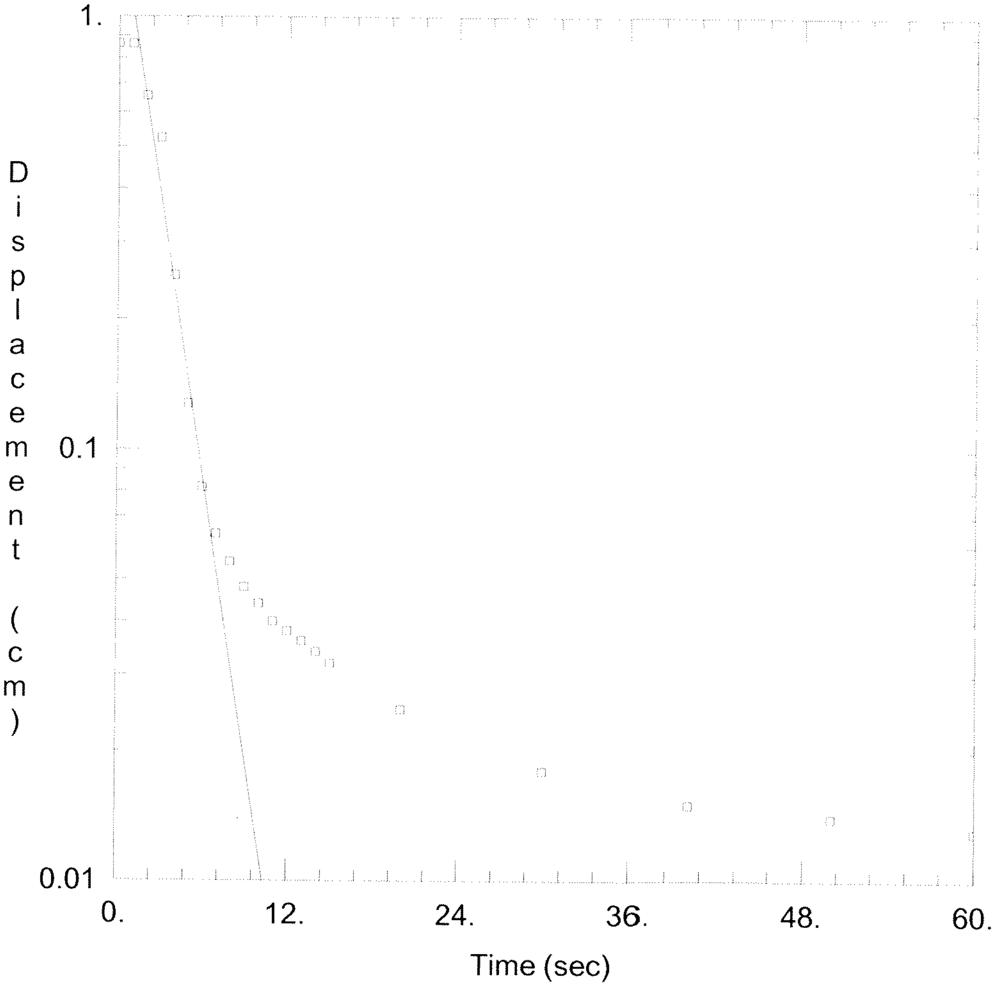
## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

## VISUAL ESTIMATION RESULTS

### Estimated Parameters

| Parameter | Estimate | |
|---|---|---|
| K | 0.0004576 | cm/sec |
| y0 | 1.734 | cm |



## SLUG TEST

Data Set: C:\...\1200 East Main St. MW-5.aqt
Date: 07/19/05 Time: 16:01:57

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Test Location: 1200 East Main St.
Test Well: MW-5
Test Date: September 11, 2003

## AQUIFER DATA

Saturated Thickness: 10.2 cm
Anisotropy Ratio (Kz/Kr): 0.01

## WELL DATA (MW-5)

Initial Displacement: 0.864 cm
Wellbore Radius: 0.161 cm
Screen Length: 12. cm
Gravel Pack Porosity: 0.3

Casing Radius: 0.083 cm
Well Skin Radius: 0.161 cm
Total Well Penetration Depth: 10.2 cm

## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

Data Set: C:\Program Files\HydroSOLVE\AQTESOLV for Windows Standard 3.0\1200 East Main St. MW-6.aqt
Title: Slug Test
Date: 07/19/05
Time: 16:02:52

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Location: 1200 East Main Street
Test Date: September 11, 2003
Test Well: MW-6

## AQUIFER DATA

Saturated Thickness: 7.97 cm
Anisotropy Ratio (Kz/Kr): 0.01

## SLUG TEST WELL DATA

Initial Displacement: 1.866 cm
Casing Radius: 0.083 cm
Wellbore Radius: 0.161 cm
Well Skin Radius: 0.161 cm
Screen Length: 12. cm
Total Well Penetration Depth: 7.97 cm
Gravel Pack Porosity: 0.3

No. of observations: 18

Observation Data

| Time (sec) | Displacement (cm) | Time (sec) | Displacement (cm) |
|---|---|---|---|
| 0. | 1.866 | 9. | 0.862 |
| 1. | 1.412 | 10. | 0.86 |
| 2. | 1.231 | 11. | 0.856 |
| 3. | 1.137 | 12. | 0.851 |
| 4. | 0.885 | 13. | 0.846 |
| 5. | 0.861 | 14. | 0.842 |
| 6. | 0.859 | 15. | 0.838 |
| 7. | 0.861 | 30. | 0.775 |
| 8. | 0.863 | 60. | 0.575 |

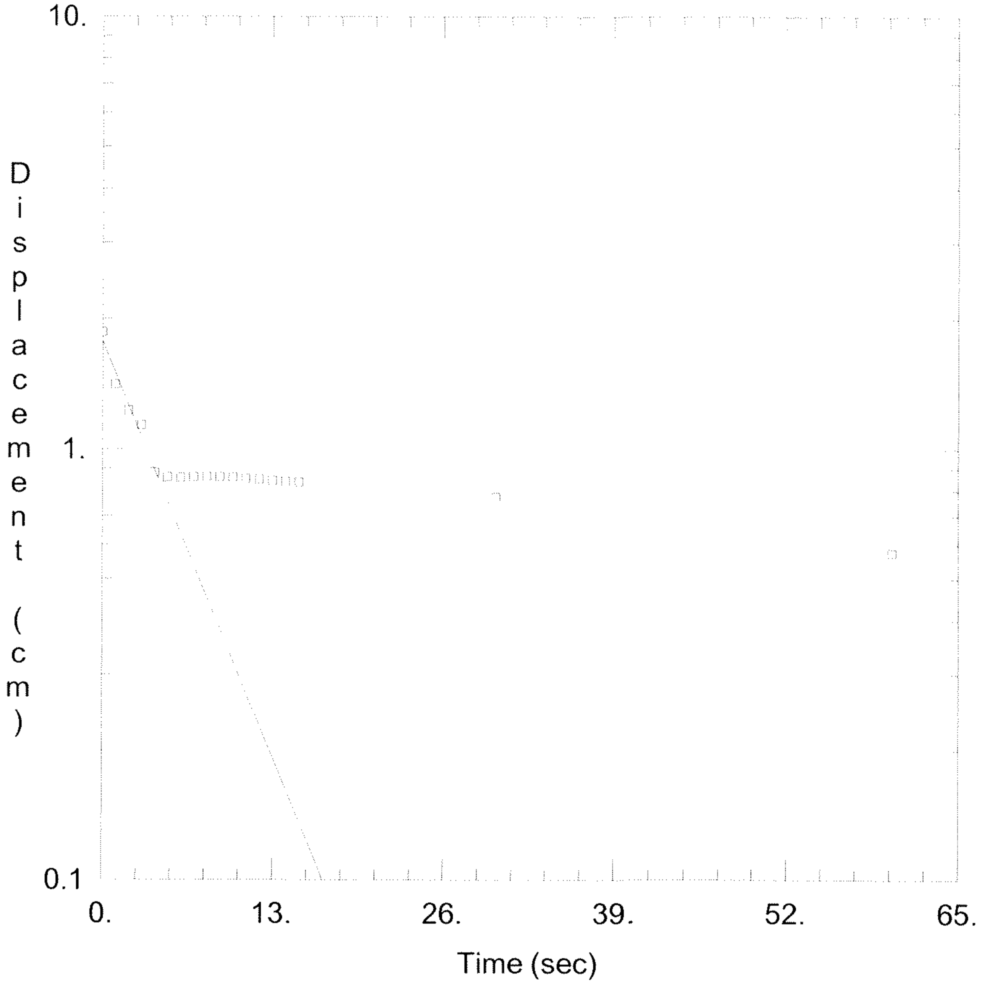
## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

## VISUAL ESTIMATION RESULTS

### Estimated Parameters

| Parameter | Estimate | |
|---|---|---|
| K | 0.0001492 | cm/sec |
| y0 | 1.783 | cm |



## SLUG TEST

Data Set: C:\...\1200 East Main St. MW-6.aqt
Date: 07/19/05 Time: 16:03:03

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Test Location: 1200 East Main Street
Test Well: MW-6
Test Date: September 11, 2003

## AQUIFER DATA

Saturated Thickness: 7.97 cm
Anisotropy Ratio (Kz/Kr): 0.01

## WELL DATA (MW-6)

Initial Displacement: 1.866 cm
Wellbore Radius: 0.161 cm
Screen Length: 12. cm
Gravel Pack Porosity: 0.3
Casing Radius: 0.083 cm
Well Skin Radius: 0.161 cm
Total Well Penetration Depth: 7.97 cm

## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

Data Set: C:\Program Files\HydroSOLVE\AQTESOLV for Windows Standard 3.0\1200 East Main St MW-7.aqt
Date: 07/19/05
Time: 16:05:11

## AQUIFER DATA

Saturated Thickness: 5.26 cm
Anisotropy Ratio (Kz/Kr): 0.01

## SLUG TEST WELL DATA

Initial Displacement: 2.561 cm
Casing Radius: 0.083 cm
Wellbore Radius: 0.161 cm
Well Skin Radius: 0.161 cm
Screen Length: 12. cm
Total Well Penetration Depth: 5.26 cm
Gravel Pack Porosity: 0.3

No. of observations: 21

Observation Data

| Time (sec) | Displacement (cm) | Time (sec) | Displacement (cm) |
|---|---|---|---|
| 0. | 2.561 | 11. | 0.314 |
| 1. | 1.742 | 12. | 0.288 |
| 2. | 1.424 | 13. | 0.267 |
| 3. | 1.236 | 14. | 0.249 |
| 4. | 0.742 | 15. | 0.233 |
| 5. | 0.638 | 16. | 0.219 |
| 6. | 0.554 | 17. | 0.207 |
| 7. | 0.485 | 18. | 0.198 |
| 8. | 0.428 | 19. | 0.19 |
| 9. | 0.382 | 20. | 0.182 |
| 10. | 0.344 | | |

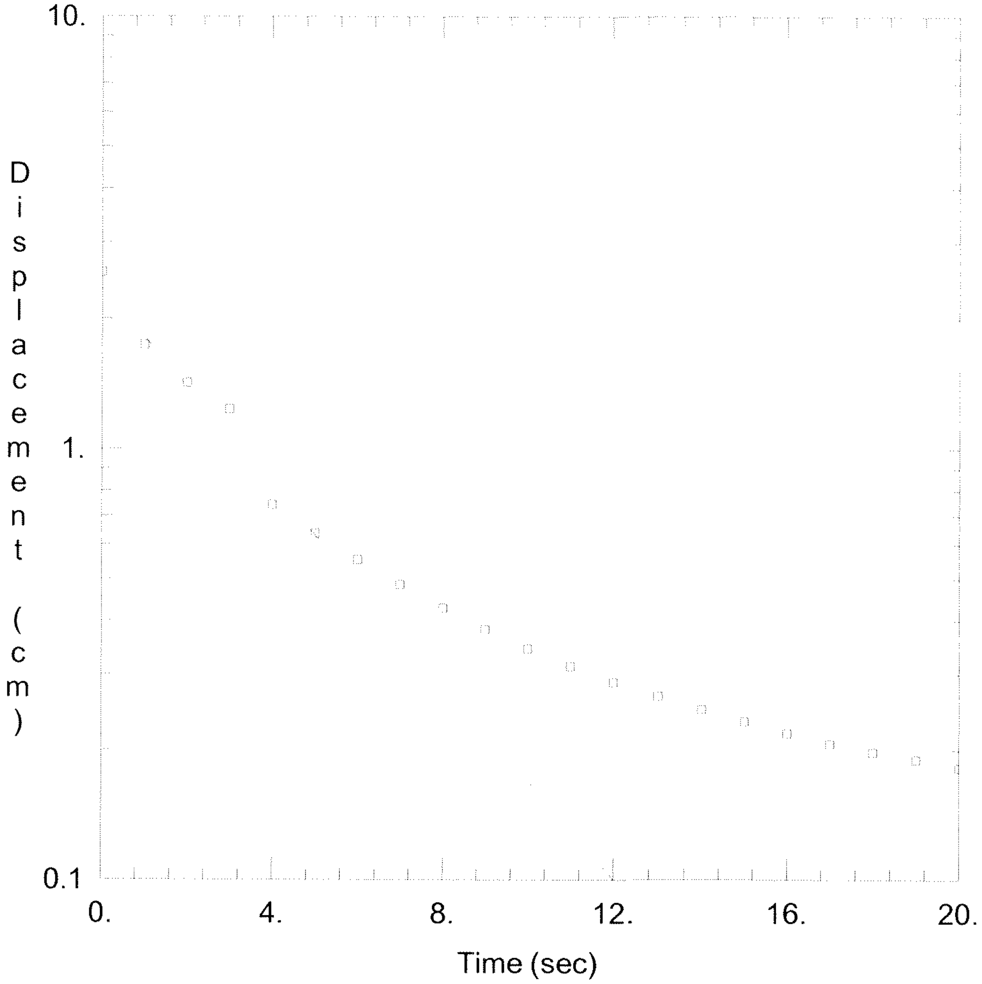
## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

## VISUAL ESTIMATION RESULTS

### Estimated Parameters

| Parameter | Estimate | |
|---|---|---|
| K | 0.0002085 | cm/sec |
| y0 | 2.361 | cm |



## WELL TEST ANALYSIS

Data Set: C:\...\1200 East Main St MW-7.aqt
Date: 07/19/05
Time: 16:05:16

## AQUIFER DATA

Saturated Thickness: 5.26 cm
Anisotropy Ratio (Kz/Kr): 0.01

## WELL DATA (OW 1)

Initial Displacement: 2.561 cm
Casing Radius: 0.083 cm
Wellbore Radius: 0.161 cm
Well Skin Radius: 0.161 cm
Screen Length: 12. cm
Total Well Penetration Depth: 5.26 cm
Gravel Pack Porosity: 0.3

## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0002085 cm/sec
y0 = 2.361 cm

Data Set: C:\Program Files\HydroSOLVE\AQTESOLV for Windows Standard 3.0\1200 East Main St. MW-8.aqt
Title: Slug Test
Date: 07/19/05
Time: 16:09:24

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Location: 1200 East Main Street
Test Date: Sept. 11, 2003
Test Well: MW-8

## AQUIFER DATA

Saturated Thickness: 2.97 cm
Anisotropy Ratio (Kz/Kr): 0.01

## SLUG TEST WELL DATA

Initial Displacement: 0.863 cm
Casing Radius: 0.083 cm
Wellbore Radius: 0.161 cm
Well Skin Radius: 0.161 cm
Screen Length: 12. cm
Total Well Penetration Depth: 2.97 cm
Gravel Pack Porosity: 0.3

No. of observations: 21

Observation Data

| Time (sec) | Displacement (cm) | Time (sec) | Displacement (cm) |
|---|---|---|---|
| 0. | 0.863 | 11. | 0.784 |
| 1. | 0.858 | 12. | 0.78 |
| 2. | 0.853 | 13. | 0.776 |
| 3. | 0.848 | 14. | 0.772 |
| 4. | 0.837 | 15. | 0.768 |
| 5. | 0.827 | 20. | 0.752 |
| 6. | 0.817 | 30. | 0.725 |
| 7. | 0.809 | 40. | 0.702 |
| 8. | 0.801 | 50. | 0.682 |
| 9. | 0.795 | 60. | 0.662 |
| 10. | 0.789 | | |

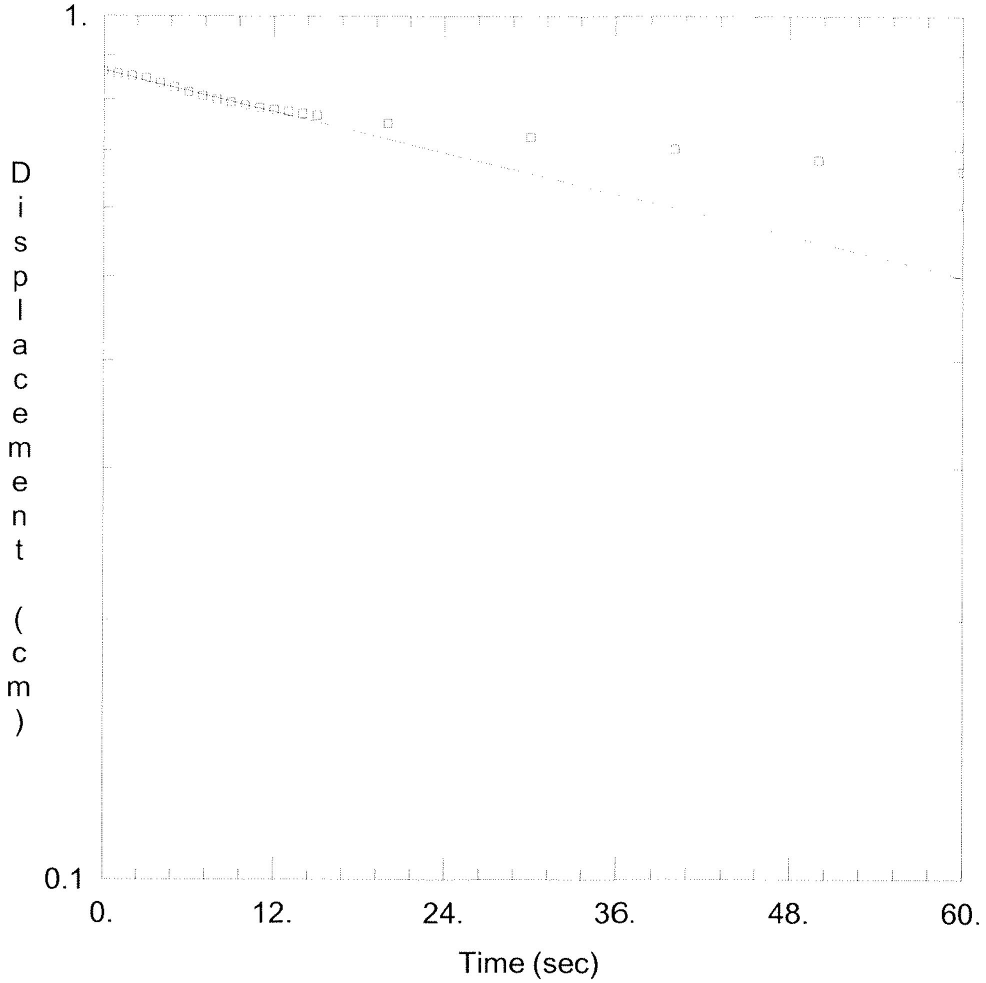
## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

## VISUAL ESTIMATION RESULTS

Estimated Parameters

| Parameter | Estimate | |
|---|---|---|
| K | 6.207E-06 | cm/sec |



### SLUG TEST

Data Set: C:\...\1200 East Main St. MW-8.aqt
Date: 07/19/05 Time: 16:09:19

### PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Test Location: 1200 East Main Street
Test Well: MW-8
Test Date: Sept. 11, 2003

### AQUIFER DATA

Saturated Thickness: 2.97 cm
Anisotropy Ratio (Kz/Kr): 0.01

### WELL DATA (MW-8)

Initial Displacement: 0.863 cm
Wellbore Radius: 0.161 cm
Screen Length: 12. cm
Gravel Pack Porosity: 0.3
Casing Radius: 0.083 cm
Well Skin Radius: 0.161 cm
Total Well Penetration Depth: 2.97 cm

### SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

Data Set: C:\Program Files\HydroSOLVE\AQTESOLV for Windows Standard 3.0\1200 East Main St MW-9 R.ac
Title: Slug
Date: 07/19/05
Time: 16:12:06

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Location: 1200 East Main St.
Test Date: Sept. 11, 2003
Test Well: MW-9

## AQUIFER DATA

Saturated Thickness: 10.13 cm
Anisotropy Ratio (Kz/Kr): 0.01

## SLUG TEST WELL DATA

Initial Displacement: 1.617 cm
Casing Radius: 0.083 cm
Wellbore Radius: 0.161 cm
Well Skin Radius: 0.161 cm
Screen Length: 13. cm
Total Well Penetration Depth: 10.13 cm
Gravel Pack Porosity: 0.3

No. of observations: 25

Observation Data

| Time (sec) | Displacement (cm) | Time (sec) | Displacement (cm) |
|---|---|---|---|
| 0. | 0. | 13. | 0.774 |
| 1. | 0.883 | 14. | 0.724 |
| 2. | 1.165 | 15. | 0.68 |
| 3. | 1.263 | 20. | 0.521 |
| 4. | 1.617 | 25. | 0.427 |
| 5. | 1.497 | 30. | 0.366 |
| 6. | 1.36 | 35. | 0.322 |
| 7. | 1.24 | 40. | 0.29 |
| 8. | 1.136 | 45. | 0.264 |
| 9. | 1.044 | 50. | 0.244 |
| 10. | 0.964 | 55. | 0.228 |
| 11. | 0.893 | 60. | 0.215 |
| 12. | 0.831 | | |

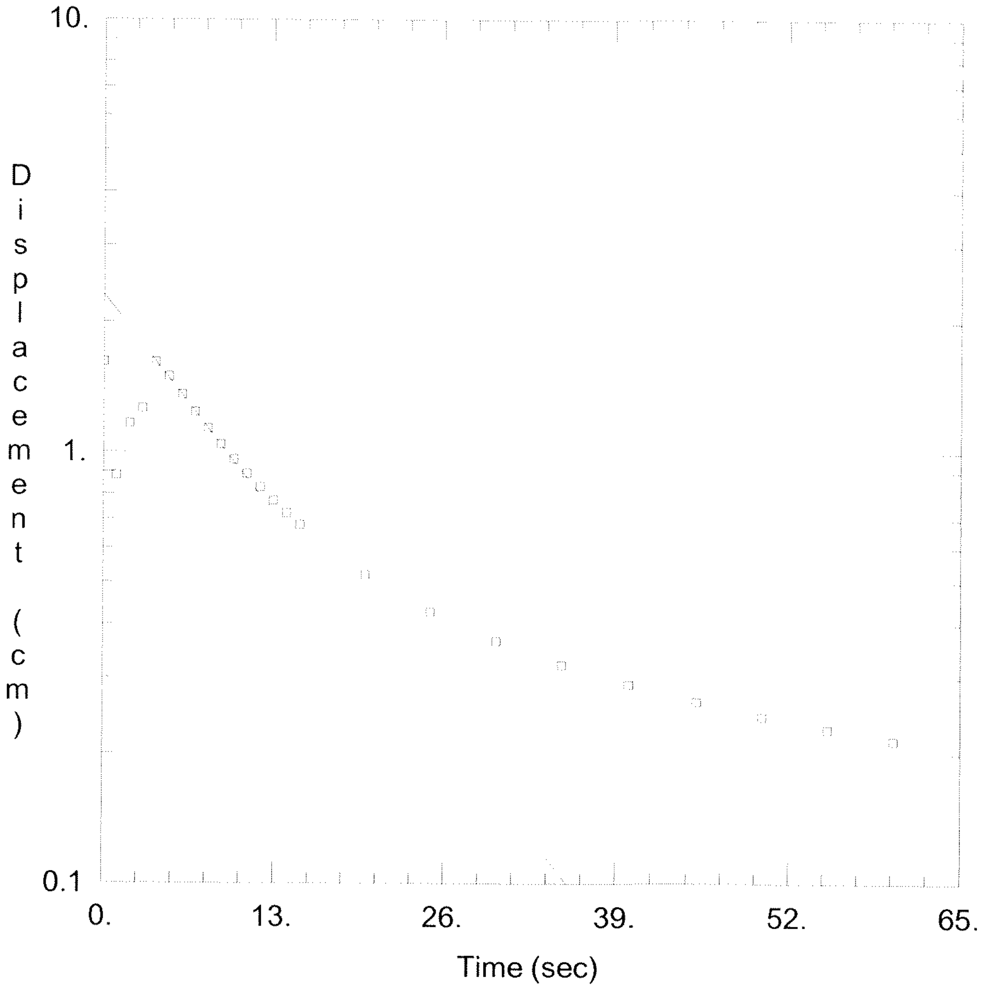
## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

## VISUAL ESTIMATION RESULTS

Estimated Parameters

| Parameter | Estimate | |
|---|---|---|
| K | 7.554E-05 | cm/sec |



## SLUG

Data Set: C:\...\1200 East Main St MW-9 R.aqt
Date: 07/19/05
Time: 16:12:11

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Test Location: 1200 East Main St.
Test Well: MW-9
Test Date: Sept. 11, 2003

## AQUIFER DATA

Saturated Thickness: 10.13 cm
Anisotropy Ratio (Kz/Kr): 0.01

## WELL DATA (MW-9)

Initial Displacement: 1.617 cm
Wellbore Radius: 0.161 cm
Screen Length: 13. cm
Gravel Pack Porosity: 0.3
Casing Radius: 0.083 cm
Well Skin Radius: 0.161 cm
Total Well Penetration Depth: 10.13 cm

## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 7.554E-05 cm/sec
y0 = 2.316 cm

Data Set: C:\Program Files\HydroSOLVE\AQTESOLV for Windows Standard 3.0\1200 East Main St. MW-10 R.
Title: Slug
Date: 07/19/05
Time: 16:14:14

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Location: 1200 East Main St.
Test Date: Sept. 11, 2003
Test Well: MW-10

## AQUIFER DATA

Saturated Thickness: 8.91 cm
Anisotropy Ratio (Kz/Kr): 0.01

## SLUG TEST WELL DATA

Initial Displacement: 0.811 cm
Casing Radius: 0.083 cm
Wellbore Radius: 0.161 cm
Well Skin Radius: 0.161 cm
Screen Length: 13. cm
Total Well Penetration Depth: 8.91 cm
Gravel Pack Porosity: 0.3

No. of observations: 18

Observation Data

| Time (sec) | Displacement (cm) | Time (sec) | Displacement (cm) |
|---|---|---|---|
| 0. | 0.811 | 9. | 0.462 |
| 1. | 0.741 | 10. | 0.446 |
| 2. | 0.666 | 11. | 0.432 |
| 3. | 0.619 | 12. | 0.419 |
| 4. | 0.581 | 13. | 0.408 |
| 5. | 0.549 | 14. | 0.398 |
| 6. | 0.523 | 15. | 0.388 |
| 7. | 0.5 | 20. | 0.349 |
| 8. | 0.48 | 30. | 0.298 |

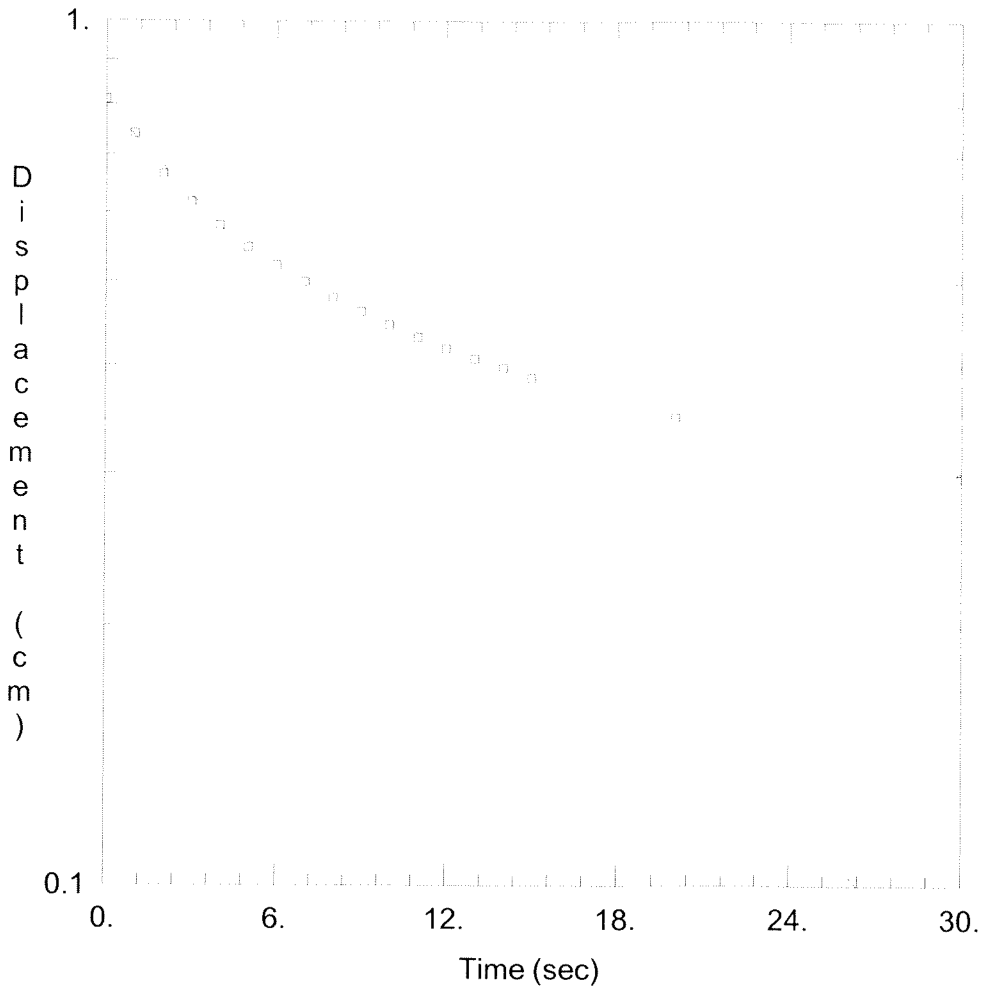
## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

## VISUAL ESTIMATION RESULTS

### Estimated Parameters

| Parameter | Estimate | |
|---|---|---|
| K | 6.516E-05 | cm/sec |
| y0 | 0.7975 | cm |



## SLUG

Data Set: C:\...\1200 East Main St. MW-10 R.aqt
Date: 07/19/05 Time: 16:14:19

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Test Location: 1200 East Main St.
Test Well: MW-10
Test Date: Sept. 11, 2003

## AQUIFER DATA

Saturated Thickness: 8.91 cm
Anisotropy Ratio (Kz/Kr): 0.01

## WELL DATA (MW-10)

Initial Displacement: 0.811 cm
Wellbore Radius: 0.161 cm
Screen Length: 13. cm
Gravel Pack Porosity: 0.3
Casing Radius: 0.083 cm
Well Skin Radius: 0.161 cm
Total Well Penetration Depth: 8.91 cm

## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

Data Set: C:\Program Files\HydroSOLVE\AQTESOLV for Windows Standard 3.0\1200 East Main St. MW-11.aq
Title: Slug Test
Date: 07/19/05
Time: 16:14:55

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Location: 1200 East Main St.
Test Date: Sept. 11, 2003
Test Well: MW-11

## AQUIFER DATA

Saturated Thickness: 10.92 cm
Anisotropy Ratio (Kz/Kr): 0.01

## SLUG TEST WELL DATA

Initial Displacement: 1.024 cm
Casing Radius: 0.083 cm
Wellbore Radius: 0.161 cm
Well Skin Radius: 0.161 cm
Screen Length: 13.5 cm
Total Well Penetration Depth: 10.92 cm
Gravel Pack Porosity: 0.3

No. of observations: 20

Observation Data

| Time (sec) | Displacement (cm) | Time (sec) | Displacement (cm) |
|---|---|---|---|
| 1. | 0.288 | 11. | 0.309 |
| 2. | 0.69 | 12. | 0.296 |
| 3. | 0.8 | 13. | 0.288 |
| 4. | 1.01 | 14. | 0.283 |
| 5. | 1.024 | 15. | 0.279 |
| 6. | 0.772 | 20. | 0.266 |
| 7. | 0.588 | 30. | 0.249 |
| 8. | 0.462 | 40. | 0.237 |
| 9. | 0.382 | 50. | 0.227 |
| 10. | 0.335 | 60. | 0.219 |

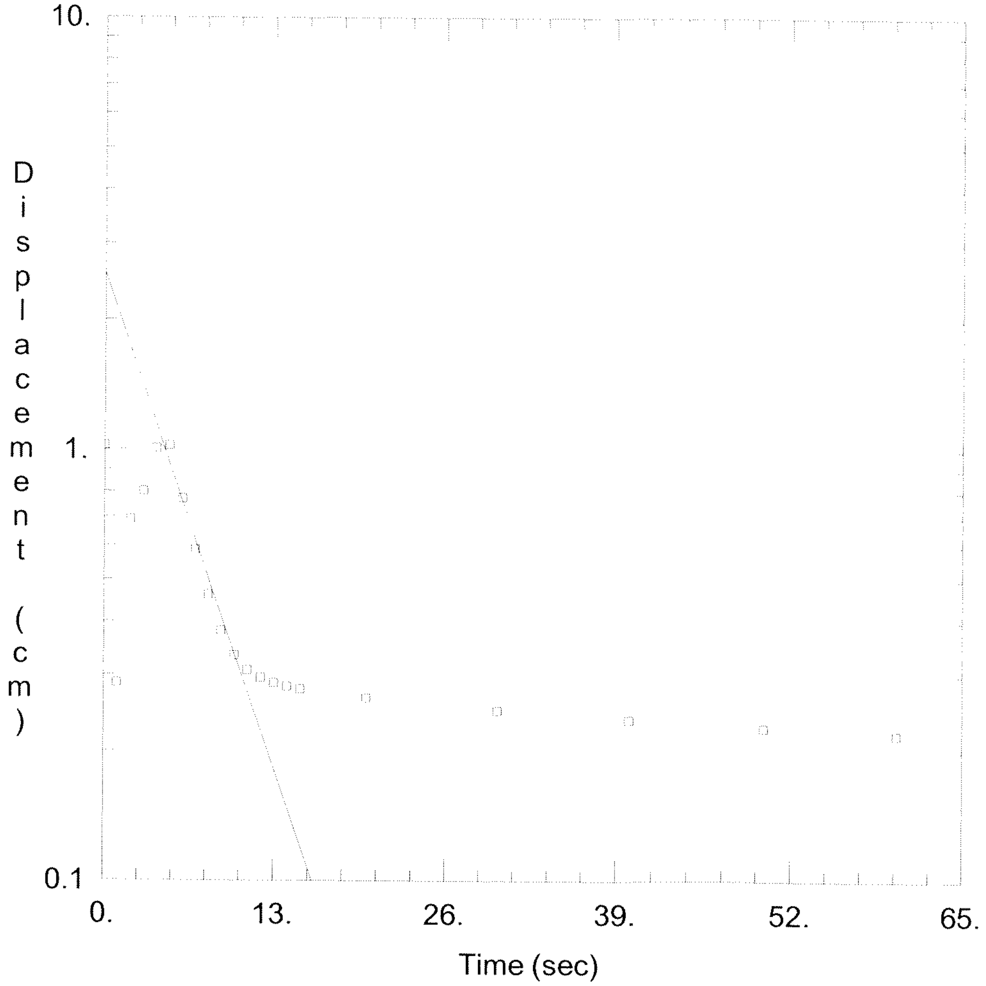
## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

## VISUAL ESTIMATION RESULTS

### Estimated Parameters

| Parameter | Estimate | |
|---|---|---|
| K | 0.0001695 | cm/sec |
| y0 | 2.575 | cm |



## SLUG TEST

Data Set: C:\...\1200 East Main St. MW-11.aqt
Date: 07/19/05 Time: 16:15:01

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Test Location: 1200 East Main St.
Test Well: MW-11
Test Date: Sept. 11, 2003

## AQUIFER DATA

Saturated Thickness: 10.92 cm
Anisotropy Ratio (Kz/Kr): 0.01

## WELL DATA (MW-11)

Initial Displacement: 1.024 cm
Wellbore Radius: 0.161 cm
Screen Length: 13.5 cm
Gravel Pack Porosity: 0.3
Casing Radius: 0.083 cm
Well Skin Radius: 0.161 cm
Total Well Penetration Depth: 10.92 cm

## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

Data Set: C:\Program Files\HydroSOLVE\AQTESOLV for Windows Standard 3.0\1200 East Main St. MW-12.aq
Title: Slug Test
Date: 07/19/05
Time: 16:15:58

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Location: 1200 East Main Street
Test Date: Sept. 11, 2003
Test Well: MW-12

## AQUIFER DATA

Saturated Thickness: 4.92 cm
Anisotropy Ratio (Kz/Kr): 0.01

## SLUG TEST WELL DATA

Initial Displacement: 1.247 cm
Casing Radius: 0.083 cm
Wellbore Radius: 0.161 cm
Well Skin Radius: 0.161 cm
Screen Length: 12. cm
Total Well Penetration Depth: 4.92 cm
Gravel Pack Porosity: 0.3

No. of observations: 21

Observation Data

| Time (sec) | Displacement (cm) | Time (sec) | Displacement (cm) |
|---|---|---|---|
| 0. | 1.247 | 11. | 0.107 |
| 1. | 0.483 | 12. | 0.101 |
| 2. | 0.384 | 13. | 0.096 |
| 3. | 0.329 | 14. | 0.092 |
| 4. | 0.054 | 15. | 0.088 |
| 5. | 0.159 | 20. | 0.07 |
| 6. | 0.146 | 30. | 0.052 |
| 7. | 0.136 | 40. | 0.041 |
| 8. | 0.128 | 50. | 0.038 |
| 9. | 0.121 | 60. | 0.034 |
| 10. | 0.113 | | |

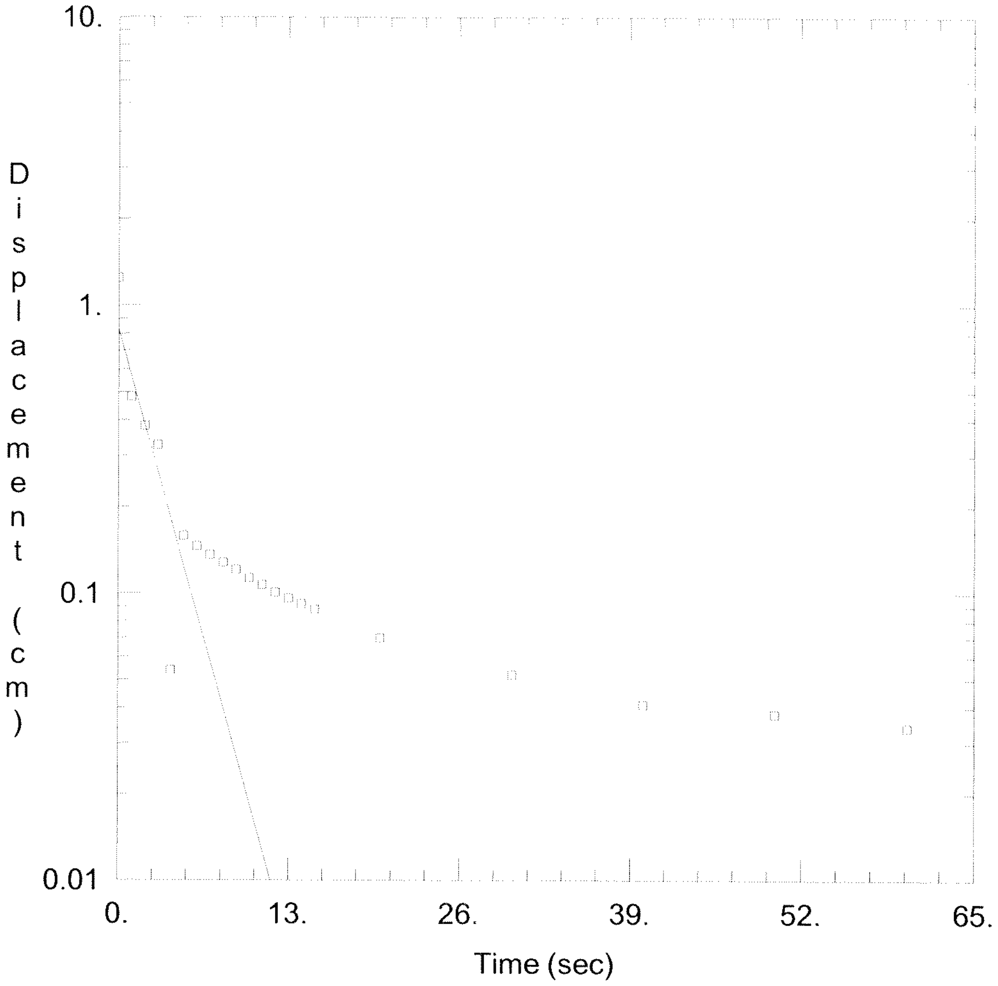
## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

## VISUAL ESTIMATION RESULTS

### Estimated Parameters

| Parameter | Estimate | |
|---|---|---|
| K | 0.0002954 | cm/sec |



## SLUG TEST

Data Set: C:\...\1200 East Main St. MW-12.aqt
Date: 07/19/05 Time: 16:16:03

## PROJECT INFORMATION

Company: Bergmann Associates
Client: City of Rochester
Project: 4453
Test Location: 1200 East Main Street
Test Well: MW-12
Test Date: Sept. 11, 2003

## AQUIFER DATA

Saturated Thickness: 4.92 cm
Anisotropy Ratio (Kz/Kr): 0.01

## WELL DATA (MW-12)

Initial Displacement: 1.247 cm
Wellbore Radius: 0.161 cm
Screen Length: 12. cm
Gravel Pack Porosity: 0.3
Casing Radius: 0.083 cm
Well Skin Radius: 0.161 cm
Total Well Penetration Depth: 4.92 cm

## SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

# APPENDIX 14

## Remedial Actions Flow Chart

# 1200 East Main Street B-00129-8 Remedial Actions